



**THE USE OF TEXTTWIST GAME FOR TEACHING
VOCABULARY**

**(A Quasi-Experimental Study at the Tenth Grade Students of SMA Islam
Ta'allumul Huda Bumiayu)**

a final project

**submitted in partial fulfillment of the requirements
for the degree of Sarjana Pendidikan
in English**

by

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2015

DECLARATION OF ORIGINALTY

I Meitia Nurdianita hereby declare that this final project entitled *The Use of Texttwist Game for Teaching Vocabulary (A Quasi-Experimental Study at the Tenth Grade Students of SMA Islam Ta'allumul Huda Bumiayu in the Academic Year 2014/ 2015)* is my own work and has not been submitted in any form for another degree or diploma at my university or other institute of tertiary education. Information derived from the published and unpublished work of others has been acknowledged in the text and a list of references is given in the references.

Semarang, 24 Agustus 2015




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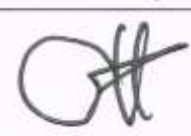
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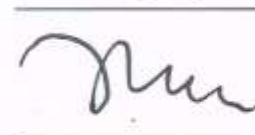
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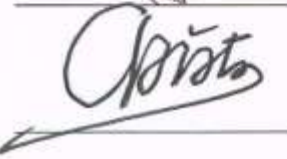
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MOTTO AND DEDICATION

“Ridhollahi fi ridhol walidaini”

“Dream what you want to dream, go where you want to go, but keep being yourself”

- To my beloved parents, Roikhatul Janah and Achmad Nurdin
- To my beloved brother, Muhammad Nurfaizi
- To my beloved friends, DACONS (Cupid, Ichaa, Tessa, Ichee, Itul, Peda, Wiwid), Asti, Icha, Reshi, Afni, Diyah, Lintang, Gesit, and all friends in English Department ‘11
- To everyone who had helped me in doing this final project

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Finally, I hope that my study will be beneficial and useful for anyone who interested in reading this final project.

ABSTRACTS

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Key words: Texttwist Game, Teaching, Vocabulary.

This research is about the use of texttwist game, a portable computer game published by game house, for teaching vocabulary to the tenth graders of SMA Islam Ta'allumul Huda Bumiayu, academic year 2014/ 2015. The aim of this research is to find out how the texttwist game is used in teaching vocabulary. In order to achieve the aim of this research, the writer used a quasi-experimental research design.

The participants of the research was the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu,. They were divided into two groups. The first group was named experimental group (X MIPA 1) which was contained of 31 students . The second group was named control group (X BAHASA) which was contained of 36 students. The method of collecting data in this research was mixed-method using quantitative data and supported by qualitative data. There were four meeting in this research including pre-test, treatment, post-test, and questionnaire. The instruments used were field note, questionnaire, and test including pre-test and post-test. The tests were used to find out to know how texttwist game was used in teaching vocabulary.

The result of this research showed that texttwist game can be used to teach vocabulary. It was proved by the result of the vocabulary test. The students' average score in the pre-test was 52, 01 and in the post-test was 69,8. The students' vocabulary was averagely improved by 17,79 points. It was 34, 20 %. It was also proved by the t-test. According to the t-test, the t-value was higher than the t-table (10, 10 > 1, 99). It means that there was a significant difference between the two means. The students' participation and attitude during the treatment showed that they appreciated the texttwist game the writer used in the teaching and learning process. The result of the questionnaire analyses also showed that students were interested in texttwist game. It could be conclude that the use of texttwist game enriched the students' vocabulary.

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CHAPTER I

INTRODUCTION

This chapter presents background of the study, reason for choosing the topic, research questions, objective of the study, significance of the study, definition of the term, limitation of the study, and outline of the report.

1.1 Background of the Topic

Language, in daily life, is very important thing. It is used by people in the world to make some communications in order to share their aims and purpose. Language which is used by people may have different meaning, so they will try to understand what other people say if they have different language. People have to be able know the meaning of language or words which is spoken or written by people to understand their aims.

In English, there are many words which can be used. HosseinVossoughi (2009:1) stated at his journal that words are tools we use to think, to express ideas or feelings. In addition, vocabulary is one of the most important aspect students need to master in learning English. McCarthy (2003: viii) stated that no matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings, communication in an L2 just cannot happen in any meaningful way. According to Camerron (2001:73) word is the key unit in building up skills and knowledge. However, English vocabulary consists of several hundred thousand words.

Therefore, teachers and students are challenged to unveil as many of them. Because vocabularies are very foundation of learning, improving students' vocabulary knowledge has become educational priority.

Vocabulary contains sorts of elements that must be understood, such as word-formation, idiom, collocation, etc. Word-formation refers to understanding morphemes of a word; at least a word consists of one freestanding morpheme (McCarthy, 2003: 6). For example, the word '*writing*' consists of a freestanding element '*write*' and a non-freestanding element '*-ing*'. Then, when talking about a group of words in a fixed order that have a particular meaning that is different from the meanings of each word understood on its own, it is called as idiom. The example is '*starving to death*' means '*very hungry*'. Whereas, based on Cambridge Dictionary-3rd edition, collocation is a word or phrase which is often used with another word or phrase, in a way that sounds correct to people who have spoken the language all their lives, but might not be expected from the meaning. For example, '*she has a beige car*' but not '*she has beige hair*'; and '*she has blond hair*' but not '*she has a blond car*'. So the word '*beige*' collocates with '*car*' and '*blond*' collocates with '*hair*'. (*'beige'* and *'blond'* have same meaning, it is *sejenis warna abu-abu dan coklat*)

Students need to learn about elements of vocabulary. However, the more important thing is that students must learn English vocabulary appropriate to their needs and so teachers must understand what students' needs are. Allen (1983: 90) in McCarthy (2003: 87) said that predicting what learners will need in the way of

vocabulary is important in selecting what to teach; equally important is ‘creating a sense of need for a word’.

When the writer was in teaching training at SMK Negeri 1 Batang , many students asked me how to memorize vocabularies. They also said that their teacher used conventional method in teaching English. So, they were often getting bored in English learning process.

In this study, the writer will show the use of texttwist game for teaching vocabulary. The writer thinks that vocabulary is important in English learning process, because if students master in many vocabularies, they will be easy to comprehend English learning process in the class.

1.2 Reason for Choosing the Topic

In this study, the writer chooses the topic “The Use of Texttwist Game for Teaching Vocabulary”, with the following reasons:

This study entitles the use of texttwist game for teaching vocabulary that concern in vocabulary and texttwist game. Vocabulary is all the words known and used by a particular. It is important thing in English learning, but many students still lacked vocabulary. In the classroom, for example, when teacher asked the students the meaning of common words, they could not answer the questions correctly. Moreover, if the students were asked about their opinions about moral value of the text, they were unable to express their ideas properly. Their vocabularies were limited, so they had to look the words up in the dictionary. However, the students were often lazy to look the words up in the dictionary, so their vocabulary mastery improvement was very slow.

Based on the conditions above, the writer thinks that there are some possibilities of factors of those problems were drawn.

1. The students' laziness to find out the meanings of words in the dictionary. They refer doing the easy way by asking their teacher the meaning of the difficult words. It is about students' character. When there was an instruction to do some exercises, students prefer to ask their teacher what should they do in that exercise than look up in the dictionary.
2. The students always want to learn vocabulary by doing interesting activities which are almost similar to play games. They more interest to learn through play than learn monotonously. Game are associated with a feeling of happiness. Students will be attracted by palying a game than listening to their teacher. It can be altenative for students to study by playing a game.
3. The students are bored with the traditional method which is done by their teacher in language teaching. Most teachers in the school use traditional or conventional method to teach their students. For instance, teaching and doing exercises by textbook, and there is not much interaction between teacher and students. It makes students get bored and do not pay attention at their teacher.
4. There is not certain time allocation for vocabulary teaching and learning in the learning process in the classrooms. English learning process in the class is only once in a week. So, the students should have another time to learn and increase their vocabulary's mastery.

According to the facts above, one of alternative techniques for teaching vocabulary should be implemented. It is a game technique. The application of

game technique in learning process may make better learning process. The writer will use texttwist game for teaching vocabulary in the classroom. Texttwist is a game for personal computer which allows people to improve their knowledge about vocabulary by twisting some letters.

The writer will give the test to the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu. The tenth grade students are appropriate students, because they are in the beginning of Senior High School, so they should be supplied by many of vocabularies.

1.3 Research Questions

The research questions posed in this study are as follows:

1. How is the use of Texttwist Game for teaching vocabulary to the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu?
2. Can the use of Texttwist Game improve the students' vocabulary?

1.4 Objectives of the Study

The objectives of this study based on the statements of the problem above are as follows:

1. To describe the used of Texttwist Game for teaching vocabulary to the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu
2. To find out whether the use of Texttwist Game improves the students' vocabulary or not.

1.5 Significance Of the Study

The result of this research study is expected to give contribution in some aspects:

- (1) The result of this study will be capable of providing information about the process of applying texttwist game in teaching vocabulary. Through this study, teacher will also be able to see the students' attainment in learning vocabulary
- (2) The result of this study will enrich the way in teaching vocabulary
- (3) The result of this study will be useful for further research and further development as a reference and a supporting material.

1.6 Definition of the Term

The key terms in this study are Texttwist game, teaching vocabulary, and vocabulary.

The first term is Texttwist game. It is a portable computer game published by game house. The way of playing this game is by arranging some letters which is provided in order to form as many English words as possible within a certain period of time.

The second term is teaching vocabulary. Teaching vocabulary is important as a part of learning English or other foreign languages since learners learn vocabulary first before their master more complex structure.

The third term is vocabulary. Many experts suggest definition of vocabulary. According to Neuman and Dawyer (2009) in Bintz (2011), vocabulary can be defined as "the words we must know to communicate

effectively: words in speaking (expressive vocabulary) and words in listening (receptive vocabulary).” vocabulary is all the words known and used by particular people.

1.7 Limitation of the Study

This study was limited to the use of texttwist game for teaching vocabulary. It means that the researcher wants to know whether texttwist game can be used in teaching and learning vocabulary or not. The study focuses only on the students’ vocabulary, especially the verb which appears in the game. However, it does not mean that other elements of English are not prominent to study. Focusing only on vocabulary is merely due to some constraints particularly in terms of time.

1.8 Outline of the Report

This final project consists of five chapters and each chapter presents different problem in line with the topic.

Chapter I is introduction which consists of background of the study, reasons for choosing the topic, research questions, objective of the research, significance of the research, definition of terms, limitation of the study, and outline of the report.

Chapter II presents review of related literature. It contains review of previous studies and theoretical framework.

Chapter III presents methods of investigation which covers research design, participants of the study, research variables and hypothesis, types of data, instruments for collecting data, methods of collecting data, and methods of analysing data.

Chapter IV presents results of the study which deals with general description, finding and analyses, and discussion.

Chapter V presents the conclusions and the suggestions.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents some theories related to the study, which consists of Review of Previous Studies, Review of Theoretical Study, and Theoretical Framework

2.1 Review of Previous Study

Using media as an aid in teaching and learning process is an interesting topic for many researchers. Therefore, there is a number of studies have been done in these field. Related to this study, the writer choose some references about previous studies which are close to the use of texttwist game for teaching vocabulary.

First, Putri (2013) conducted a research entitled *“The Use of Jigsaw II Technique and Still Pictures Combination to Improve Students’ Vocabulary (Action Research at The First Year of SMP N 12 Magelang in the Academic Year of 2012-2013)”*. She discussed the use of jigsaw II technique and still pictures combination in teaching vocabulary. So, her objective in this study is to improve students’ vocabulary through jigsaw II technique and still pictures combination in the first year of SMP N 12 Magelang in the academic year of 2012-2013. The result of this study shows that the use of jigsaw II technique and still pictures combination is effective to improve students’ vocabulary. She showed the students’ average score of pre-test was 72.3 and became 84.25 in the quiz one, 88.25 in the quiz two, and 92.3 in the post test.

