

CHAPTER I

INTRODUCTION

A. Background of the Research

Nowadays English is a universal language. As a universal language, English becomes the dominant international language in communication, science, business, aviation, entertainment, diplomacy, and internet. Even now the knowledge of English is required in many fields, professions, and occupations. Because of that, many countries mandate the teaching of English to public and private school (en.wikipedia.org/wiki/English_language).

Indonesia which uses English as a foreign language also mandates educational institution, especially the formal ones (schools) to teach English as a compulsory subject. English has been introduced to students since primary school, even kindergarten, in order to prepare Indonesian people in facing globalization era.

There are four skills to master English, they are: reading, writing, speaking, and listening. Vocabulary is the important element to master those skills. It becomes basic aspect to master a foreign language. The more vocabularies one has, the more possibilities one masters language skills (Tarigan, 1989:2).

Because of the importance of vocabulary, students are demanded to master vocabulary. Commonly, students get vocabulary from their school when they are studying English. But we cannot deny that they can get vocabulary from their

environment beyond school, such as television, radio, music, magazine, newspaper, and games.

Game, in this case is computer/video game, is a part of entertainment that uses English. Computer/video game can give advantages. McFarlane, Sparrowhawk, Heald (2001) have done the research for TEEM, a department for education and skills of United Kingdom, about the games contribution for education process. This research reports that the nature of learning supported by games use could be broadly divided into three types –learning as a result of tasks stimulated by the content of the games, knowledge developed through the content of the game, skills arising as a result of playing the game. This last one can be subdivided into direct and indirect learning. Besides that, there are other researches that were done by educational researchers and policy makers reported the advantages/disadvantages of computer/video game and its relevance for education.

Those researches based on the phenomenon that occurs. Computer/video games become popular for children and adolescents. They spend much time for playing games. There are many reasons they like games. They consider games as very pleasurable and entertaining activity, but also at times frustrating and challenging activity (Arnseth, 2006). The proliferation of games bears many gaming consoles such as the Sony PlayStation, Microsoft Xbox, and Nintendo Gamecube. A gaming console that is discussed in this research is PlayStation.

Computer/video game always uses English vocabulary for the content of game. It can be a learning source for students, especially for mastering English

vocabulary. Saprudin and Winaputra (1991) as cited in Djamarah and Zain (2002:138) say that learning sources are categorized into five; they are 1) human being; 2) book/library; 3) mass media; 4) environment; and 5) education media. It is indicated that computer/video game can be vocabulary learning outside classroom. Moreover, in EFL context the teaching and learning process in classroom is limited (Pavicic, 2000).

From the explanations above, this research is intended to investigate the phenomenon that also occurs to teenagers in our country and to find the correlation between this one and their mastery of English vocabulary. Teenagers like playing PlayStation game, they spend much time to play it, even they master many titles of PlayStation game, such as FIFA, The Sims, Crash Bandicot, Harvest Moon, Tony Hawkes' skateboarding, Sim City, F1 Racing Championship, Winning Eleven, etc. which those all use English. Therefore, the research will be given a title with: **The Students' Intensity in Playing PlayStation Game for Mastering English Vocabulary (A Research on Year Two of the SMPN 8 Bandung).**

B. Statements of Research Problem

Based on the background above, this research is intended to find the problem stated below:

1. How high is the students' intensity in playing PlayStation game?
2. How high is the students' mastery of English vocabulary?

3. How significant is the correlation between the students' intensity in playing PlayStation game and their mastery of English vocabulary?

C. Purposes and Significances of the Research

In accordance with the main problem above, this research has purposes:

1. To know the students' intensity in playing PlayStation game.
2. To identify the students' mastery of English vocabulary.
3. To find out the correlation between the students' intensity in playing PlayStation game and their mastery of English vocabulary.

This research has significance; students can get additional English vocabulary through PlayStation game as a learning source.

D. Rationale

Intensity is the strength of something (Hornby, 2000:676), while Chaplin (2002:254) states that intensity is the strength of a behavior or an experience. In this case intensity refers to the strength of playing games. There are three indicators to know one's intensity in doing certain activity; they are interest, motivation, and activity (Chaplin, 1999 as cited in Ningsih, 2003:18).

