CHAPTER I
INTRODUCTION

A. BACKGROUND

“There is also empirical evidence to support the view that games can be effective tools for enhancing learning and understanding complex subject matter (Pelin, 2010:1)”

Language is the main thing in every stationary needed for communicating and solving problems. Especially in education, teachers should know how to deliver materials well to their students. Even less for English teachers, English as the second language in Indonesia should be transferred to students well. Language as a means of communication between members of the community should be in the form of a symbol of the sound produced by human vocal organs (Keraf, 1994: 45). At present, development of language has quickly grown; it is caused by high technology furtherance. It forces the teachers to be more creative in teaching English language with an interesting teaching method.

According to the Collins Cobuild English Language Dictionary (1989: 1629) cited from Campilo (2003: 35), the vocabulary of language is the total number of words in it and someone’s vocabulary is the total number of words in a language that she or he knows. Vocabulary is obviously a very important element within a language as the overwhelming majority of meaning is carried lexically; and, therefore, something to be taken into consideration both in Second and Foreign Language. According to Schmitt (1997) cited by Öztürk (2013: 3), a
vocabulary learning strategy is any strategy that results in the learning of vocabulary.

There are so many researches in teaching English vocabulary, and either do the learning-teaching methods. Not only music which becomes their methods but also outdoor-games. Following the quick technology development this paper uses vocabulary teaching-learning method bases to technology of computer.

Nowadays game is one of newest thing in the world. Any people think that gaming is wasting time, but there is another fact which is stated by Holland cited from Mitchel (2004: 25) that video games, like any emerging medium, are disruptive, challenging existing social practices, while capturing our dreams and triggering our fears. Computer games have so many benefits in teaching-learning English vocabulary. A few of teachers has used computer games as their way to deliver English skills to their students. Beside of that, computer games or PC games has a lot of genre games; Open world games, RPG games, Turn-base games, Action games, Arcade games, etcetera. All of them can be used to reach the purpose of teaching-learning English language itself, although there are differences between them. Some games can be more challenging and harder, it makes the users (students) are able to find out the solution in finishing some objectives with different ways. Many languages used in the game are English that enable much in enhancing user’s vocabulary.

Open world PC games as one of the game genres which are designed more difficult and more sharpening user’s brain. Base on Sefton (2007: 5) an open world is a type of video game level design where a player can roam freely through a
virtual world and is given considerable freedom in choosing how or when to approach objectives. The term free roam is also used, as is sandbox and free-roaming. "Open world" and "free-roaming" suggest the absence of artificial barriers, contrast to the invisible walls and loading screens that are common in linear level designs. An "open world" game does not necessarily imply a sandbox. In a true "sandbox", the player has tools to modify the world themselves and create how they play. Generally open world games still enforce some restrictions in the game environment, either due to absolute technical limitations or in-game limitations (such as locked areas) imposed by a game's linearity.

I have found that there are some difficulties in remembering vocabularies. This problem is seen when I taught in Senior High School, so that I decide to try combining between game and English language. Game is the best one of teaching learning tools. Beside of that, nowadays game is easy to be found and easy to be played.

Based on the explanation above, the Researcher is interested in conducting an experimental study about THE INFLUENCE OF USING OPEN WORLD PC GAME ON STUDENTS’ ENGLISH VOCABULARY MASTERY: An Experimental Study at the 2nd Grade of Bina Muda Senior High School, Kabupaten Bandung

B. RESEARCH QUESTIONS

1. How good is student’s ability in mastering vocabulary by using Open World PC Game?
2. How good is the student’s ability in mastering vocabulary without using Open World PC Game?

3. How effective is the use of Open World PC Game to improve the student’s vocabulary mastery?

C. THE PURPOSES OF RESEARCH

1. To find out the student’s ability in mastering vocabulary by using Open World PC Game.

2. To find out the student’s ability in mastering vocabulary without using Open World PC Game.

3. To find out the effectiveness of using Open World PC Game to improve the student’s vocabulary mastery.

D. THE SIGNIFICANCES OF RESEARCH

The results of this research are expected to provide some valuable advantages for the teachers, students, researchers, and readers

a. For teachers

Teachers as the main actors in the classroom must be able to transfer knowledge to their student clearly. However, how it can be done if there is nothing method used, this day almost teachers use some creative teaching methods in the class. Teacher who also becomes the students’ facilitator is impossible using only one method, so teachers must mix some methods to reach the purpose of teaching-learning language. And this research may become one of teaching-learning technique references which can be applied to the students.
b. For students

Student is the object of education purpose. Neither the main object of education nor student is the reflection of a nation, more creative the student will be stronger the nation is. Beside those all, today students has so many characters and behaviors in learning. It makes teachers work hardly to find out the best solution in teaching-learning. Following the expansion of technology this century almost students are more comfort to learn English by gaming, even less using computer, gadget, laptop, etc. This case make this research using computer games as the object teaching-learning technique which is became easier tools in teaching vocabulary. This technique definitely will make students funnier in learning and accepting English vocabulary.