Second, Astuti (2014) conducted a research entitled "*The use of cooking academy game to enrich vocational students' English vocabulary (a classroom action research at the tenth grade students of SMK N 1 Mojosongo in the academic year of 2012-2013)*". She wanted to find out how cooking academy game can be used to enrich vocational students' English vocabulary. In addition, she also wanted to know how the use of cooking academy game can improve students' interest and motivation in learning English, especially vocabulary. In this research, she concluded that cooking academy game can be used in English learning process to enrich students' English vocabulary. Moreover, this technique can improve students' motivation and interest in English learning process. The result of the study showed that the achievement of the students in learning vocabulary through this way improved.

Third, Nurrahman (2013) conducted a research entitled "*The Effectiveness of Make a Match Game in Teaching Vocabulary (An Experimental Study at First Grade of SMK Wicaksana Al Hikmah 2 Benda)*". In his research, he wanted to find out whether using make a match game was effective or not in teaching vocabulary to the first grade students of SMK Wicaksana Al Hikmah 2 Benda. From his observation result in one classroom at the first grade of SMK Wicaksana Al Hikmah 2 Benda, he found that the students' competence in vocabulary mastery is still not good enough. Furthermore, there was no student's anxiety when they followed English learning process in the classroom. So, he conducted this research. From the result of the data analysis, it was found that t-test result

(3,005) was higher than t-table (1,685). It means that “Make A Match Games” is effective in teaching vocabulary.

Fourth, Aulia (2013) conducted a research entitled “*The Use of Manual Super Text Twist Game to Improve Students’ English Vocabulary Mastery*”. The study concerns in using super text twist game to improve students’ English vocabulary mastery. Therefore, the objective of this study is to obtain how well the game contributes for solving vocabulary problems of Junior High School students. She used several pre-tests and post-test to obtain the improvement of the subjects’ vocabulary mastery. Besides, she also uses questionnaires and an observation checklist to support the data. The result of this study is significant which proved by the high increase between the subjects’ score of initial pre-test and final post-test. The average of the initial pre-test score was 64, while the average of the final post-test was 80. According to the result, she concluded that game gives positive contribution to the improvement of the subjects’ vocabulary mastery. She also recommended the English teacher to use games as an alternative technique for teaching vocabulary.

Some researches above discussed about students’ vocabulary mastery. All of researchers wanted to find good strategy to improve student’s vocabulary mastery. Moreover, they used media in teaching vocabulary to students. However, using texttwist game for teaching vocabulary has not been discussed yet. So, the writer will find out how texttwist game is used for teaching vocabulary. It will be studied at the tenth grade students of SMA Islam Ta’allumul Huda Bumiayu.

2.2 Review of Theoretical Study

The following section will be presented some theoretical studies which support the research. They are mentioned as follows:

2.2.1 Vocabulary

In this part, the writer would like to present some explanation about definition of vocabulary, elements of vocabulary, teaching and learning vocabulary, and the importance of mastering English vocabulary.

2.2.1.1. Definition of Vocabulary

In order to know what vocabulary is, the writer listed some definition of vocabulary:

- 1) Ur (1991: 60), “vocabulary can be defined, roughly, as the words we teach in the foreign language.”
- 2) Linse (2006: 121), “vocabulary is the collection of words that an individual knows.”
- 3) According to *The American Heritage Dictionary* in Pikulski and Templeton (2004), vocabulary is “the sum of words used by, understood by, or at the command of a particular person or group.”
- 4) Based on the *Collins Cobuild English Language Dictionary* in vocabulary of a *Teaching and Learning Vocabulary: An Introduction for English Students*, “language is the total number of words in it.”

- 5) According to Webster's New International Dictionary (1966: 2650), "vocabulary is a sum or stock of words employed by a language, group, individual, in a work in relation to a subject."

From some definitions of vocabulary above, the writer concludes that vocabulary is the number of words that is known and used by people.

2.2.1.2. Elements of Vocabulary

In teaching vocabulary, there are some needs to be taught. According to Ur (2006: 60), there are at least six needs in teaching vocabulary to be met:

- 1) Form: pronunciation and spelling

Pronunciation is what a word sounds like and spelling is what it looks like.

- 2) Grammar

An item may have an unpredictable change of form in certain grammatical contexts. For example, we might give also its past form (eat, ate,) or we may wish to present its plural form when teaching noun (mouse, mice).

- 3) Collocation

According to Cambridge, collocation is a word or phrase which is often used with another word or phrase, in a way that sounds correct to people who have spoken the language all their lives, but might not be expected from the meaning. For example, '*she has a beige car*' but not '*she has beige hair*'; and '*she has blond hair*' but not '*she has a blond car*'. So the word '*beige*' collocates with '*car*' and '*blond*' collocates with '*hair*'. ('*beige*' and '*blond*' have same meaning, it is *sejenis warna abu-abu dan coklat*)

4) Denotation, connotation, and appropriateness

Denotation is the meaning of word which is primarily what it refers to in the real world (rose: a kind of flowers; a garden plant with thorns on its stems and pleasant-smelling flowers). Connotation the associations, or positive or negative feelings it evokes, which may or may not be indicated in a dictionary definition (flower connotes women). Whereas, appropriateness is more subtle aspect of meaning; suitable or right for a particular situation or occasion.

5) Meaning relationships

- Synonyms : items that mean the same, or nearly the same (*big, huge, large*)
- Antonyms : items that mean the opposite (*diligent is an antonym of lazy*)
- Hyponyms : items that serve as specific example of a general concept (*rose, jasmine, orchid are hyponyms of flower*)
- Co-hyponyms or co-ordinates : other items that are the ‘same kind of thing’; *red, blue, green* and *brown* are co-ordinates

6) Word formation

Word-formation refers to understanding morphemes of a word; at least a word consists of one freestanding morpheme (McCarthy, 2003: 6). For example, the word ‘*writing*’ consists of a freestanding element ‘*write*’ and a non-freestanding element ‘*-ing*’.

2.2.1.3. Teaching and Learning Vocabulary

There are some steps in teaching vocabulary. Hatch and Brown (1995) in Cameron (2001:84) describe five essential steps in vocabulary learning based on research into learners' strategies. They are: (1) having sources for encountering new words; (2) getting a clear image, whether visual or auditory or both, for the forms of the new words; (3) learning the meaning of the words; (4) making a strong memory connection between the forms and meanings of the words; and (5) using the words. Besides, learning vocabulary is a process that always continues. Cameron (2001:84) states,

Vocabulary needs to be met and recycled at intervals, in different activities, with new knowledge and new connections developed each time the same words are met again. Looking at the five steps, we can see that each step is in fact something that needs to happen over and over again, so that each time something new is learnt, or remembered.

Learning vocabulary is important as a part of learning English or other foreign languages since learners learn vocabulary first before they master more complex structure. Linse (2006: 122) stated that "learners need to acquire vocabulary learning strategies in order to discover the meaning of new words."

Looking at the explanation above, it can be concluded that in order to have strong memorization of new words, learners need to meet the words they learn again and again then practice to use them both in spoken or written form. Thus, as English teachers, we need to facilitate and encourage students to learn and practice to use particular vocabulary again and again.

2.2.1.4. The Importance of Mastering English Vocabulary

Mastering English vocabulary can lead students to be succeeded in mastering English. The more students master vocabulary, the easier they get or catch any idea. Having much memory of vocabulary, it makes them effectively choose words to share their ideas. According to McKeown and Beck (2003) in Linse (2006: 122), “it is important to use both formal and informal vocabulary instruction that engage students’ cognitive skills and gives opportunities for the learners to actually see the words.” In addition, Linse (2006: 56) states “in learning a foreign language, vocabulary plays an important role”. It is one of the most important aspects of the foreign language learning. Rich vocabulary helps people understand and learns new words.

Hiebert (2005: 48) in his journal entitled *Teaching and Learning Vocabulary: Introduction for English Students* stated that “vocabulary is obviously an essential element within a language, and students should be made aware of its importance as experience shows that there is a general tendency to overemphasize grammar or function”. Vocabulary becomes an important thing in English, because vocabulary is the first basic important in learning English. When we will speak, write, read or listen in English, of course we can’t avoid the vocabulary. As we know that the lack of Vocabulary often brings many troubles for us (as English learners). When we are speaking English, sometimes we get trouble because we don’t know what we will say in English. We can not deny that vocabulary is one of important things in English learning.

2.2.2 Computer Games

In this part, the writer would like to present some explanation about computer games in teaching vocabulary and Texttwist 2 games.

2.2.2.1. Computer Games in Teaching Vocabulary

In teaching vocabulary, a teacher needs to use proper technique in order to help his students have good understanding on new words being learned. Learning vocabulary has been considered a boring subject for a long time. So, there should be an effective way in helping learners feel comfortable and interested in the subject of vocabulary. Huang (1996: 1) in Asian EFL Journal by Huyen pointed to the effectiveness of raising word consciousness by playing with words through games, song, and humour, and encouraging children to recognize when they have encountered new words and notice special characteristic of words.

Huang (1996: 2) in Asian EFL Journal by Huyen comes to a conclusion that:

"Learning through games could encourage the operation of certain psychological and intellectual factors which could facilitate communication heightened self-esteem, motivation and spontaneity, reinforcing learning, improving intonation and building confidence."

In addition, Lee (1995: 35) in Asian EFL Journal by Huyen lists several main advantages when games are used in the classroom, including "a welcome break from the usual routine of the language class", "motivating and challenging", "effort of learning", and "language practice in the various skills."

In summary, computer games are useful and effective tools that should be applied in vocabulary classes. The use of vocabulary is a way to make the lessons not only more interesting, enjoyable, and effective, but also practice it incidentally.

2.2.2.2. Texttwist 2 Games

Texttwist 2 game is game which is published by game house. The way of playing this game is by arranging some letters which are given by the teacher in order to form as many English words as possible within a certain period of time. The game is played in groups. The group which can arrange the most letters into English word will be the winner. By doing this game, unconsciously the students will recall, write, and discuss to find out English words. Moreover, the students will be more familiar with English words. In addition, they will unconsciously be motivated to look words up in dictionary.

English is the language used in this game. The players must be creative in creating some words from some letters given. It is provided over 25.000 to be formed. There are many possibilities words can be arranged from some letters. It is given about twenty columns for placing the words. The players have to arrange some words which consist of three letters or more. Every level of this game is different in giving letters. It is based on the computer.

It is given six jumbled letters, for example, to build as many as we can before time runs out. If we find a word that uses all the letters, we can advance to the next round. In building some words, we have to place the letter balls in the solution slots, use the mouse to click them. However, we can type the letters on

the keyboard. To remove a letter, we can press the BACKSPACE at the keyboard or click *Clear* to remove them all. We also can click *Twist* button to rearrange the letters to help us guess words. When we are ready to submit a word, click *Enter* button.

2.2.3 General Concept of Experimental Research

According to Christensen (2001: 23), “an experimental research is a research that attempts to identify cause and effect relationship.” In other words, experiment is the way to find the casual relationship between two factors which are raised by the researcher in purpose by reducing or eliminating any distracting factors.

While Nunan (1992: 47) adds that “the experimental research is design to collect data in such a way that treats to the reliability and validity of the research are ministered”

An experiment involves the comparison of the effects of the particular treatment with that of a different treatment or of no treatment. “In a simple conventional, experiment reference is usually made to an experimental group and control group” Best, (1981: 59). In other words, an experimental research tries to observe the cause and effect relation. Comparing one or more experimental groups who get a treatment with one or more control groups who do not get any treatment is the way to conduct experimental research.

Best (1981: 68-81) states that “there are three kinds of experimental research designs. They are pre-experimental research design, quasi experimental design, and true-experimental design. The pre-experimental design is a depth study of a particular situation. It is a method used to narrow down a very broad

field of research into one easily researchable topic. In this type of research design, the researcher is deliberately trying to isolate a small group, one individual case or one particular population. The researcher is much more of an observer than an experimenter and each case must be treated individually. A quasi experimental design is an experimental design that the subject of the research is not chosen randomly because there are two groups (experimental group and control group). Meanwhile, true-experimental design is an experimental design that there is a control group as a comparison and the subjects of the research are taken randomly.”