Interest is defined as a feeling which states an activity, work, or object are worth and meaningful for individual (Chaplin, 2002:255). Syah (2003:136) says that interest is high tendency and spirit or great desire toward something. Interest cannot be separated from attention, curiosity, motivation, and need. This means

one who is interested in playing video games has high tendency and spirit or great desire toward games.

Syah (2003:136) defines motivation as an organism's internal condition – human or animal- which stimulates him to do something. One's motivation in doing an activity, in this case playing video game, can be measured through his behaviors, as follows: duration, frequency, persistence, the extent of aspiration and attitude (Syamsudin, 2005:40). If these behaviors show high tendency, his motivation in playing video game is high.

Activity as the last indicator of intensity comprises: 1) observing; 2) writing; 3) reading; 4) memorizing; 5) thinking; and 6) training (Soemanto, 1998:107). When one plays video game, first he observes the game to know how to play the game. After that, he trains by trying playing the game, and does it repeatedly until he masters the game. In training activity there is memorizing, he memorizes the way to play the game and the appearance of games on screen.

Chaplin (2002:90) states the definition of cognition is one general concept which comprises all kinds of recognition, including observing, looking, watching, giving, supposing, imaging, wondering, thinking, considering, guessing, and evaluating. Throughout social and behavioral science discourse on social and cognitive development, game play is regarded as an important area for the development and formation of thinking, identities, values and norms (Cole, 1996; Piaget, 1951; Rogoff, 1990 as cited in Arnseth, 2006). McFarlane, et al. (2001) also states that the nature of learning supported by games use could be broadly divided into three types –learning as a result of tasks stimulated by the content of

the games, knowledge developed through the content of the game, skills arising as a result of playing the game. The content of the game can develop skills, such as problem solving, sequencing, deductive reasoning, and memorization. Those explanations give an understanding that games involve cognitive process that has direct relationship to learning process (Syah, 2003:60). Besides that, those explanations also give an understanding that computer/video game can be vocabulary learning.

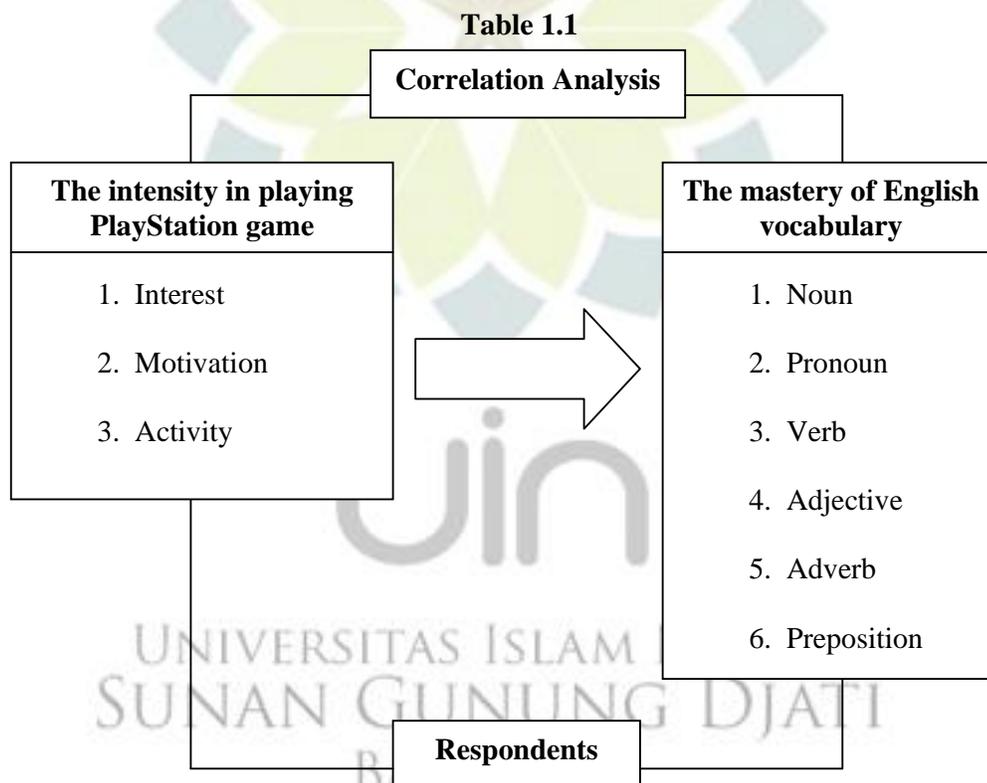
According to Bruno (1987) as cited in Syah (2002:96), memorization is mental process which comprises encoding, storage, and recalling of information and knowledge. Based on the opinion above, one, who has memorization of English vocabulary on video game screen, is able to recall English vocabulary that has been had before. It is caused that one who has high intensity (interest, motivation, and action) in playing games, for example PlayStation, will have memorization what is always played, observed, and watched by him which these activities involve the mental processes of memorization. Therefore, he will memorize English vocabulary which always appears on video game screen.

