

**THE IMPLEMENTATION OF MIND MAPPING TECHNIQUE TO
INCREASE STUDENTS' READING COMPREHENSION ACHIVEMENT
AT THE SECOND GRADE OF SMP MUHAMMADIYAH 3 BANDAR
LAMPUNG**

(A Script)

Oleh

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BANDAR LAMPUNG
2017**

ABSTRACT

THE IMPLEMENTATION OF MIND MAPPING TECHNIQUE TO INCREASE STUDENTS' READING COMPREHENSION AT THE SECOND GRADE OF SMP MUHAMMADIYAH 3 BANDAR LAMPUNG

BY

LIVINDITA

Reading skill is an important aspect in learning a language, especially in learning English as a second or foreign language. High school students found difficulties in comprehending an English text. Therefore, in this research the researcher used mind mapping technique to increase students' reading comprehension achievement. This research is intended to find out whether there is significant increase of the students' reading comprehension achievement before and after being taught through mind mapping technique and also intended to find out the highest increase in reading aspects.

This quantitative research was conducted at second grade students in academic year 2016/2017 of SMP Muhammadiyah 3 Bandar Lampung. There were two classes taken randomly used in this research, VIII C was the tryout class and VIII B as the experimental class. This research applied pretest and posttest design. The data was measured by using paired samples T-test.

The result of the students' score before and after treatment implied that mind mapping technique could increase the students' reading comprehension. The result of the data analysis on the mean score of the pretest was 59.18 and posttest was 69.46. By the comparing between the mean of pretest and posttest, it can found that the increase of the mean 10.26 point. Paired samples T-test indicates significant increase of students' reading comprehension achievement after the implementation of mind mapping technique $p=0.000$, $p<0.05$ and reference was the highest increase in reading skill. In conclusion, Mind Mapping technique is worth applying in teaching learning of English reading comprehension achievement.

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SECOND GRADE OF SMP MUHAMMADIYAH 3 BANDAR LAMPUNG**

By

Livindita

A Script

Submitted in a Partial Fulfillment of

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in

**The Language and Arts Department of
Teacher Training and Education Faculty**



FACULTY OF TEACHER TRAINING AND EDUCATION

UNIVERSITY OF LAMPUNG

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**Research Title : THE IMPLEMENTATION OF MIND MAPPING
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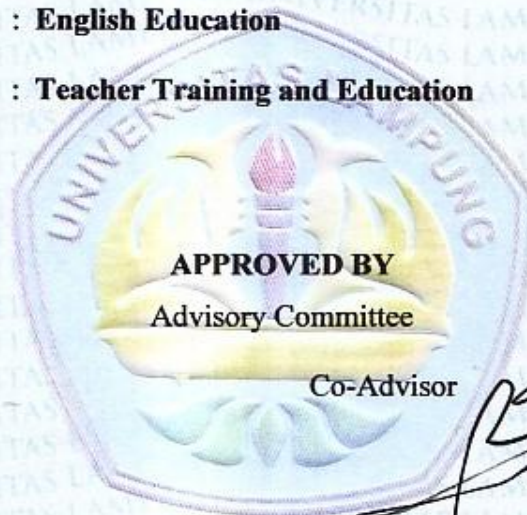
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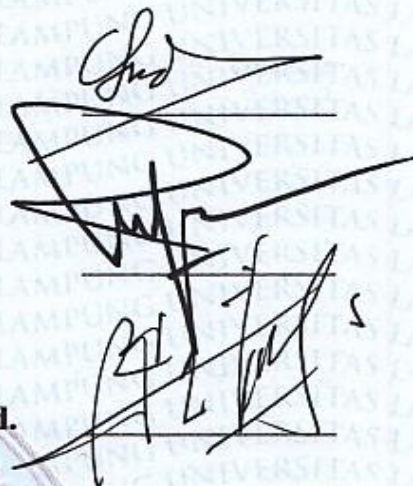
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CURRICULUM VITAE

The researcher's name is Livindita. She was born on Augustus 01, 1994 in Kotabumi, North Lampung. She is the youngest daughter of Ahmad Mursid, S. Pd., and Erni Djohan (Deceased). She has one sister and one brother namely Like Ermeisi S. Kom and Lian Edvantris.