From the experimental design’s explanation above, in this study I used quasi experimental design because I need to compare between the experimental group and control group and the subject of this research is not chosen randomly.

According to Arikunto (2002: 136) instrument of research is a device used by the researcher while collecting data in order to make his work become easier and to get better result, complete, and systematic in order to make the data easy to be processed.

In addition, Best (2004: 3) described test that is a method of measuring a persons’ ability, knowledge, or performance in a given domain. From the explanation above, it can be concluded of the components of this definition. First, test is a method. Test is an instrument in which has set of techniques, procedures, or item that requires performance on the part of the test takers. Second, test must measure general ability while others focus on very specific competencies or objectives. I will use two groups; they are experimental group and control group. I

also conduct pre-test and post-test design as a measurement. It can be diagrammed as shown below:

E	O ₁	x	O ₂		(Arikunto, 2002: 79)
C	O ₃		O ₄		

Where:

E : Experimental group

C : Control group

X : Treatment for the experimental group (the use of self-assessment)

O₁ : Pre-test for experimental group

O₂ : Post-test for experimental group

O₃ : Pre-test for control group

O₄ : Post-test for control group

2.3 Theoretical Framework

There are some researchers who have done with their researches about teaching vocabulary in Senior High School or Junior High School. They used various methods or media to investigate their research. They also wanted to know whether their methods are effective or not. However, the writer does not find the same title research “the use of texttwist game for teaching vocabulary”. So, the writer would like to conduct a research which uses those researches as references.

The theoretical framework begun from the idea that vocabulary is one of the most important aspect students need to master in learning English. Mastering

vocabulary can lead students to be succeeded in mastering English. McCarthy (2003: viii) stated that no matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings, communication in an L2 just cannot happen in any meaningful way.

In an English class, students need a positive stimulus to make their learning easier and more effective. One of some ways to help students enrich English vocabulary is using a game. Therefore, the theoretical framework in this research has been driven by this theory and relevant empirical research that have been reviewed in the previous section.

Thus the writer conducted a quasi-experimental research. The participant of the research was the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu. The game the writer used to teach the students was Texttwist 2 Game. The research was to find out how texttwist game can be used and applied to the students in teaching vocabulary in the real class. The theoretical framework of this study can be illustrated in a following figure:

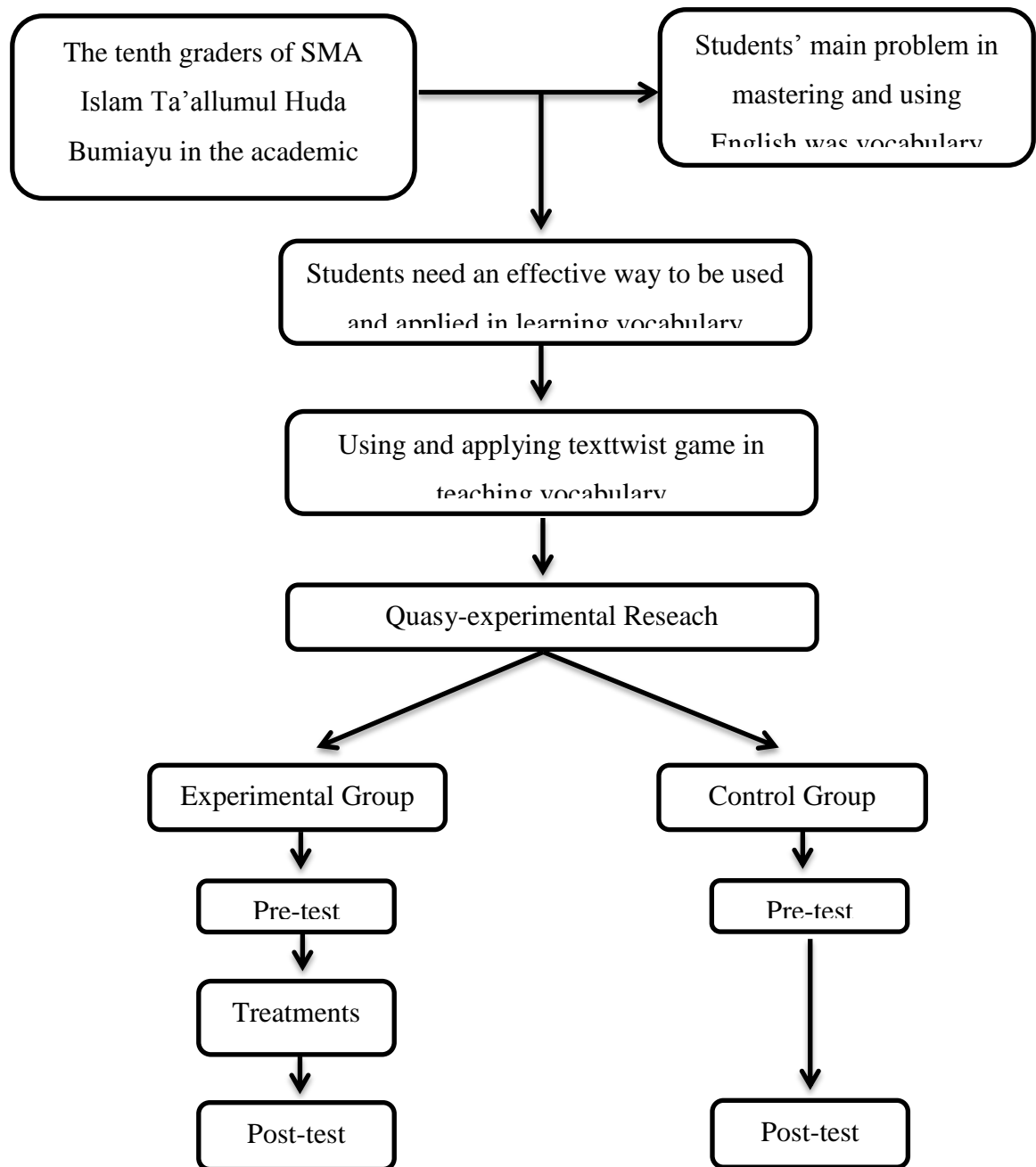


Figure 2.1

The Scheme of the Theoretical Framework

CHAPTER III

METHODS OF INVESTIGATION

This chapter presents the methods of investigation of this study. There are research design, subjects of the study, role of the researcher, type of data, research instruments, procedures of collecting data, and methods of analysing the data.

3.1 Research Design

A method used in this research is a quasi-experimental study. The writer conducted research by doing teaching and learning process in the classroom. According to my preliminary study, the writer determined the problem passed by the students in learning English was difficulty in learning English vocabulary. Thus, in this case, the research purpose was to learn and teaching English vocabulary through game. The writer wanted to know the use of the game for teaching vocabulary to the students of SMA Islam Ta'allumul Huda Bumiayu and whether the use of the game can improve the students' vocabulary or not.

The design this experiment could be described as the following:

E	0₁	X	0₂	(Arikunto, 2002: 79)
C	0₃		0₄	

Where :

- E : Experimental group
- C : Control group
- X : Treatment for the experimental group
- O₁ : Pre-test for the experimental group
- O₂ : Post-test for the experimental group
- O₃ : Pre-test for control group
- O₄ : Post-test for control group

The writer chooses the experimental research to get the required data and information. There are several definitions of experimental research which should be known.

According to Christensen (2001: 61), “the experimental research approach is a quantitative approach designed to ferret out cause-and-effect relationships. She (2001: 262) also added “a quasi-experimental design is an experimental design that does not meet all the requirements necessary for controlling the influence of extraneous variables”. In other words, experiment is the way to find the casual relationship between two factors which are raised by the researcher in purpose by reducing or eliminating any distracting factors.

In addition, Arikunto (2006: 84) stated that experimental research has a purpose to investigate whether there is an effort on doing something that is treated as the subject of the research. In other words, an experimental research tries to observe the cause and effect.

In this study, the writer divided the sample into two groups, namely experimental group (O_1) and control group (O_2). Both groups conducted pre-test and post-test. The experimental group also conducted the treatment. However, the control group did not conduct the treatment. A pre-test conducted in the beginning of the research. The writer asked the students to arrange several words from the jumbled letters which was given. The treatment which would be given was texttwist game (X). The writer asked the experimental group to play a texttwist game in several times. Besides, the writer also gave them quizzes for knowing their knowledge about the game. A post-test conducted in the last of research. The writer asked the experimental and the control group to arrange several words from the jumbled letters which was given. However, the jumbled letters would be different with the pre-test one. The writer also used field note during those activities. In addition, questionnaire was also given to the experimental group. The use of texttwist game for teaching vocabulary is shown by the differences between (O_1 - O_2) in the experimental group.

3.2 Subjects of the Study

The writer conducted this research at SMA Islam Ta'allumul Huda Bumiayu. It is located in Jl. Kh. Ahmad Dahlan No.99 Kalierang, Bumiayu.

3.2.1 Population

Population is an important matter in doing research. Christensen (2001:48) argues "A population refers to all the events, things, or individuals to be represented". Population is a group of people from which the data are collected. The population

of this study is the tenth graders of SMA Islam Ta'allumul Huda Bumiayu in the academic year 2014/ 2015 which consists of 187 students.

3.2.2 Sample

The writer conducted a quasi-experimental research in SMA Islam Ta'allumul Huda Bumiayu. Best (1981: 81) states that "A quasi-experimental design is an experimental design that the subject of the research is not chosen randomly because there are two groups (experimental group and control group)." In this study, the writer used class X MIPA 1 of SMA Islam Ta'allumul Huda Bumiayu, academic year 2014/ 2015 consisting of 31 students as the sample. The writer chose that class because the English lesson schedule of this class was every Wednesday at 10:15 a.m. until 14:00 p.m. That was convenient time for teaching English using game since it helped refresh students' brain after having some classes. In addition, the writer considered that it was better to give students stimulus in learning vocabulary earlier, so that they would have a lot of practicing.

3.3 Role of the Researcher

In this study, the writer holds some roles. First, the writer takes a role as an observer. The writer sees the condition of the class in order to know how the condition of the class. By asking to the teacher, the writer considers to choose one class to be an experimental group and one class to be a control group. Both groups are given pre-test and post-test. The tests are given in order to measure how far students understand the English vocabulary. By giving the tests, the writer collects all the students' worksheets. It means that the writer is called as a collector data.

After that, the writer analyses all of the data. In this case, the writer holds the rule of corrector.

3.4 Type of Data

In this study, there were two types of data that were used; they were quantitative and qualitative data.

3.4.1 *Quantitative Data*

The quantitative data in this research was the students' scores in forming several words. Their score was taken from pre-test, quizzes, and post-test.

3.4.2 *Qualitative Data*

The qualitative data of this research were field note and questionnaire. The field note was used to observe the students' participant and attitude during the treatment. Whereas, the questionnaire was used to get some data from students' opinion about the use of texttwist game for teaching vocabulary.

3.5 Procedures of Collecting Data

In this study, there were two tests, namely pre-test and post-test. Pre-test was given to both experimental and control group to measure the students' achievement in forming several words from the jumbled letters which was given. After having a treatment (play texttwist game) in the experimental group, post-test was given to both groups.

The writer also did some observations during the treatment by using field note. It was used to observe the students' participant and attitude. Besides, the

writer also used a questionnaire to get data from the students' opinion about the use of texttwist game for teaching vocabulary.

