

**INVESTIGATING THE IMPACT OF WORD MAPPING ON
THE STUDENTS' VOCABULARY ACHIEVEMENT AND THE
STUDENTS' PERCEPTION AT JUNIOR HIGH SCHOOL
LEVEL**

(A Thesis)

**By
WIDYAWATI**



**MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM
LANGUAGE AND ARTS EDUCATION DEPARTMENT
TEACHER TRAINING AND EDUCATION FACULTY
LAMPUNG UNIVERSITY
BANDAR LAMPUNG
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A Thesis

Submitted in a partial fulfillment of
The requirements for S-2 Degree



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ABSTRACT

INVESTIGATING THE IMPACT OF WORD MAPPING ON THE STUDENTS' VOCABULARY ACHIEVEMENT AND THE STUDENTS' PERCEPTION AT JUNIOR HIGH SCHOOL LEVEL

by

Widyawati

Vocabulary is one of the language components which is important to be mastered by the language learners. To assist them learning the vocabulary, the teacher needs to choose an interesting technique. Through this research, Word Mapping is employed to help the students master this component.

This research is aimed to find out whether there is an improvement of students' vocabulary achievement after being taught by using word mapping, to know whether there is significant difference of students' vocabulary achievement between students who are taught by using word mapping and those who are taught by using conventional technique, and to describe the students' perception on vocabulary learning through word mapping. The study was conducted at SMPN 20 Bandar Lampung. The data were taken by using vocabulary test and questionnaire. The population was the seventh grade students of SMPN 20 Bandar Lampung. The samples were the students of VII E and VII F. It was chosen by using random sampling. The data were analyzed by using SPSS.

The result of this research shows there is significant difference of students' vocabulary achievement who were taught by word mapping. It is seen that sig. (p) value (0.010) was less than sig. level (0.05). It seems the difference between the post test score of the experimental and the control group is positive since the post test score of the experimental group is higher than in the control group. Based on the questionnaire of students' perception, it was revealed that the students' perception about the implementation of word mapping is positive. It seems that students are not familiar with learning word mapping, before they got the treatment by using modified word mapping. But, when they already got the treatment, they realize that word mapping can help them in recognizing new vocabulary. Seeing the benefit of word mapping, students think that this technique is very useful for them so that the perception of students is positive.

Key words: vocabulary achievement, word mapping, students' perception

Research Title : INVESTIGATING THE IMPACT OF WORD MAPPING ON THE STUDENTS' VOCABULARY ACHIEVEMENT AND THE STUDENTS' PERCEPTION AT JUNIOR HIGH SCHOOL LEVEL

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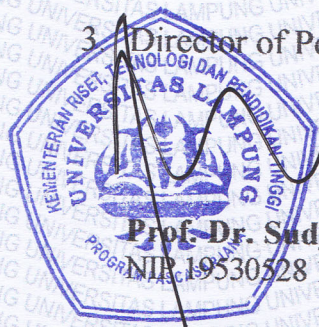
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CURRICULUM VITAE

The writer's name is Widyawati. She was born on October 9th, 1975 in Kotabumi Lampung Utara. She is the fifth daughter of Hi. Hasbi and Hj. Megaputri.

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DEDICATION

By offering my praise and gratitude to Allah SWT for the abundant blessing to me, I'd proudly dedicate this piece of work to:

- ❖ My beloved parents, Hi. Hasbi and Hj. Megaputri
- ❖ My beloved parents in law, Hi. Erwan Sampurna and Hj. Nasiah
- ❖ My beloved husband, Hi. Ferdiansyah
- ❖ My beloved daughters, Arfa Salma Firnandya, Siti Zahra Maulidya and Nathania Syafirah Anindya.
- ❖ My beloved sisters and brothers, Hj. Yusnilawati, Hj. Kartini, Hj. Ellyati, Hi. Araful, Hj. Ratna Virra and Hi. Heriyanto
- ❖ My beloved nephews and nieces.
- ❖ My fabulous friends of Postgraduate English Education Program, Juni, Nurma, Uni Derma, Bu Lasma, Wira, Leni, Tangzilal and Intan
- ❖ My Almamater, Lampung University.

MOTTO

“Do the best and pray. God will take care of the rest”

“An action is the foundation of a success”

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The writer hopes this research would give a positive contribution to the educational development, and to the readers.

Bandar Lampung, July 2016

The writer,

Widyawati

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I. INTRODUCTION

This chapter introduces the foundation and general overview of this research. It consists of the description of background, the formulation of problem, the objectives, the uses and the scope of the research.

1.1 Background of the Problems

Vocabulary is an essential component in foreign language learning. In addition, vocabulary is central to the learning of foreign language especially at primary level to enrich their language. In EFL classroom, vocabulary is needed to express meaning and to convey thoughts through both receptive and productive skills (Carpenter and Olson in Sitompul, 2013:52). Meanwhile, according to Nation, (2001:21) the learners' aim is to continue to increase their vocabular. The strategies provide a means of doing this. Helping learners to develop their vocabulary learning strategies is a powerful approach to help learners acquire large vocabulary. While learning the language learner is connected to the need of developing the skills so that vocabulary plays an important role there.

In using the language, students who are rich in vocabulary will be successful both in expression skills (speaking and writing), and receptive skills (listening and reading) but those who are poor in vocabulary will get trouble in those skills. It

means that dealing with learning English as a foreign language, vocabulary is one of the components of language which has the most important role in mastering four language skills.

Furthermore, there is another importance of vocabulary according to Pora, (2003:vii) who said that vocabulary mastery is a must for someone who wants to understand a text, conversation or written English. It means that vocabulary is important in communication. We cannot communicate with others in a certain language if we do not know many words of the language.

Without ignoring other language components, it is clear that vocabulary is the most important factor in the teaching learning of English as a foreign language even in all language. So, teachers are expected to have the excellent way to make the students interested in learning English vocabulary so that the teaching learning objectives can be carried out successfully. In other words, there should be an appropriate strategy to help the students in learning vocabulary.

Previous studies have discussed about investigating strategies used in vocabulary teaching and learning (A'lipour and Ketabi, 2010; Anuthama, 2010; Behlol and Dad, 2010; Nam, 2010; Balci and Cakir, 2012; Nilfroushan, 2012; Dunn, 2013; Sitompul, 2013; Elyas and Alfaki, 2014). These studies have proven that there are many strategies that can be used in vocabulary teaching and learning. One of the techniques that can be implemented is by using word mapping.