Learning can be done not only in school but also in environment beyond school. Games are learning source, as a learning source; of course games can give advantages for learning.

Considering those explanations, this research is intended to find out the correlation between students' intensity in playing PlayStation game and their mastery of English vocabulary. This research will be done into students at Year Two of the SMPN 8 Bandung.

Moreover, this research is divided into two variables. The first one is the students' intensity in playing PlayStation game as variable X and the second one is their mastery of English vocabulary as variable Y. Variable X will be identified by three indicators; they are: interest, motivation, and activity. Meanwhile, variable Y can be identified by noun, pronoun, verb, adjective, adverb, and preposition.

The explanation above will be described in the following chart:



E. Hypothesis

Hypothesis is a tentative answer of research problem which its truth has to be tested empirically (Suryabrata, 1998:69). It means the truth must be tested to know whether it is true or not. There are two variables that will be used to test

hypothesis, variable X is the intensity in playing PlayStation game and variable Y is the mastery of English vocabulary. The hypothesis which is used in this research is non-directional alternative hypothesis; therefore, the hypothesis of this research is *there is a correlation between students' intensity in playing PlayStation game and their mastery of English vocabulary*. The hypothesis will be analyzed by correlation approach, as follows:

$$H_0 : r_{xy} = 0 \text{ (there is no correlation)}$$

$$H_1 : r_{xy} \neq 0 \text{ (there is a correlation)}$$

F. Methodology of the Research

1. Method of the Research

This research is correlational descriptive research. It means this research uses descriptive method to describe the correlation between the students' intensity in playing PlayStation game and their mastery of English vocabulary. According to Sudjana and Ibrahim (2004:64), descriptive research is intended to describe the fact, circumstance, variable, and phenomenon that happen in present days.

2. Population and Sample

a. Population

Population is the whole subjects of research (Arikunto, 1998:115). The population of this research is Year Two students of the SMPN 8 Bandung who play PlayStation game. It means the population is limited just for students who play PlayStation game. The total numbers of Year Two students are 335

students. From 335 students, there are 204 students who play PlayStation game. Furthermore, this number will be the population of this research; therefore the population of this research is 204 students.

b. Sample

Sample is a part or representation of research population (Arikunto, 1998:117). Sampling technique that is used in this research is random sampling. Arikunto (1998:120) says if the subjects are less than 100, it is better to take all subjects, but if the subjects are more than 100, it can be taken between 10-15%, or 20-25%, or more. The number of this research population is 204 students.

Table 1.2

The Number of Sample

	Population	Sample (20%)	Total Students
8A	30	6	42
8B	23	5	42
8C	32	6	41
8D	20	4	42
8E	29	6	42
8F	28	6	42
8G	21	4	42
8H	21	4	42
•	204	41	335

Based on the table above, the number of sample is 41 students, which are taken from 20% of the population.