Table 3.1

Research Schedule

No.	Activities	April 14 th , 2015	May 13 nd , 2015	May 16 th , 2015	May 20 th , 2015	May 23 th , 2015
1.	Observation					
2.	Pre-test					
3.	Activity and Quiz 1					
4.	Activity and Quiz 2					
5.	Post-test					
6.	Questionnaire					

Table 3.2

Research Outline

Activities	Date	Details	Time Allotment
Preliminary Study	April 14 th 2015	<ul style="list-style-type: none"> - Joined X MIPA 1 English class. - Observed the situation during the class, included the students' attitude and behaviour. - Asked the students about English lesson. - Asked their difficulties in studying English. 	1 x 45 minutes
Pre-test	May 13 th , 2015	<ul style="list-style-type: none"> - Students were given a pre-test and did it in the given time. 	1 x 30 minutes

Activity 1 and Quizz 1	May 16 th , 2015	<ul style="list-style-type: none"> - Students were given an explanation about Texttwist game - In the class, each student was given chance to play Texttwist game - The game was demonstrated using a LCD. - Students were asked to play the game individually and learn new words in the game. - Students and teacher reviewed some words that students learned. - Students did Quizz 1 	2 x 45 minutes
Activity 2	May 20 th , 2015	<ul style="list-style-type: none"> - Students were given an explanation about Texttwist game - In the class, each student was given chance to play Texttwist game - The game was demonstrated using a LCD. - Students were asked to play the game individually and learn new words in the game. - Students and teacher reviewed some words that students learned. Students did Quizz 2 	1 x 45 minutes
Post-test	May 23 th , 2015	<ul style="list-style-type: none"> - Students were given a pre-test and did it in the given time. 	1 x 45 minutes
Questionnaire	May 23 st , 2015	<ul style="list-style-type: none"> - Each student was asked to answer 5 questions of questionnaire. 	1 x 45 minutes

3.6 Instrument for Collecting Data

In a research, instrument is important. The instrument was made in order to measure the students' achievement in a research. In this study, the instruments

which was used in this study were field note, questionnaire, and tests including pre-test, quizzes, and post-test.

3.6.1 Field Note

McNiff (1997: 76) claimed that teacher needs to systematically keep notes of the class situation. The writer did some observations by using field note. The writer kept noting the situation of the teaching and learning process. It was used to observe the students' participant and attitude.

3.6.2 Questionnaire

In this study, the writer also gave the students questionnaire. It was given in the last part of the observation. It was about the teaching and learning process done. It was a feedback from the students after getting the treatment. The questionnaire was open-ended items. According to Burns (2010: 85), these are items that look for free-from response. The responses usually are short, but they give researcher information that may not be easily captured numerically.

3.6.3 Tests

Beside field note and questionnaire, the writer also used some kinds of test. They were pre-test, quizzes, and post-test. Saleh (2012:45) argues "The most appropriate tool to measure ability is test". The pre-test was given in the beginning of collecting data. It was given to measure how far students understand

the English vocabulary. The test conducted in a class that students were not allowed to use any dictionary.

The second test was quiz. The aim of this quiz was to measure how many vocabularies the student achieved after they were given the treatment. It contained one part which the students were asked to arrange some words from the jumbled letters and mention the Indonesian meaning. This quiz was conducted in a group. So, the writer divided the students into some groups consist of 5-6 students. They were asked to arrange the jumble letters given by the computer. However, they had to play in rotation. The group which collected the most words was the winner.

After doing a teaching and learning process which included a treatment given to students, which was using the Texttwist game in enriching students' vocabulary, students were given a post-test. It was given in order to find whether there was an improvement in their achievement on English vocabulary or not after given the treatment.

3.7 Methods of Analyzing the Data

In this study, the writer used three instruments to collect data. They were field note, questionnaire, and tests. The methods of analyzing data were conducted in the following ways:

3.7.1 Field Note

The field note was about students' participation and attitude during the class or observation. It was analyzed using this following table:

Table 3.3
Field note

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participatipation			Interation between student and teacher			Languange used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

Scale for class participation

1 = always participate from the beginning to the end

2 = often in participation from the beginning to the end

3 = rare in participate from the beginning to the end

Scale for students' attitude

1 = always enthusiastic in the class from the beginning to the end

2 = often in enthusiastic in the class from the beginning to the end

3 = rare in enthusiastic in the class from the beginning to the end

3.7.2 Questionnaire

There were five questions included in the questionnaire. Type of the items was an open-ended. According to Burns (2010: 85), open-ended items are items that look for a free-form response. Although the responses are fairly short, but they give useful information that may not be easily captured numerically.

The writer analyzed the questionnaire per item by inferring all of the students' answers. It was helpful that their responses could give the writer information of their ideas about the method the writer used and also the game the writer gave in enriching vocabulary.

3.7.3 Tests

The process of doing the pre-test and post-test would be analyzed. The writer provided 20 columns for students to arrange the words from the jumbled letters given. The writer analyzed how many words could be arrange by students from

the jumbled words. The analysis was supported by the students' answer sheets.

Each item of the test was counted using the following rubric:

Accounting the quiz was based on the number of words which was arranged by the students when they played the game in a group. They were asked to arrange the jumble letters given by the computer. However, they had to play in rotation. The group which collected the most words was the winner. The score would be calculated based on the number of words they arranged.

Table 3.4

Assessment Rubric for Quizzes

No.	Criteria	Point
1.	Correct answer	1
2.	Incorrect answer	0

Score : correct answer \times 10

For the pre-test and post-test, by using the following rubric, we can know how many words that the students mastered for the final. It will be assessed using rubric:

Table 3.5**Assessment Rubric for Pre-test and Post-test**

Number of Vocabulary	Correct	Almost correct	Incorrect
Vocabulary	2	1	0

Then, the result of the data counts is counting down the right answer in every the students' worksheet with this formula.

Formula:

$$\text{Score} : \frac{B}{N} \times 100$$

$$\text{Maximum score} : \frac{20}{20} \times 100$$

Note:

B: right answer

N: total of the test item

The use of texttwist game for teaching vocabulary is shown by the differences between (O₁-O₂) in the experimental group. Then, the writer measured whether there was an improvement from pre-test to post-test using this formula:

$$\text{Percentage} = \frac{\bar{x}_1 - \bar{x}_2}{\bar{x}_2} \times 100\%$$

\bar{x}_1 = mean of pre-test score

\bar{x}_2 = mean of post-test score

CHAPTER V

CONCLUSION AND SUGGESTIONS

This chapter presents conclusion of the study based on the result of the study and suggestions based on the finding of the analyses.

5.1 Conclusion

The objectives of this study are to describe how the texttwist game is used in teaching vocabulary to the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu in the academic year of 2014/ 2015 and to find out whether the use of texttwist game can improve the students' vocabulary or not. After conducting the research, there are some points which could be taken as the conclusion, they were:

Firstly, based on the questionnaire analysis, texttwist game could be used in teaching vocabulary. The used of this game to teach vocabulary to the tenth grade students' of SMA Islam Ta'allumul Huda Bumiayu, academic year 2014/ 2015, run well. All of the students liked the Texttwist game. It was proved by students' answers in the questionnaire. They liked the Texttwist game because the Texttwist game was fun and interesting. It also made them enjoy in learning English. By playing the game, the students could understand and remember new vocabulary easily. They could play the game while learning English vocabulary.

Secondly, based on the data analyses, the writer found that there are significant differences in the mean scores of both group. In the experimental group, the mean score in the pre-test is 52,01. However, after being treated using Texttwist game, the mean score of post-test was 69,8. It was calculated whether

there was an improvement or not. The result showed that there was an improvement of the students, score at 34,20 %. It was also proven by t-test. The writer calculated the t-test to know the significance. From the t-test, t_{value} (10,10) was higher than the t_{table} (1,99).

5.2 Suggestions

The following are some suggestions that could be taken based on the findings and discussion of this study for English teaching and learning to enrich students' vocabulary.

Theoretically, Texttwist game will help students, especially the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu to motivate them in learning English and improve their English vocabulary. For English teachers, they should give the interesting method to the students. It is in order to make them fun and enjoy in learning English. The teachers also should have something new and interests in order to make the student are not bored. Moreover, teachers can build students' motivation in learning English. For the next researchers, the writer hopes that this research could be the one of the references for the further research dealing with vocabulary. The writer also hopes that this research can give more information about the use of Texttwist game in teaching English vocabulary.

Practically, students should use Texttwist game to help them improve their English vocabulary mastery. For the teachers, they can apply the Texttwist game in order to guide the students in learning English, especially learning English vocabulary. For the next researchers, they can use Texttwist game or another interesting activities to be applied in teaching and learning process.

Pedagogically, students are expected to be able to improve their English vocabulary easily through a fun way. This research has shown that Texttwist game can be used for teaching vocabulary at the tenth grade students of SMA Islam Ta'allumul Huda Bumiayu in the academic year 2014/ 2015. For the teachers, they should use an interesting technique for teaching and learning English, especially English vocabulary, so that, they will not face difficulties in learning English. For the next researchers, they are expected to do further research dealing with vocabulary by regarding this research in order to answer the teaching problems and to expand knowledge about teaching and learning English, especially teaching and learning vocabulary.

REFERENCES

- Arikunto, Suharsimi. 2007. *Dasar-Dasar Evaluasi Pendidikan (Edisi Revisi)*. Jakarta: Bumi Aksara.
- Astuti, J. P. 2014. *The Use of Cooking Academy Game to Enrich Vocational Students' English Vocabulary (A Classroom Action Research at the Tenth Grade Students of SMK N 1 Mojosongo in the Academic Year of 2012/2013)*. Final project of english department, semarang state university.
- Aulia, N. S. 2013. *Journal of English Language Teaching: The Use of Manual Super Texttwist Game to Improve Students' English Vocabulary Mastery*. 2/3: 1-15.
- Best, H. D. 2004. *Language Assessment: Principles and Classroom Practices*. New York: Pearson Education, Inc.
- Bintz, W.P. 2011. *Teaching Vocabulary across the Curriculum. Middle School Journal*. Available at <http://littoolkit.pbworks.com/f/Middle%2520School%2520Vocabulary%2520Strategies.pdf> [accessed 19/5/2013]
- Burns, A. 2010. *Doing Action Research in English Language Teaching (A Guide for Practitioners)*. New York: Routledge.
- Cameron, Lynne. 2001. *Teaching Language to Young Learners*. Cambridge: Cambridge University Press.
- Christensen, L.B. 2001. *Experimental Methodology (8th Edition)*. USA: A Pearson Education Company.

- Hiebert, E.H. and Michael L. K. 2005. *Teaching and Learning Vocabulary; Bringing Research to Practice*. London: Lawrence Erlbaum Associates.
- Hornby, A. S. 2005. *Oxford Advanced Learner's Dictionary (7th edition)*. Oxford: Oxford University Press.
- Huyen, Nguyen T.T. 2012. *Asian EFL Journal: Learning Vocabulary Through Games; The Effectiveness of Learning Vocabulary Through Games*. [Online.] available at <http://asian-efl-journal.com/quarterly-journal/2003/12/31/learning-vocabulary-through-games-the-effectiveness-of-learning-vocabulary-through-games/#thethe-tabs-1-> [accessed on 21/02/2015].
- Linse, Caroline, T. 2006. *Practical English Language Teaching: Young Learners*. Singapore: Singapore Press.
- McCarten, J. 2007. *Teaching Vocabulary; Lessons from the Corpus, Lessons for the Classroom*. Cambridge: Cambridge University Press.
- McCarthy, M. 2003. *Language Teaching: Vocabulary*. New York: Oxford University Press.
- McNiff, J. 1997. *Action Research: Principles and Practice*. New York: Routledge.
- Mujiyanto, Yan. 2011. *Petunjuk Penulisan Skripsi*. Semarang: Semarang State University Press.
- MyPlayCity.com. 2012. *Texttwist 2*. Available at <http://www.myplaycity.com/game/texttwist2/> [accessed on 16/02/2015].
- Nation, P. 1997. *Teaching Vocabulary*. *Asian EFL Journal*. [Online.] Available at http://www.asian-efl-journal.com/sept_05_pn.pdf [accessed on 23/01/2013].