A word mapping is a visual representation of a definition (Schwartz and Raphael, 1985:199). By this statement, it can be inferred that this technique helps to

represent a definition of a word through its visual symbol. In which to define a word, someone needs to show its meaning by questioning “What is it?”, “What is it like?”, and “What is the example?” Schwartz and Raphael (1985) designed the word mapping strategy to encourage students to move from simple dictionary-like statements to more complex critical thinking definitions that show relationships such as: “What is it (category)?”, “What is it like (properties)?”, and “What are examples (illustrations)?”. Typically, it has the form of having the vocabulary in the central portion of the graphic organizer, and three separate sections for the three main questions about the word linked to it. Using word mapping as a graphic organizer, students think about terms or concepts in several ways. Most word mapping organizers engage students in developing a definition, synonyms, antonyms, and a picture for a given vocabulary or concept (in *reading rockets.org*). By using word mapping, it is expected that the students can have meaningful and enjoyable learning situation, especially related to vocabulary learning. However, so far there is no such a perfect technique given in teaching and learning process for junior high school level.

As researchers sought to understand why instruction had generally not brought comprehension improvement, a theme began to emerge that suggested that in order to affect comprehension instruction may need to go beyond simply getting students to associate words with their definitions (Beck, McKeown, & Kucan, 2002:3). The word mapping strategy, or semantic mapping, is one of the most powerful approaches to teaching vocabulary because it engages students in thinking about word relationships (Graves in Antonacci and O’Callaghan, 2012:94). The strategy promotes students’ active exploration of word relation-

ships, thereby leading to a deeper understanding of word meanings by developing their conceptual knowledge related to words. Students learn about words through mapping because it helps them to examine the characteristics of the word concepts, categorize words, and see relationships among words that are similar as well as those that may be different. Such activities that are part of the word mapping strategy are cognitive strategies that lead to a deeper understanding of words and the concepts that they represent.

Specifically, here are the steps of using word mapping in improving the vocabulary of students (Antonacci and O'Callaghan, 2012:95-96):

1. Select words for vocabulary instruction.

Prepare for vocabulary instruction by carefully selecting the words to be taught. Choose words by considering the readings and the words that are keys to understand the text.

2. Project a blank word map on the screen.

Model how to construct a word map and demonstrate to students how to use the word map for building and exploring word relationships.

3. Write the key words on the word map.

In each blank, write and say the key word that will be taught.

4. Use a think-aloud to model how to explore relationships between words.

Use the think-aloud strategy to (a) demonstrate how to explore word relationships; (b) think about the meaning of the key word or related words; (c) model how to further the meaning of the word by examples and non examples, or synonyms and antonyms, of the word; (d) find the definition of

the word in a glossary or dictionary and find its use in context or a discussion with another student about the word's meaning; and (e) draw a picture of the word to illustrate its meaning in context.

5. Record ideas that have been used to explore the word meanings and relationships.

During the think-aloud, note information about the words is written in the appropriate space on the word map.

6. Students are directed to use the word maps about the key words.

Students use the word maps for recording new information. They may further develop their word meanings by looking for dictionary definitions, drawing pictures of words, and adding new words.

7. Students share their maps with others.

Have students share their maps with the class. During this sharing period, students use the information on their word maps to develop and expand the class map. Students write new information on the group map and are encouraged to revise their own word maps to incorporate these new ideas.

As a matter of fact, the researcher has seen through her experience as an English teacher in junior high school that the students of junior high school still have difficulties in mastering the vocabulary when English teaching learning done. The result of students' work sheet in doing reading vocabulary test is still unsatisfactory. From the pre observation and pre interview which were done to the students, the writer knows that one of the students' problems is they have low achievement in vocabulary, more over the studies on investigating students'

problem in learning vocabulary through word mapping are still rare. Besides, the researcher considers about the students' perception on the implementation of word mapping technique whereas students' perception is important to be investigated. It is in line with Barnes and Lock (2013:19) who state that students' perceptions of effective teaching and learning process are necessary, so that teachers in training and practitioners can understand how to approach and improve their practice. From this statement, it is clear that students' perceptions can be such an evaluation for the teacher so that it can be useful for teachers to create positive teaching and learning process in the future. Therefore the researcher would like to conduct research focusing on investigating the impacts of learning vocabulary by using word mapping toward students' vocabulary achievement and the students' perception on vocabulary learning through word mapping.

1.2 Identification of the Problems

1. The students get difficulties in learning vocabulary
2. The students' achievement in vocabulary is still low
3. The students get bored in learning vocabulary
4. The technique in teaching learning the vocabulary is monotonous
5. The word mapping is still rarely used at school

1.3 Limitation of the Problems

To limit the research, the researcher only focuses on investigating the impact of word mapping on students' vocabulary and the students' perception on vocabulary

learning through word mapping technique. The data were analysed to see the different result of treatments in teaching learning vocabulary through word mapping technique and conventional technique and to describe the students' perception on vocabulary learning through word mapping.

1.4 Formulation

In line with the background above, the writer identified the research questions as follows:

1. Is there a significant difference on vocabulary achievement between students who are taught by using word mapping and those who are taught by using conventional technique?
2. Is there an improvement on students' vocabulary achievement after being taught by using word mapping?
3. How is students' perception on vocabulary learning through word mapping?

1.5 Objectives

Based on the problems above, this research aims to:

1. To find out whether there is an improvement on students' vocabulary achievement after being taught by using word mapping.
2. To know whether there is significant difference on vocabulary achievement between students who are taught by using word mapping and those who are taught by using conventional technique.

3. To describe the students' perception on vocabulary learning through word mapping.

1.6 Uses

The outcomes of this study are expected to be significant theoretically and practically.

1. Theoretically, the result of this research hopefully can give contribution to the development of the theory of teaching vocabulary.
2. Practically, this study can function as information to English teachers about the process of teaching vocabulary through word mapping.

1.7 Scope

This research focused on investigating the impact of word mapping in teaching learning of vocabulary and the perception of students about vocabulary learning through word mapping. The participants of this research were the students of the seventh grade at SMP Negeri 20 Bandar Lampung. In this research, besides using a pre-test and post-test of vocabulary, the researcher also distributed questionnaire to the students after conducting vocabulary learning through word mapping. From the result of questionnaire, the researcher intended to describe students' perception on vocabulary learning through word mapping for junior high school level. The pre-test and the post-test of vocabulary were used to investigate whether there is a significant difference on vocabulary achievement between students who are taught by using word mapping and those who are taught by

using conventional technique. By comparing the result of these tests, the researcher finds out whether the students' vocabulary achievement is improved or not.

1.8 Definition of Terms

The specific terms used in this study are defined as follows:

1. Vocabulary

Napa (1991: 6) states that, vocabulary is one of the components of language and that no language exists without words. It means that vocabulary is a list of all words with their message that are used in a language to represent meaning. It refers to the words that are understood and used to communicate effectively.

2. A word mapping is a graphic organizer which enables students to expand definitions of words (Wardani, 2007:134). It is a graphic rendering of a word's meaning. Typically, it has the form of having the vocabulary word in the central portion of the graphic organizer, and three separate sections for the three main questions about the word linked to it; What is it? What is it like? What is the example?