3. Techniques of Collecting the Data

a. Questionnaires

This technique is used to know students' intensity in playing PlayStation game. It has 20 items which comprises interest, motivation, and activity. The kind of questionnaire that is used in this research is closed questionnaire with five options, they are: A, B, C, D, and E. Each answer is given score 5 for A, 4 for B, 3 for C, 2 for D, and 1 for E.

b. Test

Operationally, the test will be used to know students' mastery in English vocabulary. English words for test are more or less the same as those on the content of PlayStation game which comprises noun, pronoun, verb, adjective, adverb, and preposition. The test consists of 30 items which the right answer gets score 1 and the wrong answer gets score 0.

c. Interview

Interview is a conversation with a certain intention (Moleong, 2007:186). Interview is held to the principal, administrators, and English teacher of the SMPN 8 Bandung to gain the information about the situation of the SMPN 8 Bandung.

4. Procedure of the Research

As previous explanation, the intensity is the strength. The hypothesis of this research is there is a correlation between students' intensity in playing PlayStation game and their mastery of English vocabulary. It means if one's intensity in it is high, his mastery of English vocabulary will improve. To

determine whether there is an effect that PlayStation has on mastery of English vocabulary, therefore Pilot Study was done to determine whether:

- 1) There is the influence of one's intensity in playing PlayStation game on his mastery of English vocabulary.
- 2) The choice of questionnaire is appropriate to measure one's intensity in playing PlayStation game.
- 3) The choice of test is appropriate to see one's mastery of English vocabulary.

The pilot study participants were three students. They were part of population but separated from sample. Arikunto (2000:211) says that by taking the subject of pilot study from the population, so the condition of that subject is hoped the same as the subject of research.

Firstly, each student was given a questionnaire to know their intensity in playing PlayStation game. It has 20 items with five options, A, B, C, D, and E. Answer A is given score 5, B has score 4, C has score 3, D has score 2, and E has score 1. It comprises motivation, interest, and activity.

The maximum score of the questionnaire for each student is 100. This number is attained from $(20 \times 5) = 100$. Meanwhile, the minimum score is 20, it is attained from $(20 \times 1) = 20$. To interpret the result of questionnaire, the range of score has to be made. According to Arikunto (2000:355), to make the range of score, the steps are:

- 1) The maximum score minus the minimum score.

$$(20 \times 5) - (20 \times 1) = 100 - 20 = 80$$

- 2) The result number is divided by the number of categories.

$$\frac{80}{5} = 16$$

The score 16 is the length of each category. Based on the numerical count, finally it is attained the score range of questionnaire, as follows:

Table 1.3

The Score Range of Questionnaire for the Pilot Study

Scale	Qualification
85 – 100	Very high
67 – 84	High
53 – 68	Average
37 – 52	Low
20 – 36	Very low

Secondly, they were given a test to measure their mastery of English vocabulary. It consists of 30 items which comprises noun, pronoun, verb, adjective, and adverb. Right answer gets score 1 and wrong answer gets score 0. Vocabularies which are tested are more or less the same as the vocabularies on PlayStation game. To interpret the result of test, it is also used the range of score, as follows:

Table 1.4

The Score Range of Test for the Pilot Study

Score	Qualification
8 – 10	Very good
7 – 7.9	Good
6 – 6.9	Average

5 – 5.9	Poor
0 – 4.9	Very poor

(Syah, 2003:153)

a. Result of Pilot Study

After each student was given questionnaire and test, the data that is gained, as follows:

Table 1.5

The Result of Pilot Study

No. Respondent	Questionnaire		Test	
	Score	Qualification	Score	Qualification
1	70	High	7.7	Good
2	57	Average	6.7	Average
3	55	Average	6.7	Average

When respondent 1 has high intensity in playing PlayStation with score 70, his test score is good (7.7). Respondent 2 and 3 have average intensity in playing PlayStation with score for each 57 and 55; their test scores are average which the score is 6.7

b. Conclusion of Pilot Study

From the result above, it can be identified that there is the influence of intensity in playing PlayStation on mastery of English vocabulary. The higher intensity one plays PlayStation, the more vocabularies he gets. It means that the test and questionnaire for pilot study are appropriate to see the correlation. Therefore, they will be used for the research.