- Nunan, D. 2003. *Practical English Language Teaching (1st edition)*. New York: McGraw-Hill companies.
- Nurrahman, I. 2013. *The Effectiveness of Make a Match Game in Teaching Vocabulary (An Experimental Study at First Grade of SMK Wicaksana Al Hikmah 2 Benda)*. Final project of english department, Purwokerto Muhammadiyah University.
- Pikulski, J. J. and S. Templeton. 2004. *Current Research: Teaching and Developing Vocabulary: Key to Long-Term Reading Success*. U.S.A.: Houghton Mifflin Company.
- Putri, Dilla. 2013. *The Use of Jigsaw II Technique and Still Pictures Combination to Improve Students' Vocabulary (Action Research at the First Year of SMP N 12 Magelang in the Academic Year of 2012-2013)*. Final Project of English Department, Semarang State University.
- Ruddell, M. R. 2005. *Teaching Content Reading and Writing (4th edition)*. United States of America: John Wiley & Sons, Inc.
- Saleh, M. 2012. *Linguistic and Educational Research*. Semarang: UNNES Press
- Sudjana. 2002. *Metoda Statistika edisi 6*. Bandung: Tarsito press
- Ur, Penny. 2006. *A Course in Language Teaching Practice and Theory*. Cambridge: Cambridge University Press.
- Vossoughi, H and Zargar, M. 2009. *Journal of Teaching English as a Foreign Language and Literature of Islamic Azad University of Iran: Using Word-Search-Puzzle Games for Improving Vocabulary Knowledge of Iranian EFL Lsearners*.
- Walter, E. 2008. *Cambridge Advance Learners' Dictionary (3rd edition)*. New York: Cambridge University Press.

Appendices

Appendix 1

Permission Letter from Dekanat


KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS NEGERI SEMARANG
FAKULTAS BAHASA DAN SENI
 Gedung B0, Kampus Sekeloa, Gunungpati, Semarang 50229
 Telp./Fax (024) 8508010, Email: bs@unnes.ac.id
 Laman: <http://bs.unnes.ac.id>

Nomor : 1614/UN37.1.2/LT/2015
 Lamp. : -
 Hal. : **Permohonan Izin Penelitian**

Yth. Kepala SMA Islam Taalumul Huda Bumiayu
 di tempat.

Dengan hormat kami bertabukan bahwa dalam rangka penyusunan skripsi mahasiswa kami,

nama	Melita Nurdianita
nim	2201411046
jurusan	Bahasa dan Sastra Inggris
program studi	Pendidikan Bahasa Inggris
jenjang	S1
tahun akademik	2014/2015
judul	The Use of Textwist Game For Teaching Vocabulary.

akan mengadakan penelitian di **SMA Islam Taalumul Huda Bumiayu**, waktu pelaksanaan **April 2015 s.d. Mei 2015**. Untuk itu kami mohon Saudara berkenan memberikan izin kepada mahasiswa di atas untuk keperluan tersebut.

Atas perhatian dan kerja sama Saudara, kami sampaikan terima kasih.

Semarang, 18 April 2015
 Dekan,

Prof. Dr. Agus Nuryatin, M.Hum.
 nip 196008031989011001

Tembusan:
 1. Pembantu Dekan Bidang Akademik
 2. Ketua Jurusan
 3. Peringgal

FM-05-AKD-24

Appendix 2

Decision Letter from Dekanat



**KEPUTUSAN
DEKAN FAKULTAS BAHASA DAN SENI
UNIVERSITAS NEGERI SEMARANG
Nomor: 382/FBS/2015**

**Tentang
PENETAPAN DOSEN PEMBIMBING SKRIPSI/TUGAS AKHIR SEMESTER
GASAL/GENAP
TAHUN AKADEMIK 2014/2015**

Menimbang : Bahwa untuk memperlancar mahasiswa Jurusan/Prodi BAHASA & SASTRA INGGRIS/Pend. Bhs. Inggris Fakultas Bahasa dan Seni membuat Skripsi/Tugas Akhir, maka perlu menetapkan Dosen-dosen Jurusan/Prodi BAHASA & SASTRA INGGRIS/Pend. Bhs. Inggris Fakultas Bahasa dan Seni UNNES untuk menjadi pembimbing.

Mengingat : 1. Undang-undang No.20 Tahun 2003 tentang Sistem Pendidikan Nasional (Tambahan Lembaran Negara RI No.4301, penjelasan atas Lembaran Negara RI Tahun 2003, Nomor 78)
2. Peraturan Rektor No. 21 Tahun 2011 tentang Sistem Informasi Skripsi UNNES
3. SK. Rektor UNNES No. 164/O/2004 tentang Pedoman penyusunan Skripsi/Tugas Akhir Mahasiswa Strata Satu (S1) UNNES.
4. SK Rektor UNNES No.162/O/2004 tentang penyelenggaraan Pendidikan UNNES.

Menimbang : Usulan Ketua Jurusan/Prodi BAHASA & SASTRA INGGRIS/Pend. Bhs. Inggris Tanggal 3 Februari 2015.

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Menetapkan
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Untuk membimbing mahasiswa penyusun skripsi/Tugas Akhir:
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Topik : The Use of 'Texttwist' Game for Teaching Vocabulary
(A True Experimental Study at The Tenth Grade Students of SMA Unggul Semarang)

UNNES
SEMARANG
4 Februari 2015

KEDUA : Keputusan ini mulai berlaku sejak tanggal ditandatangani.

Tembusan
1. Pembantu Dekan Bidang Akademik
2. Ketua Jurusan
3. Petinggi


Drs. Agus Nuryatin, M.Hum.
NIP 196006031989011001

2201411046
RW-43-AMD-24Rev. 02

Appendix 3

Observation Letter from SMA Islam Ta'allumul Huda Bumiayu


YAYASAN WAKAF PERGURUAN TA'ALLUMUL HUDA BUMIAYU
SEKOLAH MENENGAH ATAS
SMA ISLAM T. HUDA BUMIAYU
TERAKREDITASI A

Alamat : J. KH. Ahmad Dahlan no. 99 Kalerang Telp. (0289) 432467, 5102030 Fax. (0289) 432467 Bumiayu 52273
 NSS : 302032903021 NDS/NIS : C. 08114007300210

SURAT KETERANGAN
 Nomor : 196/SMA.Ib/P.16/V/2015

Yang bertanda tangan dibawah ini :

Nama : H. Tasripin, S.Pd
 NIP : 196212172000121001
 Pangkat / Golongan : Penata / III.c
 Jabatan : Kepala Sekolah
 Unit Kerja : SMA Islam T. Huda Bumiayu

Menerangkan bahwa :

Nama : Meitia Nurdianita
 NIM : 2201411046
 Jurusan : Bahasa dan Sastra Inggris
 Universitas : Universitas Negeri Semarang (UNNES)

Yang bersangkutan tersebut benar telah melaksanakan penelitian di SMA Islam T. Huda Bumiayu, mulai tanggal 14 April s.d 23 Mei 2015, dalam rangka penyusunan skripsi dengan judul "THE USE OF TEXTTWIST GAME FOR TEACHING VOCABULARY"

Demikian surat keterangan ini kami buat, untuk dapat digunakan sebagaimana mestinya.

Dibuat di : Bumiayu
 Pada Tanggal : 29 Mei 2015

Kepala Sekolah

H. Tasripin, S.Pd.
 NIP. 196212172000121001



Appendix 4

List of the students of the experimental and control group SMA Islam Ta'allumul Huda Bumiayu

Experimental group (X MIPA 1)

No.	Students' Code	Name	F/ M
1	E-1	Aditya Maulan H.	M
2	E-2	Agi Khaerunnisa	F
3	E-3	Aulyana Prameswara	F
4	E-4	Della Khumaeroh	F
5	E-5	Dhea Sakila Besti	F
6	E-6	Efa Meliana	F
7	E-7	Fachrizal Joddy Prabowo	M
8	E-8	Friski Mirza Amyzani	F
9	E-9	Hastin Nur Alti Beltin	F
10	E-10	Himatul Ulya	F
11	E-11	Isna Fatkhiyatul Azka	F
12	E-12	Lantiq Satya Sejati	F
13	E-13	M. Azie Aenun Nazib	M
14	E-14	M. Azyanal Masyruh	M
15	E-15	M. Valdi Haris S.	M
16	E-16	Mia Azkia Arini	F
17	E-17	Milkha Amalia	F
18	E-18	Mita Azizah Mubarokah	F
19	E-19	M. Zulfa Ladun H.	M
20	E-20	M. Bagus P.	M
21	E-21	Nada Imani Sholihah	F
22	E-22	Nasrul Mujib	M
23	E-23	Norma Ayu Safitri	F
24	E-24	Nugraha Primanda A.P.	M

25	E-25	Nur Athfi Oktafiyanti	F
26	E-26	Nurika Dewi Febriyani	F
27	E-27	Sukma Laudya Shara	F
28	E-28	Tiara Rizki Kesumaningrum	F
29	E-29	Venly Olivia Putri Rozaly	F
30	E-30	Vigi Laela Nuzia Rahma	F
31	E-31	Wiwit Amelia Wulandari	F

Control group (X BAHASA 5)

No.	Students' Code	Name	F/ M
1	C-1	Agustiono	M
2	C-2	Ahmad Nadir	M
3	C-3	Arina Octavia Monica	F
4	C-4	Aliefa Faazani	F
5	C-5	Antar Z.	M
6	C-6	Bayu Giri Ferdiansyah	M
7	C-7	Desilia Ramadani	F
8	C-8	Diaz Rizki Maharani	F
9	C-9	Diffa Amalia Pratiwi	F
10	C-10	Farinda Eka Putri	F
11	C-11	Febriya Junarti	F
12	C-12	Firda Kharimatus Silfa	F
13	C-13	Firdan Khawafi	M
14	C-14	Genny Jovanka	M
15	C-15	Gina Indriyani	F
16	C-16	Ila Azizah	F
17	C-17	Intan Nur C.	F
18	C-18	Khoerunnisa	F
19	C-19	Khofiatus Syukur	F

20	C-20	Khudefa Ukhrima	F
21	C-21	Lina Alfiani	F
22	C-22	Malini Zakila	F
23	C-23	Meita Ambarwati	F
24	C-24	M. Khaerul Mizan	M
25	C-25	M. Aswin Himawan	M
26	C-26	Nazalul Fadli Akbar	M
27	C-27	Naeli Nihayah	F
28	C-28	Rana Alfakhatin Auliya	F
29	C-29	Raffi Bawazier	M
30	C-30	Rizka Yunita	F
31	C-31	Safan Adifa	M
32	C-32	Silvia Reza Rahmadani	F
33	C-33	Sinta Ainun Mubarakah	F
34	C-34	Sinta Anggraeni	F
35	C-35	Sinta Arum Muzelva	F
36	C-36	Ulvi Sulhiati	F
37	C-37	Vina Asriana	F
38	C-38	Yana Ameria Ursela	F
39	C-39	Yuyun Kharismawati	F

Appendix 5

Screenshot examples of texttwist game



Appendix 6**Pre-test**

Name :

Number :

Class :

Instruction**Form some words from the letters provided !**

E	S	R	A	F	W
----------	----------	----------	----------	----------	----------

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

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15.

16.

17.

18.

19.

20.