3. Students' Perception

Perception is the process in which we organize and interpret the stimulus pattern in the environment (Atkinson, Atkinson and Hilgard, 2001:20). In this research, perception is the students' interpretation or opinion towards the process of teaching in form of evaluation.

4. Improvement

Improvement of vocabulary achievement is a change of students' vocabulary achievement after being taught by using word mapping, that is, by looking at the gap between the pre test and the post test.

5. Impact

Impact is a powerful or major influence or effect as a result of treatment of teaching.

II. REVIEW OF RELATED LITERATURE

This chapter deals with the basic concept of the topic discussed in this research. These concepts are useful as the source and reference toward the data which were taken in this research.

2.1 Vocabulary

According to Cameron (2001: 95), vocabulary is fundamental in foreign language discourse. Furthermore, Cameron (2001:72) also said that building up a useful vocabulary was central to the learning of a foreign language at primary level. Therefore, it is implied that vocabulary is the basic element of a language which will make the language meaningful and this becomes the central point in the foreign language teaching learning, especially at primary level.

If the learners wants to communicate each other, they need vocabulary to express their idea clearly. Everybody should have a number of words to communicate. If they still have a few words, they must learn more new words. They can learn about new words as long as they live. If they study many words, many ideas will appear out of their mind, especially in foreign language communication. It is supported by Napa (1991: 6), who says that the more words we learn, the more ideas we should have so we can communicate the ideas more effectively. The aim

of learning vocabulary is to make students master the vocabulary and to make students able to find the meaning of unfamiliar words, and able to explain their words. Setiadi, et al (2007:2.3) the learners learn new words as they need them and the more they need them the more they learn them. It means that when the learners use many words, they are mostly convenient to think of words as freestanding items of language that have meaning.

According to Napa (1991: 6) vocabulary is one of the components of language and that no language exists without words. As it has been mentioned, that vocabulary is a list of all words with their message that are used in a language to represent meaning. It refers to the words that are understood and used to communicate effectively. Therefore vocabulary mastery must be on the first priority in English language teaching and learning. Without mastering the vocabulary, the learners will get difficulties to master all language skills. From the statement above, it seems that in teaching vocabulary to the students, the teacher should focus on helping the students understand the meaning of difficult words. The teacher should also use a good and appropriate technique to teach vocabulary. This is done in order the students increase their vocabulary mastery. By using appropriate technique, it is hoped that the students are motivated and interested in learning vocabulary, and the students can learn vocabulary in more fun situation with a good technique. It also supports students' success on the words in their mind optimally, besides they can use the vocabulary for communication with other people all over the world.

Based on the statements above the researcher assumes that the vocabulary is very important in making communication because without the vocabulary the speaker cannot communicate in English well.

2.1.1 Types of Vocabulary

About the types of vocabulary, Cameron (2001:82) states that the words of a language split roughly into two groups according to how they are used to construct sentences. The first group, function words are words that must be learned in connection with their use in the sentence. These kinds of words such as noun determiners, auxiliaries, qualifiers, preposition, coordinators, interrogators and sentence linkers. The second group, content words or lexical words are words whose meaning is recorded in dictionaries and often stated by means of definitions, synonyms, antonyms and contextual explanation. These kinds of words are nouns, verbs, adjectives and adverbs.

To get information about which words will be most useful for learners of English, it can be done by looking at the frequency counts of vocabulary. A vocabulary count is done by making a list of words in a particular text or group of texts and counting how often and where they exist. The following table shows the types of vocabulary, their features, and their implications for teaching and learning (Nation, 1990:19)

Table 2.1 Types of vocabulary, their features, and their implications for teaching and learning

Type of vocabulary	Number of words	Frequency	Coverage of text	Origins	Implications for teaching and learning
High-frequency words	2.000	Accur frequently in all kinds of texts	About 87% of the running words in a text	About half are from Latin, French, or Greek	Spend a lot of time on these words. Make sure they are learned
Academic vocabulary	800	Occur frequently in most kinds of academic texts	About 8% of the running words in academic text		If learners are in upper secondary school or in tertiary education, spend a lot of time on these words. Make sure they are learned
Technical vocabulary	About 1.000 to 2.000 for each subject	Occur, sometimes frequently, in specialized texts	About 3% of the running words in a specialized text	About two-thirds are from Latin, French, or Greek	Learning the subject involves learning the vocabulary. Subject teachers can deal with the vocabulary, but the English teacher can help with learning strategies
Low-frequency words	About 123.000	Do not occur very frequently	About 2% or more of the words in any texts		Teach strategies for dealing with these words. The words themselves do not deserve teaching time.

Source: Nation (1990:19)

Words frequency counts can help teachers and course design in several ways. They assist the teachers in selecting the words that are useful and should be given attention and which are infrequent. Frequency counts give information on range, they are also useful for developing specialized word lists.

2.1.2 Vocabulary Items for Junior High School Students

The vocabulary items for junior high school students which are based on 2006 English curriculum are divided into two kinds. Those are classification of word according to theme and class. The theme for the second year students according to

Department of National Education are: family life, job/occupation, health, teenage life, hobby, and seasons. They are covered around the scientific topic, social and daily life issues.

Vocabulary items based on the theme consist of words that should be learned in context. It is also taught in a different theme. The theme which is related with vocabulary is considered to fill the target of competence. Moreover, vocabulary items are produced from genre: descriptive, narrative, recount, procedure, report, etc. For the second grade students of SMP, genre is classified based on the semester. In the first semester for example, students are learning narrative text and for the second semester, students are learning descriptive text. In descriptive text, the social function is to describe a flora and fauna, place or thing.

2.2 Knowing Vocabulary

Knowing a word means knowing at least its forms, its meaning, and its basic usage in context receptively and productively. This means that to know a meaning of word, we need to know at least its form, its grammatical meaning and its uses both spoken and written context.

In addition, the more deeply children think while they are learning, the more they will commit to memory and later be able to recall what they have learned (Paul 2003:1). Besides receptive and productive knowledge, knowing a word involves several crucial elements or aspects of knowing, such as pronunciation, spelling, meaning, register, morphology, syntax, and collocation, and so on. Beck, et al in

Wagner (2007:9) suggests that degrees of knowledge about a word can be represented on a continuum:

1. No knowledge.
2. General sense such as knowing mendacious as a negative connotation.
3. Narrow, context-bound knowledge, such as knowing that a radiant bride is a beautiful and happy, but unable to describe an individual in a different context as radiant.
4. Having knowledge of a word but not being able to recall it readily enough to use it in appropriate situation.
5. Rich, decontextualized knowledge of a word meaning, its relationship to other words and its extension to metaphorical uses, such as understanding what someone is doing when they are devouring a book.