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DEDICATION

This paper is proudly dedicated to:

My Beloved parents:

Ahmad Mursid S. Pd, and Erni Djohan (Deceased)

My Beloved Sister and Brother:

Like Ermeisi S. Kom and Lian Edvantris

My Beloved Lectures at the English Department

My beloved Friends, and

My Almamater, University of Lampung

MOTTO :

The seeking of knowledge is obligatory for every muslim

(Prophet Muhammad)

But Allah is your protector, and he is the best of helpers

(Ali' imran 3:150)

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The writer would like to express her deepest gratitude to all of those who gave her possibility to complete this script. The writer would like to acknowledge her sincere gratefulness to as her first advisor Drs. Sudirman, M. Pd. Drs. Ramlan Ginting Suka, M. Pd, as her second advisor, who have given her much help in guidance and suggestions, knowledge, and encouragement during the accomplishment of this script. In this occasion, the writer would like to dedicate her deep gratitude to her examiner, Ujang Suparman, M.A., Ph.D. who has given suggestion to complete this script.

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Finally, the writer believes that this writing is still far for perfection. There may be weaknesses in this research. Thus, comments and suggestions are needed to make this research better. Somehow, the writer hopes this research can give a positive contribution to the educational development, the readers and those who wish to accomplish further research.

Bandar Lampung July 06, 2017

The writer

Livindita

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I. INTRODUCTION

This chapter contains a brief explanation of the introduction. It consists of the background of the research, formulation of research problem, objectives of the research, uses of the research, scope of the research, and definition of the terms.

1.1. Background of the Research

Reading skill is an important aspect in learning a language, especially in learning English as a second or foreign language. It is also important thing to choose appropriate media when a teacher teaches reading skill in a class. There are four skills in English: listening, speaking, reading, and writing. The reading skill is an important subject of study, because reading is one of the factors that can make students' success of their study depending on their greatest part of reading ability.

Reading comprehension is the ability to read text, process it and understand its meaning. An individual's ability to comprehend text is influenced by their traits and skills, one of which is the ability to make inferences. If word recognition is difficult, students use too much of their processing capacity to read individual words, which interferes with their ability to comprehend what is read. Reading is construction of meaning from a printed or written message. The construction of meaning involves the reader connecting information from the written message

with previous knowledge to arrive at meaning at an understanding. Harmer (2010: 102), also states that by reading, it can be used to be a good model in writing for students. It means that reading can support the students to increase their English skills.

In this era, English has become an international language in the world where people compete to be able to speak English. English is a foreign language taught at school in Indonesia. English has been learned since junior high school in Indonesia. The students are expected to be able to master English language skill as stated in School Based Curriculum of English lesson. It is stated that if they have a good reading ability they can have great progress a batter change to success on their study. On the other hand, if they reading skill is poor they are very likely to fail and they will have difficulty in making progress on their study.

The goal of the School Based Curriculum is that the students are expected to increase the knowledge which is mostly written in textbook. It means that the students should interpret the meaning of the text when they are reading. According to Hornby (1972:63) a comprehension is the power of understanding fully. It means that comprehension determines the principle of reading process, and by reading comprehension we can understand the purpose and the main point of the text. In the process, the students will perform some tasks given, when students can get the main idea of the text, they will get knowledge and that is part of learning.

Based on 2006 curriculum (KTSP), the student is supposed to deal with many kind of text such as narrative text, descriptive text, recount text, record text,

procedure text, and functional text such as advertisement, brochure, message, notice, personal letter and invitation (Depdiknas 2006). In this research the researcher is only focus in descriptive text, it because descriptive text was related to KTSP curriculum. Descriptive text is also suitable for the second grade students. According to KTSP syllabus, in the first semester of the second grade of junior high school should learnt two text, they are descriptive and recount text. Descriptive text is a simple text that used simple present tense that has been leaned since in junior high school.