Appendix 7**Pre-Test Key answer**

1. Sea : Laut
2. War : Perang
3. Saw : Melihat/ Gergaji
4. Wear : Memakai
5. Sear : Kering/ Membakar
6. Raw : Mentah
7. Far : Jauh
8. Fare : Ongkos
9. Was : To be/ Adalah
10. Fear : Takut
11. Safe : Aman/ Peti Besi/ Selamat
12. Are : To be/ Adalah
13. Ware : Barang
14. Ear : Telinga
15. Wars : Perang
16. Sew : Menjahit
17. Few : Sedikit
18. Era : Jaman/ Masa
19. We : Kami/ Kita
20. Wafer : Wafer
21. Wafers: Wafer
22. As : Sebagai
23. Rase : Memusnahkan
24. Ease : Kesenangan
25. Awe : Mengagumkan/ Terpesona
26. Serf : Hamba/ Budak
27. Swear : Sumpah
28. Weft : Pakan
29. Res : Perihal
30. Eras : Zaman
31. Wares : Barang

Appendix 8

Students' Score of Pre-Test

No.	Students' symbol	Pre-test
1	E-1	52,5
2	E-2	50
3	E-3	45
4	E-4	37,5
5	E-5	75
6	E-6	70
7	E-7	35
8	E-8	67,5
9	E-9	62,5
10	E-10	60
11	E-11	37,5
12	E-12	32,5
13	E-13	45
14	E-14	32,5
15	E-15	27,5
16	E-16	80
17	E-17	27,5
18	E-18	37,5
19	E-19	42,5
20	E-20	67,5
21	E-21	67,5
22	E-22	27,5
23	E-23	55
24	E-24	27,5
25	E-25	60
26	E-26	37,5
27	E-27	72,5
28	E-28	65
29	E-29	75
30	E-30	60
31	E-31	17,5

No.	Simbol Siswa	Pre-test
1	C-1	70
2	C-2	30
3	C-3	30
4	C-4	55
5	C-5	-
6	C-6	35
7	C-7	70
8	C-8	60
9	C-9	27,5
10	C-10	65
11	C-11	57,5
12	C-12	47,5
13	C-13	52,5
14	C-14	67,5
15	C-15	67,5
16	C-16	62,5
17	C-17	-
18	C-18	60
19	C-19	67,5
20	C-20	55
21	C-21	42,5
22	C-22	47,5
23	C-23	47,5
24	C-24	65
25	C-25	55
26	C-26	37,5
27	C-27	30
28	C-28	62,5
29	C-29	60
30	C-30	62,5
31	C-31	52,5
32	C-32	45

33	C-33	75
34	C-34	62,5
35	C-35	60
36	C-36	12,5
37	C-37	22,5
38	C-38	65
39	C-39	-
	Mean	52

Appendix 9

Example of Students' Work on Pre-Test

Pre-test

Name : Hastin Nur Alb Bertin

Number : 09

Class : X-1 / MIPA

Instruction

Form some words from the letters provided !

E	S	R	A	F	W
---	---	---	---	---	---

- | | | |
|--------------------------|-----------------------|--------------------------------------|
| 1. are = to be 2 | | 11. awe = per terpesona 2 |
| 2. was ware 1 | | 12. rase = memusnahkan 2 |
| 3. safe = besi 1 | | 13. ear = per |
| 4. was = to be 2 | $\frac{25}{4} = 6,25$ | 14. ear = telinga 2 |
| 5. fare = biaya 2 | | 15. saw = melihat 2 |
| 6. far = jauh 2 | | 16. |
| 7. sea = laut 2 | | 17. |
| 8. sear = membakar 2 | | 18. |
| 9. swear = janji 2 | | 19. |
| 10. wear = pakaian 1 | | 20. |

Pre-test

Name : SINTA ARUM MURIELVA

Number : 35

Class : X5 / Bahasa

Instruction

Form some words from the letters provided !

E	S	R	A	F	W
---	---	---	---	---	---

- | | |
|---------------------------|---------------------|
| 1. safe : peti besi ~ | 11. ease : mudah |
| 2. War : perang ~ | 12. fare : ongkos ~ |
| 3. sea : laut ~ | 13. rare : suka ~ |
| 4. fer fer : ~ | 14. fear : takut ~ |
| 5. ear : telinga ~ | 15. wafer : wafer ~ |
| 6. was : adalah ~ | 16. |
| 7. far : jauh ~ | 17. |
| 8. wear : memakai ~ | 18. |
| 9. saw : melihat ~ | 19. |
| 10. raw : mentah ~ | 20. |

$$\frac{24}{4} = 6$$

Appendix 10**Post-test**

Name :

Number :

Class :

Instruction**Form some words from the letters provided !**

E	P	N	L	R	A
----------	----------	----------	----------	----------	----------

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

Appendix 11**Post-Test Key Answer**

1. Pen : Pulpen
2. Ran : Berlari
3. Lap : Putaran
4. Are : To be/ Adalah
5. Era : Jaman/ Masa
6. Ear : Telinga
7. Pearl : Mutiara
8. Real : Nyata
9. Plane : Pesawat
10. Plan : Rencana
11. Pea : Kacang Polong
12. Pear : Buah pir
13. Near : Dekat
14. Leap : Lompatan
15. Per : Tiap
16. Nap : Tidur Sebentar
17. Nape : Tengukuk
18. Rap : Ketokan/ Kesalahan/ Hukuman
19. Reap : Memungut
20. Pale : Pucat
21. Earl : Gelar Bangsawan
22. Learn : Mempelajari
23. Pre : Sebelum
24. Lane : Jalan Raya
25. Pan : Wajan/ Periuk
26. Ape : Kera
27. Lean : Kurus
28. Pare : Mengupas
29. Pal : Sahabat
30. Panel : Sehelai Papan
31. Planer : Perencana
32. Lea : Padang Rumput
33. Pane : Kaca
34. Earn : Gaji
35. Ren : Dahan
36. Arena : Tempat Tanding
37. Elan : Semangat

Appendix 12

Students' Score of Post-Test

No.	Students' symbol	Post-test	Students' symbol	Post-test
1	E-1	82,5	C-1	75
2	E-2	92,5	C-2	25
3	E-3	70	C-3	42,5
4	E-4	27,5	C-4	45
5	E-5	50	C-5	-
6	E-6	77,5	C-6	37,5
7	E-7	30	C-7	30
8	E-8	50	C-8	70
9	E-9	82,5	C-9	37,5
10	E-10	92,5	C-10	75
11	E-11	80	C-11	37,5
12	E-12	85	C-12	70
13	E-13	70	C-13	67,5
14	E-14	92,5	C-14	85
15	E-15	57,5	C-15	72,5
16	E-16	77,5	C-16	82,5
17	E-17	82,5	C-17	-
18	E-18	67,5	C-18	80
19	E-19	72,5	C-19	62,5
20	E-20	85	C-20	72,5
21	E-21	75	C-21	35
22	E-22	65	C-22	72,5
23	E-23	57,5	C-23	65
24	E-24	82,5	C-24	62,5
25	E-25	87,5	C-25	80
26	E-26	70	C-26	42,5
27	E-27	82,5	C-27	25

28	E-28	72,5	C-28	77,5
29	E-29	87,5	C-29	85
30	E-30	37,5	C-30	75
31	E-31	22,5	C-31	72,5
	\bar{x}	69,8	C-32	65
			C-33	55
			C-34	77,5
			C-35	77,5
			C-36	17,5
			C-37	30
			C-38	77,5
			C-39	-
				60

Appendix 13

Example of Students' Work on Pre-Test

Post-test

Name : Hastin Nur Alfi Bertin
 Number : 09
 Class : X.1

Instruction
 Form some words from the letters provided !

E	P	N	L	R	A
---	---	---	---	---	---

1. Ron 1
2. Pen 1
3. leo = Padang rumput 2
4. Pea = kocang polong 2
5. Are 1
6. ~~Near~~ = tide air perbani 1
7. Near = debat 2
8. Lap = pangkuan 1
9. Pale = batas 1
10. Pan = panci 2
11. Ape = stamang 2
12. Pap = ketokan 2
13. ~~Pen~~ = ~~per~~ plane = pesawat 2
14. Lane = jalan keal 2
15. Nap = tidur sebentar, bulu halus 2
16. Peal = gemunah 2
17. Elan = semangat 2
18. Nape = tuduk, serguk 2
19. Penal = mengenai hukum, undang-undang 2
20. Ron = dahan 2

$$\frac{33}{4} = 8,25$$

Post-test

Name : SINTA ARUM MUZEIVA

Number : 35

Class : X 5 / bahasa

Instruction

Form some words from the letters provided !

E	P	N	L	R	A
---	---	---	---	---	---

- | | |
|---------------------------------|-------------------------------|
| 1. <u>plane</u> : pesawat 2 | 11. <u>learn</u> : belajar 2 |
| 2. <u>Rap</u> : kesalahan 2 | 12. <u>pen</u> : pulpen 2 |
| 3. <u>Ear</u> : telinga 2 | 13. <u>Dale</u> : batas 1 |
| 4. <u>Real</u> : nyata 2 | 14. <u>pal</u> : sahabat 2 |
| 5. <u>Ape</u> : kera 2 | 15. <u>pane</u> : kaca 2 |
| 6. <u>Near</u> : dekat 2 | 16. <u>Dan</u> : penggereng 2 |
| 7. <u>Ran</u> : lari 2 | 17. _____ |
| 8. <u>Pre</u> : sebelumnya 2 | 18. _____ |
| 9. <u>Era</u> : zaman 2 | 19. _____ |
| 10. <u>Lane</u> : jalan kecil 2 | 20. _____ |

$$\frac{31}{4}$$

7.75

Appendix 14**Students' Score of Quizz**

No.	Students' symbol	Quizz
1	E-1	24
2	E-2	25
3	E-3	24
4	E-4	24
5	E-5	21
6	E-6	25
7	E-7	25
8	E-8	24
9	E-9	24
10	E-10	24
11	E-11	21
12	E-12	24
13	E-13	25
14	E-14	24
15	E-15	21
16	E-16	24
17	E-17	25
18	E-18	24
19	E-19	24
20	E-20	24
21	E-21	21
22	E-22	21
23	E-23	24
24	E-24	25
25	E-25	24
26	E-26	21
27	E-27	24
28	E-28	24
29	E-29	24
30	E-30	25
31	E-31	24

Appendix 15

Field note

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participatipation			Interation between student and teacher			Language used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

Scale for class participation

1 = always participate from the beginning to the end

2 = rare in participate from the beginning to the end

3 = no participate

Scale for students' attitude

1 = always enthusiastic in the class from the beginning to the end

2 = rare in enthusiastic in the class from the beginning to the end

3 = no enthusiastic in the class from the beginning to the end

Appendix 16

Fieldnote analysis

Meeting : 1st Meeting

Date : May, 13th 2015

Field Note

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participatipation			Interation between student and teacher			Language used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	E-1	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
2	E-2	-	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-	√	-
3	E-3	-	√	-	√	-	-	-	√	-	√	-	-	-	√	-	√	-	-
4	E-4	-	√	-	-	-	√	-	√	-	-	√	-	-	-	√	-	√	-

5	E-5	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-
6	E-6	√	-	-	-	√	-	√	-	-	-	√	-	-	√	-	√	-	-
7	E-7	-	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-
8	E-8	-	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-	√	-
9	E-9	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-	√	-	-
10	E-10	√	-	-	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-
11	E-11	-	√	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
12	E-12	√	-	-	-	√	-	√	-	-	√	-	-	√	-	-	-	√	-
13	E-13	-	-	√	-	√	-	-	√	-	-	-	-	√	-	-	-	-	√
14	E-14	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
15	E-15	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√
16	E-16	√	-	-	√	-	-	-	√	-	√	-	-	√	-	-	-	√	-
17	E-17	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
18	E-18	√	-	-	√	-	-	-	√	-	-	√	-	-	√	-	√	-	-
19	E-19	-	√	-	-	√	-	√	-	-	-	√	-	-	-	√	-	-	√
20	E-20	-	-	√	-	√	-	√	√	-	√	-	-	√	-	-	-	-	√
21	E-21	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
22	E-22	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-

23	E-23	√	-	-	-	√	-	-	-	√	-	√	-	√	-	-	-	√	-
24	E-24	-	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-	-	√
25	E-25	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√
26	E-26	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
27	E-27	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
28	E-28	-	-	√	-	√	-	-	√	-	-	-	√	√	-	-	√	-	-
29	E-29	√	-	-	-	-	√	-	√	-	-	-	√	-	√	-	-	√	-
30	E-30	-	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-	√	-
31	E-31	-	√	-	-	-	√	-	-	-	√	-	-	-	√	-	-	-	√