Knowing a word implies knowing many things about the word: its literal meaning, its various connotations, its spelling, derivations, collocations, frequency, pronunciation, the kind of syntactic constructions into which it enters, the morphological options it offers and a rich variety of semantic associates such as synonyms, antonyms, homonyms. It means that knowing a word, we have to be sure that we know the words grammatically, syntactically, phonologically, morphologically and semantically. For example, a learner who knows the word 'written' will know that its past tense form and its past participle form. The learner would know that 'written' is spelled with double 't'. The learner will also know when and how to use the various auxiliary verbs appropriately. The learner would know that writing is a verb that is used in the present continuous tense and

that writing can also serve as a noun: e.g. the writing is on the wall. The learner would be aware of the various synonyms of writing such as compose, drop a line, record, scribe and draft and also know that its collocations are subject to syntactic modifications such as write effectively and effective writing. The learner will also be able to use the word within various registers.

There are some aspects of knowing a word for students to know. And the aspects they should be proficient depends upon what language skill is required; what is the main goal of their vocabulary learning; what communication situations a language learner is dealing with, and what level of a language learner's education is: beginner, intermediate, or advanced. For example, young learners do not need to deal with register, morphology, syntax, or collocation since these are too complicated for them whereas advanced learners have to do so if expecting excellence in vocabulary learning. In fact, teaching vocabulary is more of a complex matter.

Besides knowing the form of the word, learners also need to be familiar with its grammar. Learners need to know e.g. irregular forms of verbs or plural nouns, the position of adjectives etc. Another aspect in teaching vocabulary is the word formation. Learners should know how to change a word form and when to use it (gerund, the past form).

Teaching the meaning includes mainly connecting a word with its equivalent in the real world. It is called denotation. Apart from denotation, connotation of the word (associations and feelings, which arise when the word is heard) should be taught. The denotation of a word or phrase is its explicit or direct meaning. For

example: snake is any of numerous scaly, legless, sometimes venomous reptiles having a long tapering, cylindrical body and found in most tropical and temperate regions. And the connotation of word or phrase is the associated or secondary meaning; it can be something suggested or implied by a word or thing, rather than being explicitly named or described (snake could include evil or danger). Many vocabulary items have several meanings depending on context. To make it even worse, 'word' meaning is frequently stretched through the use of *metaphor* and *idiom*". Furthermore, learners need to be provided with the word sense relations to other words. There are various relationships such as synonyms, antonyms, hyponyms etc.

Another challenge the learner will face when learning a new item is collocation. That means he or she needs to know which words can be used in connection with each other and how. E.g. when learning the word "picture", the learner should be informed that one can *take* a picture, not *make* a picture. On top of that, the student needs to acquire the ability to recognize when it is appropriate to use a particular word – speaking or writing, informal conversation with a friend or formal polite conversation.

In conclusion, it is not enough to learn just the form of a new vocabulary item and its denotation. In order to be able to understand it properly and to use a new item of vocabulary in a given language correctly, the learner must be familiar with the word connotation, grammar and formation as well as its collocation and the right way and appropriateness of use.

2.3 Teaching Vocabulary

One of the very important parts of learning a new language is mastering vocabulary of the language we want to learn. It is clear that teaching and learning is important because when we teach a certain language it is the same as we teach vocabulary at the same time.

Klippel (1984:5) says that learning a foreign language is not just a matter of memorizing a different set of names things around us, it also an educational experience. In short, we learn vocabulary to know the meaning of words. We do not just memorize or write the words but we also need to know the function of the words itself. So, in learning vocabulary, we should be able to use vocabulary whether in learning speaking and writing. And Richards and Renandya (2002: 255) say vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write. Without an extensive vocabulary and strategy for acquiring new vocabulary, learners often achieve less than their potential and maybe discouraged from making use of language learning opportunities around them such as listening to the radio and native speakers, using the language in different contexts, reading, or watching television.

From statements above, it seems that for teaching vocabulary to the students, the teacher should give the students understanding of the meaning of vocabulary items. The teacher should also use a good and appropriate technique to teach vocabulary.

By using appropriate technique, it is hoped that the students are motivated and interested in learning vocabulary; it also supports students' success on gaining the words in their mind optimally. Therefore, those students will no longer have difficulties in learning English both written and oral.

2.4 Vocabulary Learning

It has been mentioned previously that vocabulary is a vital aspect of language, so the teaching of vocabulary is also automatically and primarily very important in context of teaching English as a foreign language. Memorizing the words is not enough. It is ineffective to learn vocabulary because it has no function without putting it on the sentence. It is often remarked how strong it is that comparatively has been written in the teaching and learning of foreign language vocabulary, because there is the sense in which learning a foreign language is a mastery of learning vocabulary of that language. Vocabulary is an essential means in conducting communication. The more we master vocabulary, the easier we express our ideas. By mastering a large amount of vocabulary, we can not only choose the right words to express our ideas but also understand what the other people say.

Learning vocabulary is a complex process. In learning vocabulary, English learners may use the five essential steps as proposed by Hatch and Brown in Takac (2008:73), they are:

- a. Encountering new words (with sources of new words being reading, watchinbg TV, listening to radio, conversation with native speakers, text books, word list, dictionares, etc).

- b. Creating a mental picture (visual, auditory or both) of word form (e.g. relating a new word with L1 words or other FLs with similar sounds, using phonetic script, relating to already acquired English words that sound similarly).
- c. Learning the words meaning (e.g. asking the native speaker for the meaning creating a mental image of the meaning, guessing from context).
- d. Creating a strong linkage between word form and meaning in the memory (regardless of the memory strategy used – as long as it is used).
- e. Using words (in example sentences, collocations, various contexts, conversation, etc).

Learning vocabulary is a complex process. Vocabulary learning can be divided into two types, namely incidental learning and intentional learning. The first type is a by-product of doing or learning something else. It can happen through reading or listening. The second type is the type of learning being designed, planned for or intended by a teacher or a student. This type includes a vocabulary-teaching program in schools. The researcher assumes that upon incorporation of the above two kinds of the students will be easier to understand new vocabulary that found and the students will be easier to remember and can be applied in daily activities. Incidental and intentional learning will also help the students in finding new vocabularies.

Much research has been conducted concerning vocabulary teaching and learning. Nam (2010) studied about effective strategies for teaching vocabulary in the ESL classroom. He applied vocabulary teaching strategies drawn from research findings reported in the literature to provide a model for ESL teachers when

putting theory into practice. Besides, Behlol and Dad (2010) investigated the effectiveness of structural method of teaching vocabulary. Anuthama (2010) also conducted research to investigate strategies for teaching vocabulary.

Elyas and Alfaki (2014) recently conducted research to find out the relationship between techniques of teaching and strategies of learning new vocabulary items. This study investigated the techniques of teaching new lexis which are adopted by non-native teachers of English language and the strategies of learning new lexis which are adopted by learners in relation to their level.