Based on my pre-research at SMP Muhammadiyah 3 Bandar Lampung, it was found that the reading achievement of the students' are low, it can be seen from their scores in English lesson. Most of students are having some problems in learning English, i.e. students have difficulties to understand the meaning of words, students have difficulties to get mind idea of the English text, students are lack of appropriate teaching media, they feel afraid or nervous in learning English, teachers using commercial book for teaching English, and teacher does not use the appropriate media in teaching learning process. They lacked of reading skill because students often claim that their primary problem in acquiring English is the lack of vocabulary to understand and they difficulties to get the main idea of the text.

The second problem is the teacher teaches the students based on the book provided by Depdiknas (Department of Education) or commercial books, by using commercial book the teachers in their school just ask them to read and answer the multiple choices questions without tell them about the more specific information of the text. The teacher do not use their creativity in providing appropriate

technique for teaching learning process, so the students easily get bored during the class and difficult to get the idea of the text and finally they become passive during the class. It makes their English skill cannot increase. English teaching should be delivers in interesting technique that can guide the students to understand the text and to predict the meaning. So, they can increase their reading skill especially their skills in comprehension. In reading comprehension there are five aspects that students should improve. The five aspects are determining main idea, specific information, references, interferences, and vocabulary.

A good technique is needed to make students pay attention in classroom and media are needed to be used in the classroom to make them interested in learning process. The teacher should use a suitable method and technique to increase students' achievement specially in reading achievement. There are many methods that can be used for teaching reading related to their subject. One of the techniques is mind mapping technique. According to Buzan (2005:1), mind mapping is a very powerful tool for brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking. By using mind mapping, the readers can see the way that pieces of information fit together, as well as recording the raw fact contained in normal notes. Mind mapping encourage creative problem solving, as they hold information in a format that the students' mind finds easy to remember and quick to review. It is a good way to make the students understand more about what they read. As has been said previously that mind mapping promote effectiveness and enjoyment in the classroom, the writer assume that this technique will be good also to be implemented in teaching English, especially in reading skill.

Based on the explanation above, the researcher wants to conduct a research to know how effective mind mapping to increase students' reading ability in teaching English. The researcher wants to apply mind mapping in teaching reading skill at SMP Muhammadiyah 3 Bandar Lampung chosen as subject. The researcher believes that creating activities using mapping can help the students' easier to find the main idea of the text and keep the meaning of the words stand longer in their mind. Therefore, there is a hope that mind mapping can help students to increase their reading comprehension. By the reason above, the researcher will conduct a study entitled "The Implementation of Mind Mapping Technique to Increase Students' Reading Comprehension achievement in the Second Grade of SMP Muhammadiyah 3 Bandar Lampung.

1.2. Research Questions

Based on the background above, the writer formulates the problem as follows:

- a. Is there any significant increase on the students' reading comprehension achievement after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung?.
- b. Which aspect of reading skill has highest increase after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung.

1.3. Objectives of the research

In relation to the research question, the objectives of this research are

- a. to find out whether there is significant increase on the students' reading achievement after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung.
- b. to find out which aspect of reading skill has highest increase after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung.

1.4. Uses of the Research

This research is expected to be useful both theoretically and practically:

- a. Theoretically, hopefully the results of this research can give contribution to teachers and curriculum developers about the quality of mind mapping in reading comprehension.
- b. Practically, this research gives information to English teachers that mind mapping can be used as an appropriate technique to increase students' reading comprehension.

1.5. Scope of the Research

This research is quantitative research dealing with the use of mind mapping technique in understanding reading comprehension skills. This research was conducted in the second grade of junior high school at SMP Muhammadiyah 3 Bandar Lampung. The materials of reading were taken from students' English handbook for the second grade. In this research, the researcher focused on reading

comprehension of descriptive text. The subject of the research was one class which consisted of 32 students. In this research, the researcher focused on mind mapping technique to determine the achievement of the students in reading comprehension skill by using questions about descriptive text as many as 30 questions. The test items cover five reading aspects: determining main idea, finding information, references, inferences, and vocabulary for pre-test and post-test of multiple choices.

1.6. Definition of the Terms

There are some terms used by the researcher and to make it clearly, the researcher give the definition as follows:

1. Reading comprehension

It refers to an activity of thinking process in which a reader simultaneously extracts and constructs meaning thought interaction and involvement with written language to get meaning or idea of the texts.