The pilot study is used just to know that there is a correlation between students' intensity in playing PlayStation game and their mastery of English vocabulary. To know how significant that correlation is, it will be found further in the research.

5. Analysis of Data

a. Partial Analysis

Each variable, variable X and variable Y, is counted by using this analysis. The steps of analysis are:

1) Arranging the frequency distribution, by:

a) Arranging the data from each variable.

b) Determining the range of data (R) by using the formula:

$$R = \text{the highest score} - \text{the lowest score} + 1 \quad (\text{Sudijono, 1997:49})$$

c) Determining the class interval (K) by using the formula:

$$K = I + 3.3 \log n \quad (\text{Sudjana, 2002:47})$$

d) Determining the length of class (P) by using the formula:

$$P = \frac{R}{K} \quad (\text{Sudjana, 2002:47})$$

e) Making the table of distribution.

2) Finding the central tendency

a) Counting Mean (\bar{x}) by using the formula:

$$\bar{x} = \frac{\sum f_i x_i}{\sum f_i} \quad (\text{Sudjana, 2002:67})$$

b) Counting Median (Me) by using the formula:

$$Me = b + p \left(\frac{\frac{1}{2}n - F_{kb}}{f_i} \right) \quad (\text{Sudjana, 2002:79})$$

c) Counting Modus (Mo) by using the formula:

$$Mo = b + p \left(\frac{b_1}{b_1 + b_2} \right) \quad (\text{Sudjana, 2002:77})$$

3) Testing the normality of data

a) Determining the standard deviation (SD) by using the formula:

$$SD = \sqrt{\frac{\sum fx^2}{n} - \left(\frac{\sum fx}{n} \right)^2} \quad (\text{Sudijono, 1997:155})$$

b) Determining Z score (z) by using the formula:

$$z_i = \frac{x_i - \bar{x}}{SD} \quad (\text{Sudjana, 2002:99})$$

c) Determining the expected result (Ei) by using the formula:

$$E_i = n \times \ell \quad (\text{Sudjana, 2002:293})$$

d) Determining the chi square (χ^2)_{count} by using the formula:

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i} \quad (\text{Sudjana, 2002:273})$$

e) Making the table of observed and expected frequency.

f) Determining the degrees of freedom (dk) by using the formula:

$$dk = K - 3 \quad (\text{Sudjana, 2002:293})$$

g) Determining the chi square $(\chi^2)_{table}$ on significance 5%.

$$\forall = 0.05, \chi^2_{(1-\forall)(k-3)} \quad (\text{Sudjana, 2002:293})$$

h) Interpreting the normality of data.

$(\chi^2)_{count} < (\chi^2)_{table}$, it means the data is normal.

$(\chi^2)_{count} > (\chi^2)_{table}$, it means the data is not normal.

(Sudjana, 2002:294)

b. Correlational Analysis

Correlational analysis is used to know the correlation between variable X and Y. The steps that have to be followed are:

1) Testing the regression equation by using the formula:

$$\hat{Y} = a + bX \quad (\text{Sudjana, 2002:312})$$

a and b can be counted by using the formula:

$$a = \frac{(\sum Y_i)(\sum X_i^2) - (\sum X_i)(\sum X_i Y_i)}{n \sum X_i^2 - (\sum X_i)^2}$$

$$b = \frac{n \sum X_i Y_i - (\sum X_i)(\sum Y_i)}{n \sum X_i^2 - (\sum X_i)^2} \quad (\text{Sudjana, 2002:315})$$

2) Testing the regression linearity.