Balci and Cakir (2012) have done an investigation about teaching vocabulary through collocations in EFL classes. This study found out that teaching vocabulary through collocations can be an effective factor in helping students remember and use the new words easily in primary school EFL classes. Balci and Cakir (2012) suggested that teachers of English could be encouraged to attach more importance to vocabulary teaching rather than the acquisition of grammar and the use of current vocabulary teaching strategies in their classes.

Then A'lipour and Ketabi (2010) also conducted a research about teaching vocabulary in EFL classrooms. In this research, they explain how a simple game can be incorporated into EFL classrooms and add an element of variety. Furthermore, there are also some studies related to the use of word mapping in teaching vocabulary. Nilforoushan (2012) has tried to identify the effect of teaching vocabulary through semantic mapping on EFL learners' awareness of the affective dimensions of deep vocabulary knowledge. In addition, Dunn (2013)

stated utilization of semantic networks in the teaching of vocabulary. He also mentioned that semantic networks in the brain are the maps to understanding that hold the potential to make learning vocabulary more effective and meaningful.

2.5 Word Mapping

A word map is a visual organizer that helps students engage with and think about new terms or concepts in several ways. It is a graphic rendering of a word's meaning. Typically, it has the form of having the vocabulary word in the central portion of the graphic organizer, and three separate sections for the three main questions about the word linked to it. It is derived from mind mapping concept (Buzan,1994:59) it defines mind map as an expression of Radiant Thinking and is therefore a natural function of the human mind. It is a powerful graphic technique which provides a universal key to unlocking the potential of the brain. The Mind Map can be applied to evryaspect of life where improved learning and clearer thinking will enhance human performance. By these statements, it can be inferred that word mapping can be adopted from the concept of Mind Mapping. This provides space for the teacher to help the learner to improve the mastery of vocabulary.

Word mapping is a technique for representing knowledge in graphs. Knowledge graphs are networks of concepts. Networks consist of nodes (points/vertices) and links (arcs/edges). Nodes represent concepts and links represent the relations between concepts. By the statements, it can be inferred that Word Mapping technique is one activity to increase student's vocabulary in English. It is often

taught to be one of the most effective ways of integrating language skills in the language classroom. Though the terms word mapping have been interpreted in many different ways by both teachers and textbook writers, both activities offer a flexible yet principled way of tailoring intergraded skills to learner needs.

Swanson and Howerton (2007:291) adds using word maps gives students an opportunity to think of a word in a variety of ways. From the statements, the researcher assumes that word mapping activities which are based on graphics often give a useful way to students to have valuable practices, either when they are in the classroom activities or outdoor activities.

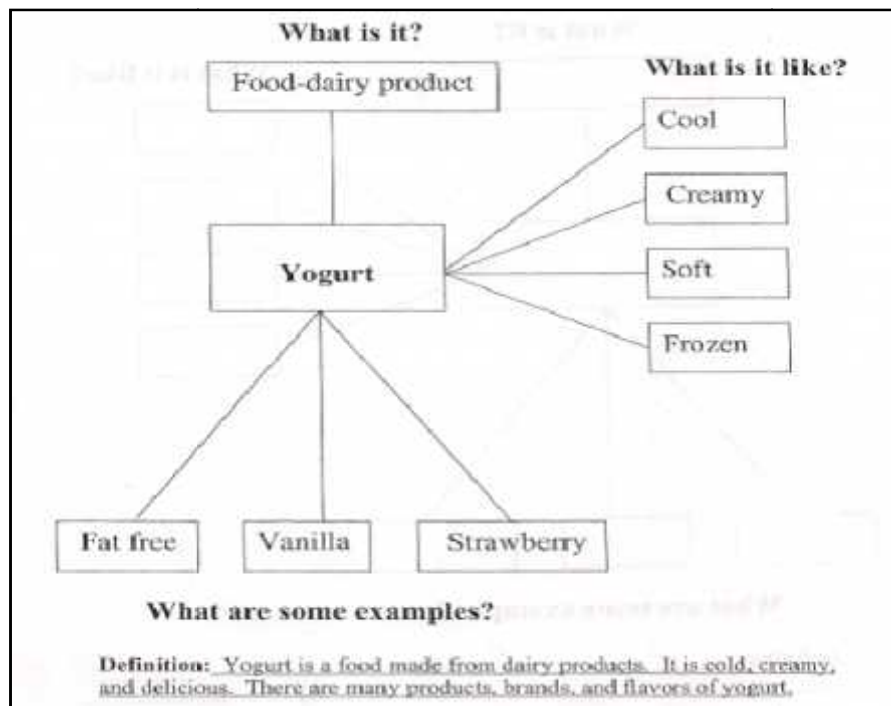
Based on description above, the writer concludes that word mapping can help the students in finding new vocabulary that can be implemented in making writing or speaking. Word mapping also gives the different situation for students in learning English, especially vocabulary. There are some reasons why teachers choose word mapping in teaching, namely:

- 1) They are useful for helping students develop their understanding of a word.
- 2) They help students think about new terms or concepts in several ways by asking the following questions: “What is it?”; “What is it like?”; and “What are some examples?”
- 3) They help students build upon prior knowledge and visually represent new information.

Schwartz and Raphael (1985:200) designed the word mapping in teaching vocabulary, the procedure are as follows:

1. Show students an overhead of the vocabulary-mapping organizer. Point out that in order to develop a meaningful definition, the map needs to contain three relationships: "What is it? What is it like? What are some examples?"
2. To model this strategy, the teacher begins by identifying a familiar word that can be easily mapped. (Examples: yogurt, rain forest, shoes).
3. Teacher writes the word on map.
4. Ask "What is it?" Record selected students' responses on map.
5. Ask "What is it like?" Record students' responses on map.
6. Ask "What are some examples?" Record students' responses on map.
7. Explain to students that the definition now includes properties, categories, and examples.

Figure 1. An illustration of Word Mapping



Source : Revitalizing vocabulary, North Caroline Teacher Academy

The procedure was started by introducing the students about word mapping, explain each part of map carefully by pointing out to have meaningful definition. The map should show three relationships of “What is it?”, “What is it like?”, and “What are some examples?” It can be assumed that this can lead the students to define the word, know what the word is represented, and the example which they can find in real life. To initiate the first step, teacher needs to give an illustration by using a familiar word that can be easily mapped. After that teacher writes a word on map, ask the students by what is it, what is it like and what are the examples. The responded word of students was written on the map. And finally teacher explains the definition of the word by including the properties, categories and examples.

By seeing the steps of word mapping, the researcher assumes that the steps start from simple to complex in which students are directed by the questions in general to be more details in some examples, and it ends by categorizing the word into their classification. This benefits the students to know the words more contextually and enables them to remain longer in their memory.

2.6 Students’ Perception about the Implementation of Teaching Technique

In the investigation of this teaching technique, students’ perception about the implementation of teaching technique is very necessary to know because it deals with whether the technique which is applicable or not used with the students’ characteristics and students’ need. Educators tended to teach the way they preferred to learn, a practice which would not benefit students with learning styles

differing from their teachers. If the needs of these students were not met, such situations could result in a loss of motivation to learn.