2. Increase

It refers to a process especially from pretest and posttest or before treatment and after treatment becoming or making better in terms of quality, score, or usefulness.

3. Technique

It refers to a specific activity manifested in the class that is consistent with method in harmony with an approach as well.

4. Mind mapping

It refers to a technique of making outline which represents words, ideas, tasks, or another linked of the text to arrange radically around a central key word or idea by lines and typically it contains words, idea, short or picture related together.

5. Descriptive

It refers to which describe a vivid image of a person, place, or thing. It draws on all of the sense, not merely the visual. Its purpose is to enable the reader to share the writer's sensory experience of the subject.

6. Achievement

It refers to the result of what an individual has learned from reading descriptive text after being taught through mind mapping technique.

II. LITERATURE REVIEW

This chapter concerns with the theories that support the research. There are some theories described in this framework. It consists of review of previous researches, the concept of reading comprehension, concept of reading aspects, teaching reading comprehension, technique of reading, concept of mind mapping, procedures of teaching reading comprehension, advantages and disadvantages of mind mapping, theoretical assumption and the hypothesis.

2.1. Review of Previous Researches

There have been several studies dealing with teaching reading for second grade of junior high school. Firstly, Indrayani (2014) conducted a study about the effectiveness of mind mapping technique to improve students' reading comprehension at second grade of SMA Matha'ul Huda. She investigated the effectiveness of mind mapping technique to improve students' reading comprehension. The result shows that mind mapping technique is effective technique to improve students' reading comprehension at second grade of Senior high school.

Secondly, Khoirunnisa (2013) conducted a study about the use of mind mapping technique to increase students' reading comprehension at the second grade of

SMP Negeri 3 Bandar Lampung. She investigated the increasing of students' reading comprehension after being taught mind mapping technique. The findings shows that mind mapping technique can be use to increase students' reading comprehension achievement.

Based on the previous research done by Indrayani (2014) and Khoirunnisa (2013) the result showed that mind mapping is good technique for teaching reading. It was also found that there was an increase of students' reading comprehension achievement after being taught through mind mapping technique.

2.2. Concept of Reading Comprehension

Reading comprehension is a process when readers learn something or get information from what they read. In learning language especially English, there are four that must be developed. They are speaking, listening, reading and writing. Reading is the challenge to the teacher also because it such as a complex process and it not a general ability but a composite of many specific abilities. Besides, according to Nutal (1982:4), there are five aspects of reading that the students should understand to comprehend the text well. They are determining mind idea, finding specific information, references, interferences, and vocabulary.

In reading process, readers utilize vision, perception, comprehension and reaction (Brown, 1982: 6). According to Tankersley (2005), reading comprehension can be defined as an active thinking process in which a reader simultaneously extracts and constructing meaning through interaction and involvement with written language. From the explanation above, Tankersley (2005:108) "explained that comprehension is a not a product". Readers filter understanding through the lens

of their knowledge and experience Tankersly (2005:108) because she or he is able to relate the information given which has been stored in his or his mind Chark and Silberstein (1987), cited in Brow (2001: 299-300).

Based on Howart (2006), reading is just as communicative any other form of language. It means that reading is communication both of the reader and writer, they use their emotion where the writers tries to show the message of the text. So that the readers try to decode the message that sent by the writer. Basically, this concept says that reading always deal with printed materials, which stresses on grasping meaning from printed language. It means that reading activity is the interaction between the perception of the graphic symbols that represent the language and the readers' language skill, cognitive skill and the knowledge. From this process, the reader tries to understand the meaning of the writer.

Brown (1982) states that the reading is comprehending. How much and how easily readers comprehend depends on variable within and outside them, Durkin (1979) in McIntyre, Hulan, and Layne (2011). The variable includes the reader, the activity of reading and the text. Actually, reading English foreign language seems to be more complicated for the students since it is not native language according to Brown (2011), but, if those three intersect, it will how is well comprehension will occur.

Simanjuntak (1988: 4) adds that the first point reading process is reading comprehension. Knowledge is the basic element for comprehension. It means that knowledge related to what the information we should know and we have already known. For example, we already know the word " zoo", there are words denoting

the animals of zoo like : monkey, fish, bear, snake, etc. We can imagine the picture.