a) Counting the total square of a (JK_a) by using the formula:

$$JK_a = \frac{(\sum Y_i)^2}{n} \quad (\text{Sudjana, 2002:327})$$

b) Counting the total square of b toward a ($JK_{b/a}$) by using the formula:

$$JK_{b/a} = b \left\{ \sum X_i Y_i - \frac{(\sum X_i)(\sum Y_i)}{n} \right\} \quad (\text{Sudjana, 2002:328})$$

c) Counting the total square of residue (JK_{res}) by using the formula:

$$JK_{res} = \sum Y_i^2 - JK_a - JK_{b/a} \quad (\text{Sudjana, 2002:327})$$

d) Counting the total square of error ($JK(E)$) by using the formula:

$$JK(E) = \sum_x \left\{ \sum Y_i^2 - \frac{(\sum Y_i)^2}{n_i} \right\} \quad (\text{Sudjana, 2002:331})$$

e) Counting the total square of disagreement ($JK(TC)$) by using the formula:

$$JK(TC) = JK_{res} - JK(E) \quad (\text{Sudjana, 2002:333})$$

f) Counting the freedom degrees of error ($dk(E)$) by using the formula:

$$dk(E) = n - k \quad (\text{Sudjana, 2002:332})$$

g) Counting the freedom degrees of disagreement ($dk(TC)$) by using the formula:

$$dk(TC) = k - 2 \quad (\text{Sudjana, 2002:332})$$

h) Counting the square average of error (s_e^2) by using the formula:

$$s_e^2 = \frac{JK(E)}{n - k} \quad (\text{Sudjana, 2002:332})$$

i) Counting the square average of disagreement (s_{tc}^2) by using the formula:

$$s_{tc}^2 = \frac{JK(TC)}{k - 2} \quad (\text{Sudjana, 2002:332})$$

j) Counting the F score of disagreement (F_{tc}) by using the formula:

$$F_{tc} = \frac{s_{tc}^2}{s_e^2} \quad (\text{Sudjana, 2002:332})$$

k) Arranging the list of variance analysis for testing linear regression.

l) Counting the F score from the table on significance 5% by using the formula:

$$F_{tc} = 0.05, F_{(1-\alpha)(k-2, n-k)} \quad (\text{Sudjana, 2002:332})$$

m) Interpreting the regression linearity.

$F_{tc} \leq F_{(1-\alpha)(k-2, n-k)}$, it means the regression is linear

$F_{tc} > F_{(1-\alpha)(k-2, n-k)}$, it means the regression is not linear

(Sudjana, 2002:332)

3) Determining the coefficient of correlation (r).

a) If both variables have normal distribution and linear regression, so to determine the coefficient of correlation used the Product Moment formula that developed by Pearson, as follows:

$$r = \frac{n \sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\{n \sum X_i^2 - (\sum X_i)^2\} \{n \sum Y_i^2 - (\sum Y_i)^2\}}} \quad (\text{Sudjana, 2002:369})$$

b) If one of the variables does not have linear regression, so to count the coefficient of correlation used the rank order correlation technique that developed by Spearman, the formula is:

$$r = 1 - \frac{6 \sum b_i^2}{n(n^2 - 1)} \quad (\text{Sudjana, 2002:455})$$

c) Interpreting the level of correlation coefficient as follows:

Table 1.6

The Interpretation of r Value (the Correlation Coefficient)

The amount of r value	Interpreting
0.90 – 1.00	Very high
0.70 – 0.89	High
0.50 – 0.69	Average
0.30 – 0.49	Low
0.00 – 0.29	Very low

(Djiwandono, 1996:154)

4) Testing hypothesis

a) Determining t_{count} by using the formula:

$$t_{\text{count}} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} \quad (\text{Sudjana, 2002:380})$$

b) Determining the degrees of freedom (dk) by using the formula:

$$dk = n - 2 \quad (\text{Sudjana, 2002:380})$$

c) Determining t_{table} on significance 5%.

$$\forall = 0.05, t_{(1-1/2\forall)} \quad (\text{Sudjana, 2002:380})$$

d) Interpreting the hypothesis.

 $t_{\text{count}} < t_{\text{table}}$, it means the hypothesis is rejected $t_{\text{count}} > t_{\text{table}}$, it means the hypothesis is received (Sudjana, 2002:380)

5) Determining the coefficient of determination.

$$KD = r^2 \times 100 \quad (\text{Subana, et al. 2005:145})$$