Therefore, students' perceptions on classroom environment plays essential role in giving teachers feedback on the environment that promotes motivation among students in the classroom. By this statement, it can be inferred that perception of the students should be considered into account in order to make the learning process being fruitful. In short, the interaction and the participation will be fine if the students' perception is positive. Furthermore Atkinson & Atkinson and Hilgard (2001:201-203) states that perception is the assumption about certain objects which is obtained through senses then it is organized, interpreted and evaluated. The sumit of this process is evaluation. Through evaluation, someone then determine their perception about something happened suround them.

This current research technique is word mapping technique. And the students' perception about the technique can be concluded if they evaluate the teaching technique applied in the classroom. Talking about evaluating teaching technique, Fraenkel, et al (2009:231-234) underlines several aspects namely preparation, presentation, method, teachers-students' interaction, learners' satisfaction.

They include how well the teacher preparation in the classroom; how well the teacher presentation during the process of learning; how well the method employed by the teacher to facilitate the students' necessity; how well the teachers-students interaction in the classroom; and finally how well the learner's satisfaction with the process learning of vocabulary through word mapping. The

students told their perception about the four aspects which are formulated in the questionnaire. The aspects above were used as the indicators for measuring students' perceptions about the vocabulary learning through Word Mapping technique.

2.7 The Theoretical Assumption

According to Hiebert and Kamil (2005:28) teaching individual words is what commonly comes to mind when we talk about vocabulary instruction. A number of studies have sound that for vocabulary instruction to increase the comprehension of texts that contain the instructed words, it must be fairly intensive. There are many kinds of teaching technique, such as: story telling, games, song, mind map, word mapping. Among those alternative techniques in teaching, the writer is interested to employ word mapping in teaching vocabulary. A definition of word mapping is a graphic rendering of a word's meaning. Typically, it has the form of having the vocabulary word in the central portion of the graphic organizer, and three separate sections for the three main questions about the word linked to it.

The researcher proposes an alternative way in teaching vocabulary that is by using word mapping technique. Since it is useful for helping students in developing their understanding of a word, it can help students think about new terms or concepts in several ways by asking the following questions; what is it?, what is it like?, and what are the examples?.

Based on the background of problem, the theoretical review of the technique and the examples, the researcher would like to formulate problem in this research to be “Is word mapping technique effective to develop student’s vocabulary achievement?” In this research, the researcher focused the study on the effectiveness of the word mapping in teaching learning activity to widen students’ vocabulary. The technique will be applied to the students of junior high school level.

2.8 Hypothesis

In relation to the theoretical assumption; therefore, the hypotheses can be formulated that:

1. There is a significant difference on vocabulary achievement between students who are taught by using word mapping and those who are taught by using conventional technique.
2. Ho : There is no significant difference between students’ vocabulary achievement after being taught by using word mapping.
H1 : There is a significant difference between students’ vocabulary achievement after being taught by using word mapping.

III. RESEARCH METHOD

This chapter describes the design of the research, how to collect the data in the research and how to analyze the data. This chapter also describes research procedure, schedule of the research, validity and reliability of the test instrument, data treatment, and hypothesis testing.

3.1 Research Design

This research is a quantitative study which employs *control group pretest – posttest* design. There were two classes as the subject of the research which were chosen randomly. The first class was as the experimental class and the second was as the control class. The research design is as follows:

K1 (random) T1 X T2

K2 (random) T1 X T2

K1 : experimental group

K2 : control group

T1 : Pre-test.

X : Treatment.

T2 : Post-test.

(Setiyadi, 2006:135).

Subject in experimental class was given the treatment of teaching vocabulary through word mapping technique. The subject in the control class was taught by the conventional technique. The treatments for experimental and control group was done for two months. The pre-test was administered to both classes before the treatment of teaching vocabulary is implemented, to see the students' basic mastery of vocabulary. Then the post-test was administered to analyze the improvement of the students' mastery of vocabulary.

The questionnaire distributed in this research was used to investigate the students' perception about vocabulary learning through word mapping. The questionnaire was arranged in Likert scale in which the answers were analyzed, classified and generalized as the data source.

3.2 Population and Sample of the Research

The population was the seventh grade of SMPN 20 Bandar Lampung students. Totally there were 491 students of the seventh grade; 261 male and 230 female which were put in 14 classes. Each of the classes consisted of 30 students. As the classes were spread homogenously, two classes were taken as sample randomly. One of the classes was the experimental group and the other was control group. They were VII E and VII F. The class VII C was used as the try out class.

3.3 Data Collecting Technique

In collecting the data, the researcher uses the following research procedure:

3.3.1 Test

Vocabulary test was used to measure students' vocabulary achievement. There were 40 questions with 4 options: a, b, c and d. To be clear, it can be seen in the following sub chapter:

3.3.1.1 Pre-test and Post-test

The pre-test was done in the two classes in the first meeting before the treatment of teaching vocabulary, to see the students' basic mastery of vocabulary.

The post-test was done in the two classes after the treatment of teaching vocabulary by using the test in the pre-test. The result of the post-test was compared with the result of the pre-test to analyze the improvement of the students' vocabulary through word mapping.

3.3.2 Non Test

Non test instrument was used in form of questionnaire which was employed to know students' perception toward word mapping technique. The description can be seen in the following part:

3.3.2.1 Questionnaire

To answer the third research question, the researcher distributed close-ended questionnaire. This instrument was given to experimental class. The questionnaire was prepared to answer all the questions dealing with students' preception. The questions were translated into Bahasa Indonesia in order to avoid mis

interpretation by the students. The specification of students' perception questionnaire can be seen as follow.

Table 3.1 Specification Table of Students' Perception Questionnaire

No	Objective	Aspect	Indicators	Number of Item
1	This specification is used to assess the students' perception about the vocabulary learning through Word Mapping technique.	Students' Perception	Preparation	1,2,3
			Presentation	5,6,7,8,9,10
			Method/ Execution	12,13,14,15,16,17,18,19,20
			Teacher-Students Interaction	22,23,24,25,27,28,29
			Learners' Satisfaction	4,11,21,26,30

3.4 Research Procedure

In conducting the research, the writer did the research by these following steps:

3.4.1 Conducting the Try-out Test

The try-out test is conducted in the first meeting in another class which was chosen purposively out of the two classes, to know the quality of the test as the instrument of the research. The number of the test items was fifty items which contains four options of answer for each (A, B, C, and D). The time allocation was eighty minutes. This test was administered to the students in order to have a good test quality, which has not only good reliability and good validity, but also good level of difficulty.