Moreover, Doyle (2004) states that comprehension is progressive skill in attaching meaning that begin at the same level and proceed to attach meaning to entire reading selection. All comprehension revolves around the reader's ability in finding main idea and topic sentence from the text.

Based on the definition above, it can be says that when the students tries to comprehending the text they must to know the strategy of reading. It means that the students can easily to indentify the information of the text. Based on that explanation, the researcher assumed that the reading comprehension is the basic students' competence in reading comprehending specific information of the text.

2.3. Teaching Reading Comprehension

Reading cannot be separated from comprehension because the purpose or the result of reading activity is to comprehend what has been read. Reading without understanding what has been read is useless. According to Hedge (2003:18) any reading component of English language teaching may include a set of leaning goals for :

The ability to read is a wide range of text English. This is language range goal for most teachers seek to develop through independent readers outside EFL/ESL classroom. It is supported by the knowledge of vocabulary that should be the ability to read text. For instance, if students are reading about animal, they should have known most words related to the topic of animal, *such as a dog, lion, cat, etc.*

Build knowledge of language will facilitate reading ability. Students can build their language competence, progress in their reading ability, become more independent in their studies, acquire cultural knowledge, and develop confidence and motivation to carry on learning. The teacher's responsibility is to motivate reading by selecting appropriate materials.

The ability to adapt the reading technique to reading purposes. In this case, teacher with EFL/ESL, learners can use a variety of adapted texts or authentic text that is suitable with the students' level. These students are then taught to use different reading techniques for specific purposes. Such as, *skimming may be sufficient in reading for finding specific information, but would not serve well in reading for entertainment.*

Build schematic knowledge. Reading can be seen as an interactive process between the reader and the text which leads to automaticity or reading fluency. From this process, the readers interact dynamically with the text as she/he tries to elicit the meaning and where various kinds of knowledge are being used. For example, *when the student read the text, they should know the elicited meaning in the story.*

Taking a critical stance to the contents of the texts. It can be implemented at advance level, in which students can check the authenticity of the text by looking at the following indicators: *whether the article gives the name of the author or not, the data of publication, the aim of article, etc.*

The developing an awareness of the structure of written text in English. In creative reading, students would be acquainted with writing mechanism. For

example, when they have to read other texts, they will have the knowledge of the text structure that they are to achieve comprehension

In this course, each text is read carefully and thoroughly for maximum comprehension. Woods (2005:63) classifies the activity in reading into three as follows:

a) Pre- reading task

This task can be in form of vocabulary games, word searches, and matching synonym. These activities can help students to approach a text in more confident way. Pre-reading stage helps the students' activate the relevant schema.

b) While-Reading Tasks

These kinds of task, according to Hedge in Woods (2005:63) states, have become useful since the adoption of the idea of reading as an interactive process. This stage is to develop students' ability in tackling text by developing their linguistic and schematic knowledge.

c) Post-Reading Tasks

The tasks follow up the work covered and seek to extend candidates. Such as activities are directed writing activities, or role play and group discussion.

Teaching reading is to develop students' skill of reading English texts effectively and efficiently. Effectively and efficiently is always useful and tending to focus on the mainly on the purpose of the activity. In short, in teaching reading the

teacher should a strategy to reach the purpose of reading to anticipate the different types of reading text in teaching reading.

In short, in teaching reading, the teacher should provide the strategy to teach students to anticipate the different type reading in teaching reading. In teaching reading should apply based on the purpose of reading in order to get the most of classroom reading activity.

2.4. Learning Strategy

Two bases of categories of strategies can distinguished in language learning there are learning strategies and communication strategies. According to Brown (1980:83) learning strategy is a method of perceiving and storing particular items for later recall and communication strategy is a method of achieving communication. Although there is a strong relationship between the two type of strategy above, there are clearly difference in their manufacture. For example, transfer of native language false cognate in learning process might result in same instance in actual productive use of false cognate in L2, like the word 'piknik to have a trip with or without bring some food in Bahasa seems to be cognate since there is also picnic 'eat outside' in English. So there is clearly difference concept in Indonesia piknik from that english picnic.