c. For researchers

This is new technique in teaching English vocabulary, and this research will make the researcher get more knowledge about teaching technique and the effectiveness for students' ability in mastering vocabulary.

d. For readers

Hopefully this research will become a reference for those who need it as an additional material or used as a comparative study toward the other teaching method.
E. RATIONALE

In learning vocabulary automatically students have to know the meaning of words itself and can use it in sentences. Wilkins (1972: 130) cited in Thornbury (2002) states that vocabulary learning is learning to discriminate progressing the meaning of words in the target language from the meanings of their nearest ‘equivalent’ in the mother tongue. It is also learning to make the most appropriate lexical choices for particular linguistic and situational context. Every learner may have a different way to improve their ability in mastering vocabularies based on what the teacher has provided the learning method and technique in teaching those vocabularies. For example, when they have to develop words, determine the usage, meaning, formation and so on.

Most of the teachers commonly use the ordinary technique such as by using vocabulary pocket, puzzle, short story, and etcetera. Whereas, teachers not only can use the old technique regularly to be applied but they also can creatively create such a new technique in English learning and teaching process in order to make a variety atmosphere in the classroom activity especially in teaching vocabularies. So here the researcher tries to apply the new technique by using Open World PC Games.

There are some evidences about the advantages games for learning tools, not only in increasing vocabulary but also gaming is able to improve other skills. People in another country have made a research about gaming as learning tools, and that research shows me as the researcher to find out another advantage of gaming especially for vocabulary mastery skills.
Based on the explanation about using Open World Game above, the researcher decided to use this technique in teaching student’s vocabulary mastery. By using their memory system, students are trained to memorize and then write down the words that certainly has the closest meaning with the keyword which has given by the teacher then they can write as many as the words they knew. This research used two kinds of variable, the first is Using Open World Game Technique as the X variable, and the second is the student’s vocabulary mastery as the Y variable. The variable studied can be seen in the figure below:

**Figure 1.1:**
*Indicator of Using Game Open World and Student’s Vocabulary Mastery*
A. HYPOTESIS

Hypothesis is a combination of the word "hypo" means under, and "thesis" which means truth. Overall hypothesis means that under truth (not necessarily true) and be appointed as a new truth if it had been accompanied by the evidence. (Arikunto, 2000: 57). This research has two variables; Using Open World Game as variable X and Student’s Vocabulary Mastery as variable Y. In connection with problem is about The influence of Open World PC Game to improve students’ vocabulary mastery. The Hypothesis in this research is:

1. $H_0$ accepted if $t_{\text{account}} < t_{\text{table}}$: it means that there is no the significant influence of using open world PC game on student’s vocabulary mastery
2. $H_1$ accepted if $t_{\text{account}} > t_{\text{table}}$: it means that there is the significant influence of using open world PC game on student’s vocabulary mastery

The hypothesis that was proposed will test the validity with statistic by the collected data.

B. METHODOLOGY OF RESEARCH

1. Type of research: Quantitative

Kasiram (2008) cited in Kuntjojo (2009), defines that quantitative research is a process to find knowledge by using the data in the form of numbers as a means of analyze information on what they want to know. In this research, one important step is to make the design of the study. The study design is basically a strategy to achieve the research objectives defined and serve as guidelines or guiding researchers on the whole research process. This research uses a
Quantitative Quasi Experimental Study, according Arikunto (2010), it has the characteristics of the control group and the exclusion of the experimental group was randomly determined.

A research or evaluation design with two or more randomly selected groups (an experimental group and control group) in which the researcher controls or introduces an intervention (such as a new programme or policy) and measures its impact on the dependent variable at least two times (pre- and post-test measurements). (W. Howard & S. Shagun, 2014: 1).

2. Method of research

This research uses quasi experimental study, because of that the researcher makes scheme research in table below

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**Figure 1.2**  
Research Design
3. Determining Source of Data

a. Location of Research

This research will be conducted at 2nd grade SMA Bina Muda Kabupaten Bandung. Based on my teaching practice experience at SMA 2 Muhammadiyah Bandung, I found that there are some student’s difficulties in mastering vocabularies, especially when they read a simple passage or create a sentence, most of them always ask to the teacher and then they will easily forget about the vocabularies that they have already known. So that I plan to conduct this research in 2nd grade SMA Bina Muda, Kabupaten Bandung because this teaching technique is appropriate to be taught in Senior High School level.

b. Population

Population or universe is the total number of units or individuals whose characteristic will be investigated, the units called as the analysis unit, it can be the people, institutions, objects, and so on. (Djarwanto, 1994: 420). There are 40/two classes’ students of 2nd grade students as the population in this research.

c. Sample

Sample is part of the population which will be investigated (Djarwanto, 1994:43). A Good sample, which the conclusion can be imposed on the population, is a sample that is representative or to describe the characteristics of the population. So for this research there are only 2 classes that will be used as the sample; class A and class B which has been chosen based on the probability sampling technique. This technique provides equal opportunities to every member of the population to be elected as members of the sample.
d. Dividing the group of research

In this research the respondent will be divided into two groups, the first is the experiment class and the second is control class.