3.4.2 Administering the Pre-test

The pre-test was administered in two classes in the first meeting before the treatment of teaching vocabulary through word mapping was implemented, to see the students' basic mastery of vocabulary. The pre-test was administered as an objective test in the form of multiple choices. The number of the items in the test was forty items which contain four options of answer for each (A, B, C, and D), in which one of them was the correct answer and the rests are the distracters. The materials were given based on recent curriculum of junior high school, which considered suitable vocabulary for their level.

3.4.3 Conducting the Treatment

After having the pre-test, the treatment of teaching vocabulary through word mapping was implemented in experimental class. Schwartz and Raphael (1985) designed the word mapping in teaching vocabulary. In conducting the treatment, the researcher designed the procedure of word mapping technique which can be seen as follows:

1. Firstly, teacher divides the students into five groups.
2. Then, teacher prepares 5 words for each meeting. To begin the lesson, she shows students an overhead of the vocabulary-mapping organizer. Then she points out that in order to develop a meaningful definition, the map needs to contain three relationships: "What is it? What is it like? What are some examples?"

3. To model this strategy, the teacher begins by identifying a familiar vocabulary word that can be easily mapped. It can be noun or noun phrase.
(Examples: yogurt, rain forest, shoes)
4. Next, the teacher writes the word on map. For example, yogurt.
5. Then teacher asks "What is it?". And she records and selects the students' responses on map. For example, yogurt-----→ food-dairy product
6. She continues to ask "What is it like?". And she also records the students' responses on map. For example, yogurt-----→ cool, creamy, soft, frozen
7. And she asks "What are some examples?" and records the students' responses on map, such as, yogurt-----→ fat free, vanilla flavour, strawberry flavour.
8. Next session is continued by preparing some cards which contain some words. The teacher lets the representative of each group to take one card and ask the group to work in group to make the word map.
9. After having the word map, each group reports the result of their work of the word map on the board.
10. At the end, the teacher explains to the students that the definition now includes properties, categories, and examples.

3.4.4 Administering the Post-test

The post-test was administered in two classes after the treatment of teaching vocabulary by the same questions like done in the pre-test. The result of the post-test was compared with the result of the pre-test to analyze the improvement of student's mastery of vocabulary.

The researcher made the vocabulary test in 50 items in form of multiple choices. After doing the try out, the test used consists of 40 items. For the test instrument, the table of specification is needed. Therefore, the researcher provides the following table specification.

Table 3.2 Specification Table of Vocabulary Test

No.	Aspect	Item	Number of item	%
1.	Noun	9,10,11,12,25,26,27,28,43,44,45,46	12	24%
2.	Verb	1,2,3,4,17,18,19,20,34,35,36,37	12	24%
3.	Adjective	13,14,15,16,29,30,31,32,33,47,48,49,50	13	26%
4.	Adverb	5,6,7,8,21,22,23,24,38,39,40,41,42	13	26%
Total			50	100%

3.4.5 Distributing the Questionnaire

The researcher distributed close-ended questionnaire to get the data about students' preception from all the students in experimental class, the researcher instructed them to answer all the questions. The questions are translated into Bahasa Indonesia in order to avoid mis interpretation.

3.5 Schedule of the Research

The data of research are taken in four steps which consist of:

- 1) First step : The try-out test was conducted in another class out of two groups to test the instrument of the research.
- 2) Second step : The pre-test was administered in two groups to see the students' basic mastery of vocabulary.

- 3) Third step : The treatment of teaching vocabulary through Word Mapping was implemented in experimental group. It took six meetings. The observation is also conducted to observe the teaching-learning process during the treatment of teaching vocabulary through word mapping.
- 4) Fourth step : The post-test is administered in 2 classes to analyze the improvement of the students' vocabulary from the comparison of the pre-test and post-test results, and then the distribution of questionnaire is also conducted afterward, to find out the problems the students face in learning vocabulary through word mapping.

3.6 Validity and Reliability

To make sure whether the instruments are eligible to be used in this research, the researcher tested the validity and reliability of the instruments. They are described as follow:

3.6.1 Validity

The test is considered as the valid one if the test measures the object to be measured and it is suitable with the criteria. To measure whether the test has a good validity, this research used content and construct validity.

3.6.1.1 Content Validity

Content validity is concerned with whether the test is sufficiently representative and comprehensive for the test. According to Hatch and Farhady (1982:251),

since content validity is the extent to which a test measures a representative sample of the subject matter content. The focus of content validity is adequacy of the sample and not simply on the appearance of test. Therefore, since the test instrument is conducted to get the data of the students' vocabulary achievement. The content validity of the test items are conducted by including vocabulary list which are arranged based on the materials already given and it is suitable with the curriculum. Thus, if the measuring instrument has represented all the ideas connected with the materials that will be measured, the measuring instrument has fulfilled the aspect of content validity.

3.6.1.2 Construct Validity

Construct validity is concerned with whether the test is actually in line with the theory of vocabulary achievement which will be measured. To achieve the construct validity, the test was adopted from the student's hand book based on 2006 English curriculum of junior high school for the first grade. Then, the test is made based on the classification of word according to theme and class. The first is function words which include noun determiners, auxiliaries, qualifiers, preposition, coordinators, interrogators and sentence linkers. The second is content words which include nouns, verbs, adjectives and adverbs.

Based on the classification of word, the test instrument is constructed. It is tried-out first and then the items were selected from fifty items to thirty qualified-items. Next, the test instrument is used to analyze the improvement of the students' vocabulary through word mapping.

In order to measure the content and construct validity, *inter-rater* analysis was used to make the vocabulary test instrument more valid. Thus, three English teachers of SMPN 20 Bandar Lampung were as the raters, they took part in measuring the content and construct validity of the test instrument. If the percentage of one item is >50%, it means that the item test could be taken.

3.6.2 Reliability and Item Analysis of Vocabulary Test

Try out of instrument was conducted at SMP N 20 Bandar Lampung. However, it was administered for the students who are not included as the sample of the research. The test instrument needed to be checked for its reliability. Reliability is the degree to which an assessment tool produces stable and consistent result. To know the reliability of test, the writer used the Split-Half technique as follows:

1. Giving the test items to the students out of the sample of research
2. Dividing the result to odd and even items
3. Analyzing the result by using Product Moment formula as follows:

$$r_{xy} = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{\{N \sum x^2 - (\sum x)^2\} \{N \sum y^2 - (\sum y)^2\}}}$$

Notes:

- r_{xy} : coefficient correlation between x and y
- xy : the total of x and y
- x : the total number of x score (odd items)
- y : the total number of y score (even items)
- x^2 : the sum square of x variable
- y : the sum square of y variable
- N : total of sample

(Hatch and Farhady, 1982:198)

4. Calculating of the reliability of the item test by using Spearman Brown Formula as follows:

$$r_x = \frac{2r_1}{1 + (r_1)}$$

Notes:

R_x : the full coefficient reliability of test

r_1 : the coefficient correlation between x and y

(Hatch and Farhady, 1982:247)

3.6.3 Validity and Reliability of Questionnaire

To collect the data of students' perception toward the implementation of word mapping, a questionnaire which consists of 30 items was employed. The researcher analyzed the validity and reliability of the instrument before the questionnaire was used as an instrument. The content validity was done by doing expert judgment. The expert looked up to the questionnaire items and matched them with the theory lies behind them. Seeing the result of expert judgment, it was found that all of the items were in line with theories and it can be concluded that this questionnaire can be used to gather the data in this research.