Meeting : 2nd Meeting

Date : May, 16th 2015

Field note

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participation			Interaction between student and teacher			Language used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	E-1	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
2	E-2	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
3	E-3	√	-	-	-	√	-	√	-	-	-	-	√	-	√	-	√	-	-
4	E-4	-	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-	-	√
5	E-5	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
6	E-6	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
7	E-7	-	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-

8	E-8	-	√	-	-	√	-	-	√	-	-	√	-	√	-	-	√	-	-
9	E-9	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
10	E-10	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-	-
11	E-11	-	√	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
12	E-12	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-	-	√	-
13	E-13	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
14	E-14	√	-	-	-	-	√	-	√	-	-	-	√	-	-	√	√	-	-
15	E-15	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
16	E-16	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-	-	√	-
17	E-17	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
18	E-18	-	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-	√	-
19	E-19	-	√	-	-	√	-	-	√	-	√	-	-	-	√	-	-	√	-
20	E-20	-	√	-	√	-	-	-	√	-	-	-	√	-	√	-	-	√	-
21	E-21	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
22	E-22	-	√	-	-	√	-	-	-	-	√	-	-	√	-	√	-	-	√
23	E-23	√	-	-	√	-	√	-	-	√	-	√	-	-	√	-	√	-	-
24	E-24	-	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	√	-
25	E-25	-	√	-	-	√	-	-	√	-	√	-	-	-	-	√	√	-	-

26	E-26	√	-	-	-	√	-	-	-	√	√	-	-	-	√	-	-	√	-
27	E-27	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-
28	E-28	-	√	-	-	√	-	-	-	√	√	-	-	√	-	-	-	√	-
29	E-29	√	-	-	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-
30	E-30	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	-	√	-
31	E-31	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√

Meeting : 3rd Meeting

Date : May, 20th 2015

Field note

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participation			Interaction between student and teacher			Language used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	E-1	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	√	-	-
2	E-2	√	-	-	-	√	-	-	√	-	-	√	-	√	-	-	-	√	-
3	E-3	√	-	-	√	-	-	-	-	√	-	√	-	-	√	-	-	√	-
4	E-4	-	√	-	√	-	-	-	√	-	-	-	√	-	√	-	-	√	-
5	E-5	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-	-
6	E-6	-	√	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
7	E-7	√	-	-	-	√	-	√	-	-	-	√	-	√	-	-	√	-	-

8	E-8	√	-	-	-	√	-	√	-	-	√	-	-	√	-	-	-	√	-
9	E-9	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
10	E-10	√	-	-	-	√	-	-	√	-	-	-	√	√	-	-	-	√	-
11	E-11	√	-	-	√	-	-	-	√	-	√	-	-	√	-	-	-	√	-
12	E-12	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
13	E-13	-	√	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-	-
14	E-14	√	-	-	-	√	-	-	-	√	√	-	-	-	√	-	-	√	-
15	E-15	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
16	E-16	√	-	-	√	-	-	√	-	-	-	√	-	-	-	√	√	-	-
17	E-17	√	-	-	-	√	-	-	√	-	-	-	√	-	-	√	√	-	-
18	E-18	√	-	-	√	-	-	-	-	√	√	-	-	√	-	-	-	√	-
19	E-19	-	√	-	-	√	-	-	-	√	√	-	-	√	-	-	-	√	-
20	E-20	-	√	-	-	√	-	√	-	-	-	√	-	√	-	-	√	-	-
21	E-21	√	-	-	-	√	-	√	-	-	-	√	-	-	√	-	√	-	-
22	E-22	√	-	-	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-
23	E-23	√	-	-	-	√	-	-	-	√	√	-	-	-	√	-	√	-	-
24	E-24	√	-	-	-	√	-	-	√	-	-	-	√	-	-	√	-	√	-
25	E-25	-	√	-	-	√	-	√	-	-	-	√	-	-	√	-	√	-	-

26	E-26	√	-	-	-	√	-	√	-	-	√	-	-	√	-	-	-	√	-
27	E-27	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-	-	√	-
28	E-28	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-
29	E-29	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
30	E-30	√	-	-	-	√	-	-	-	√	-	√	-	√	-	-	-	√	-
31	E-31	√	-	-	-	√	-	-	√	-	-	√	-	√	-	-	-	√	-

Meeting : 4th Meeting

Date : May, 23th 2015

Fieldnote

No	Students' code	Students' participation									Students' attitude								
		Students' attention			Students' participation			Interaction between student and teacher			Language used between student and teacher			Students' response toward teacher instruction			Students' attitude during the lesson		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	E-1	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
2	E-2	√	-	-	-	√	-	-	√	-	-	-	√	-	√	-	-	√	-
3	E-3	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
4	E-4	√	-	-	-	√	-	-	√	-	-	-	√	-	√	-	-	√	-
5	E-5	-	√	-	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-
6	E-6	√	-	-	-	√	-	√	-	-	-	√	-	-	√	-	√	-	-
7	E-7	-	√	-	√	-	-	-	√	-	√	-	-	-	√	-	√	-	-

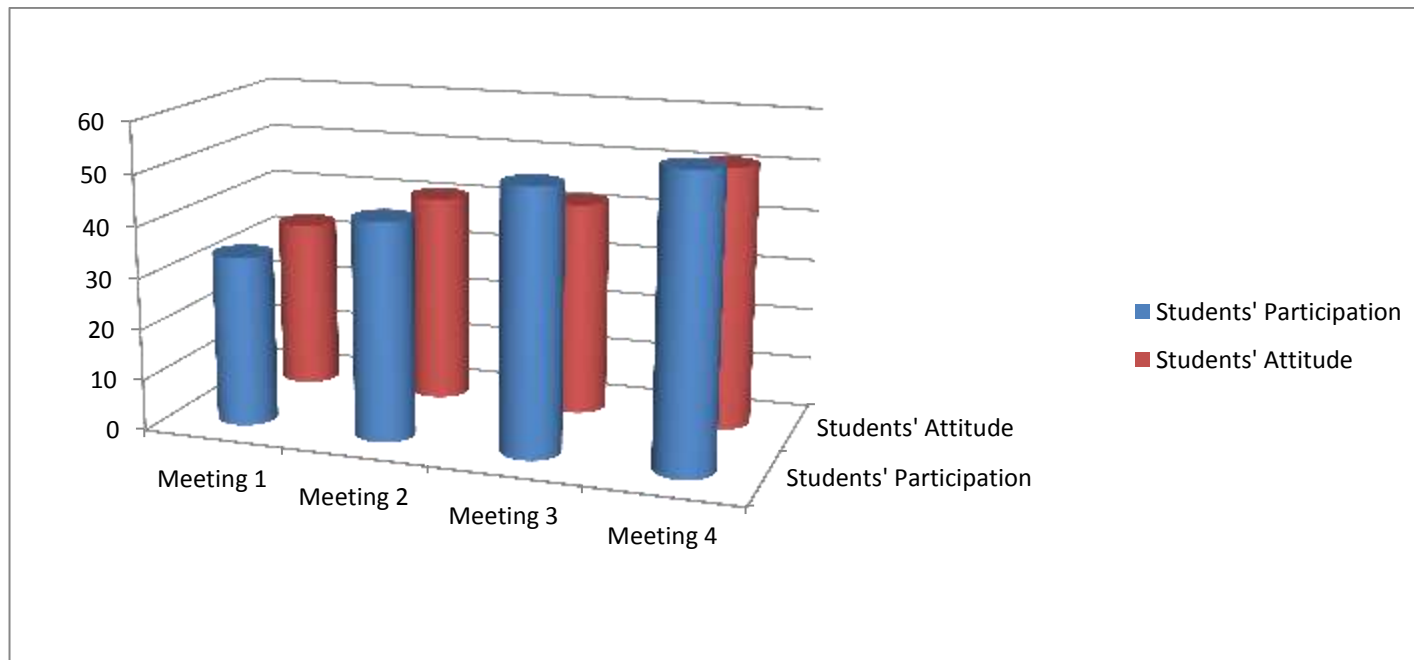
8	E-8	-	√	-	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-
9	E-9	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-
10	E-10	√	-	-	-	√	-	√	-	-	-	√	-	-	√	-	-	√	-
11	E-11	-	√	-	√	-	-	√	-	-	√	-	-	-	√	-	√	-	-
12	E-12	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
13	E-13	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
14	E-14	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-
15	E-15	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
16	E-16	√	-	-	-	√	-	-	√	-	√	-	-	-	√	-	√	-	-
17	E-17	-	√	-	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-
18	E-18	-	√	-	-	√	-	√	-	-	√	-	-	√	-	-	√	-	-
19	E-19	√	-	-	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-
20	E-20	√	-	-	√	-	-	-	√	-	-	√	-	√	-	-	√	-	-
21	E-21	√	-	-	-	√	-	-	-	√	√	-	-	-	√	-	-	√	-
22	E-22	√	-	-	-	√	-	-	-	√	√	-	-	√	-	-	√	-	-
23	E-23	√	-	-	√	-	-	-	√	-	-	√	-	-	√	-	√	-	-
24	E-24	-	√	-	-	√	-	√	-	-	√	-	-	√	-	-	√	-	-
25	E-25	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-

26	E-26	√	-	-	√	-	-	-	-	√	-	√	-	-	√	-	√	-	-
27	E-27	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	-	√	-
28	E-28	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-
29	E-29	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-	-	√	-
30	E-30	√	-	-	-	√	-	-	-	√	√	-	-	√	-	-	-	√	-
31	E-31	√	-	-	√	-	-	-	√	-	-	√	-	-	√	-	-	√	-

Field Note Analysis

	1 st			2 nd			3 rd			4 th		
	1	2	3	1	2	3	1	2	3	1	2	3
Students' Participation												
Students' attention	39%	45%	16%	51%	42%	7%	67%	22%	11%	67%	32%	1%
Students' participation	29%	42%	29%	35%	51%	14%	42%	58%	0%	54%	45%	1%
Interaction between students and teacher	32%	45%	23%	42%	48%	10%	45%	35%	20%	48%	45%	7%
Students' Attention												
Language used between students and teacher	32%	45%	23%	42%	39%	9%	45%	35%	20%	45%	48%	7%
Students' responses toward teachers' instruction	39%	35%	26%	42%	45%	13%	42%	48%	10%	58%	32%	10%
Students' attitude	29%	48%	23%	39%	51%	10%	39%	51%	10%	51%	48%	1%

	1 st			2 nd			3 rd			4 th		
	1	2	3	1	2	3	1	2	3	1	2	3
\bar{x} of Students' Participation	33,3 %	44,4%	22,6%	42,6%	47%	10,3%	51,3%	38,3%	10,3%	56,3%	40,6%	3%
\bar{x} of Students' Attention	33,35	42,6%	24%	41%	45%	10,6%	42%	44,6%	13,3%	51,3%	42,4%	6%



Appendix 17

QUESTIONNAIRE

Nama :

Kelas :

1. Apakah Anda menyukai permainan *Texttwist* yang diberikan?

Jawab:

.....
.....

2. Apakah kosa kata yang diajarkan sering Anda gunakan dalam kehidupan sehari-hari?

Jawab:

.....
.....

3. Apa manfaat dari permainan tersebut terhadap pembelajaran kosa kata Anda?

Jawab:

.....
.....

4. Apakah metode ini dapat menambah kesukaan Anda dalam belajar bahasa Inggris? Berikan penjelasan!

Jawab:

.....
.....

5. Adakah kelemahan dari metode yang diberikan tersebut? Jelaskan!

Jawab:

.....
.....

Appendix 18

Example of Students' Work on Questionnaire

QUESTIONNAIRE

Nama : Himmatul Ulya
Kelas : x.1

1. Apakah Anda menyukai permainan *Texttwist* yang diberikan?
Jawab: Ya
2. Apakah kosa kata yang diajarkan sering Anda gunakan dalam kehidupan sehari-hari?
Jawab: Ada yg sudah sering & juga ada yg tidak.
3. Apa manfaat dari permainan tersebut terhadap pembelajaran kosa kata Anda?
Jawab: Jadi lebih tahu kosa kata - kosa kata yg lain & ingin belajar lebih tentang kosa kata yg lain.
4. Apakah metode ini dapat menambah kesukaan Anda dalam belajar bahasa Inggris? Berikan penjelasan!
Jawab: Ya, karena metode yg ajarkan tidak membosankan belajar sambil bermain.
5. Adakah kelemahan dari metode yang diberikan tersebut? Jelaskan!
Jawab: Ada, kosa kata yang banyak yg kurang tahu.