4. Technique of Collecting Data

1) Test

The main data is got by using:

a. Pre–test

This is the first measure of the condition students understanding English.

b. Treatment

In this process, the classes will be divided into two groups, they are experimental group by using Open World PC Game Technique, and the control group by providing direct instruction in the meaning of words. In experimental group, students will be divided again in several group of work, after that, teacher gives the material about vocabulary in certain term with different theme of each group, and then they will work in group to do the assignment by using the Using Open World PC Game Technique. While in control group, teacher only uses the conventional technique in teaching vocabulary based on their own background knowledge.
c. Post – test.

Post – test as a result after students already given the treatment of teaching learning process. The implementation of post-test is conducted in the class. This test used to know the influence of the experiment being conducted toward experimental group and to know how far students are able to master the vocabularies by using open world PC game Technique to and without using Open world PC game Strategy. And which one is better.

D. DATA ANALYSIS

According to Subana (2000: 38), determining the normality of data by conducting the steps as follows:

\[
\begin{array}{ccc}
| & E & : & O_1 & X & O_2 \\
| C & : & O_1 & & O_2 \\
\end{array}
\]

E : Experiment  
C : Control Class  
O₁ : Pre-test  
O₂ : Post-test  
X : Treatment  
——— : Experimental and control class are resulted from random

According to Subana (2000: 38), determining the normality of data by conducting the steps as follows:

a. Making the distribution table of frequency, with procedures:

1) Determining range (R)
2) Determining class interval (K)

\[ R = \lceil H - L \rceil + 1 \]

3) Determining the length of interval (P)

\[ P = \frac{R}{K} \]

4) Table frequency of frequency distribution

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>( x_i )</th>
<th>( f_i )</th>
<th>( f_i \cdot x_i )</th>
<th>( x_i^2 )</th>
<th>( f_i \cdot x_i^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

b. Determining central tendency, mean, median and modus. According to Subana (2000: 65) are as follows:

Determining mean

\[ \bar{X} = \frac{\sum f_i \cdot x_i}{\sum f_i} \]

c. Looking for the standard deviation by using formula according to Sudjana (1988:93) are as follows:

\[ s = \sqrt{\frac{\sum f_i \cdot (x_i - \bar{X})^2}{n-1}} \]

d. Arranging the distribution of observation and expectation frequency by using the tables as follows:
Table 1.3
Arranging the distribution observation and expectation frequency

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>$z_{count}$</th>
<th>$z_{table}$</th>
<th>$L_i$</th>
<th>$O_i$</th>
<th>$E_i$</th>
<th>$x^2 = \text{count}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

e. Determining Chi square count ($x^2$) according to Subana (2000:124) by using formula

$$x^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

f. Determining the degree of freedom with formula

$$df = \kappa - 5$$

g. Interpreting data normality by comparing Chi square count ($x^2$) and Chi Square table ($x^2_{table}$) with formula:

- IF ($x^2 < x^2_{table}$), this data is normal
- IF ($x^2 > x^2_{table}$), this data is not normal

5. Homogeneity Analysis

Subhana (2000:162) says that the analysis involves the steps of determining homogeneity of two variances by conducting the steps as follows:

a) Determining score $F$ by using Formula:

$$F = \frac{\nu_k}{\nu_d}$$

b) Determining the degree of freedom of the data:

$$Df_1 = n_1 - 1$$

$$Df_2 = n_2 - 1$$
c) Determining homogeneity of the data with criterion:

It is called homogenous if $F_{table} < F_{Count}$

It is called not homogenous if $F_{Table} > F_{Count}$

d) Testing hypothesis by using T-test formula as follows:

$$t = \frac{X_1 - X_2}{\frac{1}{n_1} + \frac{1}{n_2}}$$

$X_1$ = mean of post-test of the experiment group

$X_2$ = mean of post-test of the control group

$n$ = the total number of cases

d$s_g$ = cumulative standard deviation on f the experiment group

$$dsg = \sqrt{\frac{(n_1 - 1)V_1 + (n_2 - 1)V_2}{n_1 + n_2 - 2}}$$

$V_1$ = the post-test standard deviation of the experiment group

$V_2$ = the post-test standard deviation of the control group

e) Coefficient of determination (CD)

$$CD = r^2 \times 100$$

$$r = \frac{n\sum x_1y_1 - (\sum x_1)(\sum y_1)}{\sqrt{(n\sum x_1^2 - (\sum x_1)^2)(n\sum y_1^2 - (\sum y_1)^2)}}$$

Explanation:

$N$ = the number of students

$X$ = the middle score of pre – test

$Y$ = the middle