According to Dawey (1910) explained problem solving a process as consisting of five stages:

1. A state of doubt, cognitive complexity, frustration or awareness of difficulty.

2. An attempt to identify the problem, including a nonspecific designation of the ends that are sought, the gap to be filled, or the goal to be reached, as defined by the situation that sets the problem.
3. Relating these problem propositions to cognitive structure. Thereby activating relevant background idea and previously achieved problem solutions which, then, are reorganized in the form of problem solving propositions or hypotheses.
4. Successive testing of the hypotheses and reformulation of the problem if necessary.
5. Incorporation the successful solution into cognitive structure and applying it both to the problem at hand and to other exemplars of the same problem.

If both children and adult make use of the five stages of problem solving, children show different problem solving strategies from those of adults. Language teaching methods should be appropriately adjusted to age levels although both child and adults are going through the same five stages and are solving the same problem that is learning the second languages.

2.5. Concept of Reading Aspects

In order to know the important of reading in teaching process, reading is contraction of involves the reader connecting information from the written message, Suparman (2012) states that are several aspects of reading comprehension skills that should be mastered by reader to comprehend the text:

mind idea, specific information, references, inferences, and vocabulary. These aspects are explained below:

1. Mind idea

Finding the mind idea of paragraph is one of most important reading comprehension skill. In some paragraphs, the mind idea is not explicitly stated in one sentence. Instead, it is left to the reader to infer or reason out. In the word, the main idea is the most important idea that the author develops throughout the paragraph. For example, in *my family*, the idea of the text is 'my family has four members'.

2. Specific information

Specific information develops the topic sentences by giving definition example, facts, comparison, analogy, cause, and effect statistic and quotation. For example supporting sentence in the second paragraph *my family* is 'my mother 47 years old'.

3. References

References are words or phrases used either before or after the references in reading material. They are used to avoid unnecessary repetition of words or phrases. It can the readers signal to find the meaning of word elsewhere in the text. For instance, she in sentence 'she's thin-faced and she's got long' refer to her mother (from *my family*).

4. Inference

Inference is an educational guessing or prediction about something unknown based on available facts and information. It is the logical connection that the reader draws between his observes or known and what he does not know. For example, question '*why the writer cannot speak sundanese well?*' make the reader a prediction based on the facts he find in the text.

5. Vocabulary

Vocabulary is the stock of word used by the people of even person. Concerning whit those statement indeed vocabulary is fundamental for everyone who wants to speak or to produce utterances for reading. It *the elephant*, for instance reader would know that '*a carnivore*' is the answer to the question '*what is the opposite meaning of a herbivore*' after reading the sentence in the text that build the context the word '*a herbivore*'.

2.6. Concept of Descriptive Text

There are many texts that are used as learning materials on a second year students of Junior High School based on KTSP, one of which is a descriptive text. Descriptive text is a type of written text which has specific function to give description about particular person, place or things according to Gerot and Wignel (1994), which is used to create a vivid impression of those subjects (Zahrowi, 2009). In line with this, Mark and Anderson (2003) argue that a factual description is specifically used to describe a particular place, person or thing. Then, the purpose of a descriptive text is to tell about the subject by describing its features without including person opinions.

Furthermore, Mark and Anderson (2003) elaborate a factual description differs from an informational report because it describes a specific subject rather than a general group. For example, the description of a specific animal, a particular building or a specific person. As described by Gerot and Wigle (1994: 208), the generic structure in descriptive text are identification used to identify phenomenon to be described and description use to mention parts, qualities, and characteristics of subject being described. According to Mark Anderson (2003), in a paragraph of the descriptive text, it usually has an opening paragraph by introducing the subject of the description that give the readers brief details about when, where, who, or what.

A series of paragraphs that describe one feature of the subject and a concluding section that signals the end of description Gerot and Wigle (1994). Then, descriptive text also has the language features. Language features in a descriptive text can be identified by the reader because it usually uses identifying process, adjectives and classifiers in nominal group and also simple present tense.

Zahrowi (2009) stated that the dominant language features in a descriptive text as follows: descriptive text usually uses simple present tense, action verb, passive voice, noun phrase, and adverbial phrase, technical terms, general and abstract noun and also conjunction and cause-effect. A writer relies on adjectives to explain how something feels, look, taste, smell, or sound. The following is an example of descriptive text:

MY FAMILY

Identification : My family has four members: those are I, my sister, and parents of course.