Cronbach Alpha Formula was used in finding out the reliability of the questionnaire. Based on the analysis by using SPSS 20, it is found that the coefficient Alpha obtained is 0.919. It means that the questionnaire is reliable and it can be used as instrument to get the data of students' perception toward the implementation of word mapping technique.

Reliability Statistics

Cronbach's Alpha	N of Items
,919	20

3.7 Data Treatment

The quantitative data are treated by statistical formula, while qualitative data are treated into descriptive analysis. And the data are treated by following step:

3.7.1 Normality Test

Normality test is used to measure whether the data in the subject of the research is normally distributed or not. The students' scores of the pre-test and post-test in two classes are analyzed by *One-sample Kolmogorov-Smirnov* formula through SPSS 20 to gain the normality test.

The hypotheses for the normality test are as follow:

H_0 : The data is not distributed normally.

H_1 : The data is distributed normally.

In this research, H_1 would be accepted if $p > \alpha$, and the writer uses level of significance 0.05.

3.7.2 Scoring System

In scoring the students result of the test, Arikunto`s formula was used. The ideal higher score is 100. The scores of the pre-test and post-test are calculated by using formula as follows:

$$P = (100) \frac{F}{N}$$

P : The score of the test.

F : The total of the right answers.

N : The total items.

(Hatch and Farhady,1982:46).

3.8 Data Analysis

Analysis means categorizing, ordering, manipulating, and summarizing of data obtained to answer the research questions. The purpose of analysis is to reduce data to be intelligible and interpretable so that the relation of the research problem can be studied. Therefore, the data from the interview is collected and interpreted. Data in this research are analyzed quantitatively. There are some different statistical computations to answer each research question. To analyze the data, Statistical Package for Social Science (SPSS) program version 20 for windows is used. The data obtained from test are compared before and after treatment. Since there are two research questions in this research, the researcher described it one by one. The steps are described as follows.

3.8.1 Research Question 1

1. The score of students' vocabulary achievement before and after the treatment in the experimental class are analyzed to find out the mean score.
2. The researcher analyzed the score of students' vocabulary achievement before and after the treatment in the control class to find out the mean score.
3. The mean score of each vocabulary achievement are compared by using paired t-test to know the differences of vocabulary achievement before and after the treatment given. The significant level () which is used is 0.05.

3.8.2 Research Question 2

1. The score of vocabulary achievement from pre test and post test in the experimental class are analyzed to find the mean score.
2. The score of vocabulary achievement from pre test and post test in the control class are analyzed to find out the mean score.
3. The score of vocabulary achievement from pre test and post test are compared by using independent t-test to know the differences before and after the treatment given. The significant level () which is used is 0.05.

The hypothesis are tested as follows.

H_{01} = there is no significant difference of vocabulary achievement before and after treatment.

H_{A1} = there is a significant difference of the vocabulary achievement before and after treatment.

H_{03} = there is no significant difference of students' vocabulary achievement who are taught by Word Mapping and conventional technique.

H_{A3} = there is a significant difference of students' vocabulary achievement who are taught by Word Mapping and conventional technique.

The criteria for hypothesis acceptances is that if the significant (p) value obtained through SPSS program is less than the significant level (0.05) it means that H_0 is rejected. However, if the significant (p) value which is gained from SPSS program is greater than the significant level (0.05) it means that H_0 is accepted.

To analyze the data of students' perception toward the implementation of word mapping, the researcher analyzed the result of questionnaire descriptively then described it clearly. The description is based on the mean score of students' response.

3.9 Hypothesis Testing

The hypothesis is statistically tested by using Statistical Package for Social Science (SPSS) program version 20 for windows., in which the significance is determined by $p < 0.05$. Therefore, the hypothesis which can be cited as follows:

1. H_0 : There is no significant difference in vocabulary achievement between students who are taught by using Word Mapping and those who are taught through conventional technique.

H_1 : There is a significant difference in vocabulary achievement between students who are taught by using Word Mapping and those who are taught through conventional technique.

2. H_0 : There is no significant difference between vocabulary achievement before and after taught by using Word Mapping.

H_1 : There is a significant difference between vocabulary achievement before and after taught by using Word Mapping.

The criteria of accepting hypothesis is that if $t\text{-count} < t\text{-table}$ then H_0 is rejected.

That means that H_1 is accepted.

V. CONCLUSIONS AND SUGGESTIONS

In this chapter, the researcher comes to the following conclusions based on the result discussed in the previous chapter. In addition, the suggestions of the research are dedicated to the teachers, and further researchers are put forward.

5.1 Conclusions

Referring to the result of the data analysis and the discussions of this research, the researcher makes the following conclusions.

1. This research focuses on the students' vocabulary achievement improvement by implementing modified word mapping. The results reveal vocabulary achievement, that there was a significant difference of the students' vocabulary achievement between the experimental and the control class. By looking at the result, students' vocabulary achievement in the experimental class is better than that of the students in the control class. It means that the teaching of word mapping can promote students' vocabulary achievement. This happens due to the fact that word mapping can help students to develop their mastery of vocabulary.
2. Based on the questionnaire of the students' perception, it reveals that the students' perception about the implementation of Word Mapping is positive.

This means that the process of teaching vocabulary through word mapping is good in that the students are mostly satisfied. Before treatments the students were not familiar with learning word mapping. However, when they already got the treatment, they realized that word mapping could help them in recognizing new words. Seeing the benefit of word mapping, the students think that this technique is very useful for them so that the perception of the students is positive.

5.2 Suggestions

In line with the result and conclusions of the research, the researcher would like to propose some suggestions for teachers and further researcher:

a. For the Teachers

1. The technique used in this research is really effective to teach students about vocabulary achievement. It can be used as an alternative way for teacher to teach learning vocabulary. It provides clear directions and steps to teach students about the technique.
2. In implementing the approach, teachers are suggested to not only give the clear instruction about how to use the technique but also give the materials which support the usage of the technique. By giving the appropriate materials, students can try to implement the technique by using those materials.

b. For the Further Research

1. By looking at the limitation of the research, several suggestions for further research identified. First, since in this research on word mapping was modified to be appropriate to teach vocabulary. It seems that it would be interesting for the future researchers to implement this technique in different strategies to different skills. Second, it is better for the further research to be conducted in a senior high school which has students with good ability of English in order to get the best result of the research. In addition, it is also suggested for the next researcher to implement Word Mapping in long term research to see the different effect of Word Mapping to students' other language skills.

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