QUESTIONNAIRE

Nama : Isna Fokkiyahul Asa

Kelas : X.1

1. Apakah Anda menyukai permainan Textwit yang diberikan?

Jawab: Ya saya menyukai permainan tersebut

2. Apakah kosa kata yang diajarkan sering Anda gunakan dalam kehidupan sehari-hari?

Jawab: kadang-kadang

3. Apa manfaat dari permainan tersebut terhadap pembelajaran kosa kata Anda?

Jawab: Menambah pengetahuan dan menambah kosa kata yang belum diketahui

4. Apakah metode ini dapat menambah kesukaan Anda dalam belajar bahasa Inggris?

Berikan penjelasan!

Jawab: Ya, karena tidak membosankan.

Dengan metode pembelajaran ini ada kosa kata yg baru + dipelajari

5. Adakah kelemahan dari metode yang diberikan tersebut? Jelaskan!

Jawab: Kurang mengetahui bahasa Inggris, tetap saja pembelajaran metode ini ada sedikit mengetahui dan bahasa Inggris.

Appendix 19

Standar Deviation and T-test Calculation

Score of Experimental Class on Post-Test

No.	Students' symbol	Post-test (x)	$(x - \bar{x})$	$(x - \bar{x})^2$
1	E-1	82,50	12,66	160,31
2	E-2	92,50	22,66	513,53
3	E-3	70,00	0,16	0,03
4	E-4	27,50	-42,34	1792,57
5	E-5	50,00	-19,84	393,57
6	E-6	77,50	7,66	58,70
7	E-7	30,00	-39,84	1587,12
8	E-8	50,00	-19,84	393,57
9	E-9	82,50	12,66	160,31
10	E-10	92,50	22,66	513,53
11	E-11	80,00	10,16	103,25
12	E-12	85,00	15,16	229,86
13	E-13	70,00	0,16	0,03
14	E-14	92,50	22,66	513,53
15	E-15	57,50	-12,34	152,24
16	E-16	77,50	7,66	58,70
17	E-17	82,50	12,66	160,31
18	E-18	67,50	-2,34	5,47
19	E-19	72,50	2,66	7,08
20	E-20	85,00	15,16	229,86
21	E-21	75,00	5,16	26,64
22	E-22	65,00	-4,84	23,41
23	E-23	57,50	-12,34	152,24

24	E-24	82,50	12,66	160,31
25	E-25	87,50	17,66	311,92
26	E-26	70,00	0,16	0,03
27	E-27	82,50	12,66	160,31
28	E-28	72,50	2,66	7,08
29	E-29	87,50	17,66	311,92
30	E-30	37,50	-32,34	1045,79
31	E-31	22,50	-47,34	2240,95
		$\bar{x} = 69,84$	0,00	370,14

Control Class on post-test

No.	Simbol Siswa	Post-test (x)	$(x - \bar{x})$	$(x - \bar{x})^2$
1	C-1	75,00	15,00	225,00
2	C-2	25,00	-35,00	1225,00
3	C-3	42,50	-17,50	306,25
4	C-4	45,00	-15,00	225,00
5	C-5			
6	C-6	37,50	-22,50	506,25
7	C-7	30,00	-30,00	900,00
8	C-8	70,00	10,00	100,00
9	C-9	37,50	-22,50	506,25
10	C-10	75,00	15,00	225,00
11	C-11	37,50	-22,50	506,25
12	C-12	70,00	10,00	100,00
13	C-13	67,50	7,50	56,25
14	C-14	85,00	25,00	625,00
15	C-15	72,50	12,50	156,25

16	C-16	82,50	22,50	506,25
17	C-17			
18	C-18	80,00	20,00	400,00
19	C-19	62,50	2,50	6,25
20	C-20	72,50	12,50	156,25
21	C-21	35,00	-25,00	625,00
22	C-22	72,50	12,50	156,25
23	C-23	65,00	5,00	25,00
24	C-24	62,50	2,50	6,25
25	C-25	80,00	20,00	400,00
26	C-26	42,50	-17,50	306,25
27	C-27	25,00	-35,00	1225,00
28	C-28	77,50	17,50	306,25
29	C-29	85,00	25,00	625,00
30	C-30	75,00	15,00	225,00
31	C-31	72,50	12,50	156,25
32	C-32	65,00	5,00	25,00
33	C-33	55,00	-5,00	25,00
34	C-34	77,50	17,50	306,25
35	C-35	77,50	17,50	306,25
36	C-36	17,50	-42,50	1806,25
37	C-37	30,00	-30,00	900,00
38	C-38	77,50	17,50	306,25
39	C-39	-	-	-
		$\bar{x} = 60,00$	0,00	14462,50

➤ Counting Standard Deviation and t-Test

$$S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where :

x_1 : mean of the experimental group

x_2 : mean of the control group

s : standard deviation

s_1^2 : variance of the experimental group

s_2^2 : variance of the control group

n_1 : total number of subject of the experimental group

n_2 : total number of subject of the control group

The Standard Deviation of Post-Test

$$S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

$$S_1 = \sqrt{\frac{(x - \bar{x})^2}{n}}$$

$$S = \sqrt{\frac{(31 - 1)11,94 + (36 - 1)20,04}{31 + 36 - 2}}$$

$$S_1 = \sqrt{\frac{370,14}{31}}$$

$$S = \sqrt{\frac{358,2 + 701,4}{65}}$$

$$S_1^2 = 11,94$$

$$S = \sqrt{\frac{1059,6}{65}}$$

$$S_2 = \sqrt{\frac{(x - \bar{x})^2}{n}}$$

$$s = \sqrt{16,301} = 4,03$$

$$s_2 = \sqrt{\frac{14462,50}{36}}$$

$$s_1^2 = 20.04$$

The T-Test of the Post-Test

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t = \frac{69,8 - 60}{4,03 \sqrt{\frac{1}{31} + \frac{1}{36}}}$$

$$t = \frac{9,8}{4,03 \sqrt{0,06}}$$

$$t = \frac{9,8}{0,97} = 10,10$$

Experimental class on pre-test

No.	Students' symbol	Pre-test (x)	$(x - \bar{x})$	$(x - \bar{x})^2$
1	E-1	52,5	0,48	0,23
2	E-2	50	-2,02	4,06
3	E-3	60	7,98	63,74
4	E-4	37,5	-14,52	210,72
5	E-5	77,5	25,48	649,43
6	E-6	70	17,98	323,42
7	E-7	35	-17,02	289,55
8	E-8	67,5	15,48	239,75
9	E-9	62,5	10,48	109,91
10	E-10	67,5	15,48	239,75
11	E-11	50	-2,02	4,06
12	E-12	32,5	-19,52	380,88
13	E-13	45	-7,02	49,23
14	E-14	32,5	-19,52	380,88
15	E-15	37,5	-14,52	210,72
16	E-16	80	27,98	783,10
17	E-17	42,5	-9,52	90,56
18	E-18	37,5	-14,52	210,72

19	E-19	42,5	-9,52	90,56
20	E-20	67,5	15,48	239,75
21	E-21	67,5	15,48	239,75
22	E-22	27,5	-24,52	601,04
23	E-23	55	2,98	8,90
24	E-24	27,5	-24,52	601,04
25	E-25	60	7,98	63,74
26	E-26	37,5	-14,52	210,72
27	E-27	72,5	20,48	419,59
28	E-28	65	12,98	168,58
29	E-29	75	22,98	528,26
30	E-30	60	7,98	63,74
31	E-31	17,5	-34,52	1191,36
	52,016129	52,01	0	279,605

Control class on pre-test

No.	Simbol Siswa	Pre-test (x)	$(x - \bar{x})$	$(x - \bar{x})^2$
1	C-1	70,00	19,44	378,09
2	C-2	30,00	-20,56	422,53
3	C-3	30,00	-20,56	422,53
4	C-4	55,00	4,44	19,75
5	C-5	-	-	-

6	C-6	35,00	-15,56	241,98
7	C-7	35,00	-15,56	241,98
8	C-8	60,00	9,44	89,20
9	C-9	27,50	-23,06	531,56
10	C-10	65,00	14,44	208,64
11	C-11	47,50	-3,06	9,34
12	C-12	47,50	-3,06	9,34
13	C-13	52,50	1,94	3,78
14	C-14	67,50	16,94	287,11
15	C-15	67,50	16,94	287,11
16	C-16	62,50	11,94	142,67
17	C-17	-	-	-
18	C-18	60,00	9,44	89,20
19	C-19	67,50	16,94	287,11
20	C-20	55,00	4,44	19,75
21	C-21	42,50	-8,06	64,89
22	C-22	47,50	-3,06	9,34
23	C-23	47,50	-3,06	9,34
24	C-24	65,00	14,44	208,64
25	C-25	55,00	4,44	19,75
26	C-26	37,50	-13,06	170,45
27	C-27	30,00	-20,56	422,53
28	C-28	62,50	11,94	142,67
29	C-29	60,00	9,44	89,20
30	C-30	62,50	11,94	142,67
31	C-31	52,50	1,94	3,78
32	C-32	45,00	-5,56	30,86
33	C-33	60,00	9,44	89,20
34	C-34	62,50	11,94	142,67

35	C-35	60,00	9,44	89,20
36	C-36	12,50	-38,06	1448,23
37	C-37	22,50	-28,06	787,11
38	C-38	-	-	-
39	C-39	60,00	9,44	89,20
	Mean	50,56	0,00	201,35

➤ The Standard Deviation of Pre-Test

$$S = \sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}}$$

$$s_1 = \sqrt{\frac{(x-\bar{x})^2}{n}}$$

$$S = \sqrt{\frac{(31-1)9,02 + (36-1)5,60}{31+36-2}}$$

$$s_1 = \sqrt{\frac{279,605}{31}}$$

$$S = \sqrt{\frac{270,6+196}{65}}$$

$$s_1^2 = 9,02$$

$$S = \sqrt{\frac{466,6}{65}}$$

$$s_2 = \sqrt{\frac{(x-\bar{x})^2}{n}}$$

$$S = \sqrt{7,18} = 2,68$$

$$s_2 = \sqrt{\frac{201,35}{36}}$$

$$s_2^2 = 5,60$$

The T-Test of the Pre-Test

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$\mathbf{t} = \frac{52,01 - 50,55}{2,68 \sqrt{\frac{1}{31} + \frac{1}{36}}}$$

$$\mathbf{t} = \frac{1,46}{2,68 \sqrt{0,06}}$$

$$\mathbf{t} = \frac{1,46}{0,64} = 2,28$$

Appendix 20

Documentation of the activities during the research



The location of the research



The situation of doing pre-test



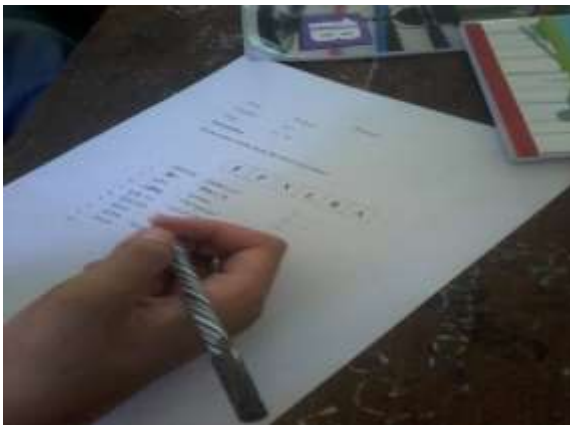
The situation of doing the activities



The situation of doing the activities



The situation of doing the post-test



The situation of doing the post-test