Description : My mother is 47 years old. Her name's Anisa. She's thin-faced and she's got long, blond hair and beautiful green eyes. She is still slim because she always tries to stay in shape. She is very good-looking, always well-dressed and elegant. My father, Lukman, is 5 years older than my mother. He is 52. In spite of his age he's still black-haired, with several grey hairs. He has bright blue eyes. He is quite tall, but a bit shorter than me. He's very hard-working. Besides that he is working in a travel company. He can even make a dinner when my mother is outside. His cooking and his meals are always very tasty as well as my mothers'.

Finally, my sister Nadina. She is 22. She is also red-haired and green-eyed. She has long wavy hair and freckles. She is definitely shorter than me. She is rather introverted. But she is very sensible, smart and co-operative. Right now she is studying English and also knows Arabic and Mandarin. I want to be so smart as she is. They all, except me, speak Sundanese very well, because we were living in Bandung for 5 years. My sister has been going to primary school there. Unfortunately I was only 3 when we were leaving to Jakarta, so I can't speak Sundanese. Now we are happily living in Jakarta.

Referring to those explanations, it can be concluded that descriptive text is a text that has function to describe something or somebody in our daily life with purpose to identify the features of some objects clearly. As the other text genres, descriptive text has characteristic in the form of generic structure and language

feature which make the text has certain characteristics that will be different from the other text genres.

2.7. Concept of Mind Mapping

The mind mapping is a technique to use the whole brain by using visual and other graphic to create a meaningful impression DePotter and Hernacki (2004). Using the whole brain can balance two sides of human brain: left and right brain. It means that human can maximize their brains to create meaningful things because of their brains power.

Jonassen, Beissner, and Yacci (1993) define the concept of maps or mind maps as “representation of concepts and their interrelationship that are intended to represent the knowledge structures that humans stored in their minds”. This mind map could be more freestyle, visual, and do not necessarily have particular meanings imposed on relationships Buzan (1995). It is able to be a simple work for the students who learn to understand a written text.

According to Swan (2010), a mind mapping changes the paradigm of teaching and learning process and converts monotone information into a colorful, memorable and highly organized diagram that works in line with someone’s brain. There are four essential characteristics in mind mapping: The central topic is the starting point for mind map that gives a brief description of a story Eppler, (2006:2).

Concept mind map



Mind mapping has natural organization structure that radiates from the center and uses lines, symbols, words, colors, and image Margulies (1991). According to Swan (2010), a mind mapping changes the paradigm of teaching learning process and convert monotonous information into a colorful, memorable, and highly organized diagram that works in line with someone's brain. There are five essential characteristic in mind mapping:

- 1). The central topic is the point for mind map that gives a brief description of a story.
- 2). The mind themes of the subject radiate from the central image a branches. The first level of branches is called basic ordering ideas that can be organized into different sections or topic.
- 3). The topic of lesser important are represent as "twigs" of the relevant branch.
- 4). Keyword are the words given to each branches to convey meaning of the topic.

5). Images are widely seen as the best way to describe a mind mapping because it can give better meaning the words. It can be used anywhere, as a substitute for central topic, the branch or instead of keyword on the branch.

Mind mapping can help someone to maximize the potential ability of the brain to memorize and organize idea Wycoff (2003) cited in Kusumaningsih (2008), because mind map help enhance the brain's capacity to recall information Beare, (2009). It also motivating way for students to summarize a unit, because it assist in digesting information, retaining it and exploring new concept and topics in our own unique way Margulie (1991).

Best of the explanation above, mind mapping is an effective technique present and rearrange ideas which come on mind. By using mind mapping, we can quickly identify and understand the structure of a subject and also see the way that pieces of information fit together, as well as recording the raw facts contained in normal notes.

2.8. Procedures of Teaching Reading Comprehension Descriptive Text by Using Mind Mapping Technique

The research gives treatment to the students by understanding the teaching reading narrative text as the materials. The teaching procedures are described based on the steps implemented for mind mapping technique.

a. Pre reading activity

In pre reading activity is an opening act in order to build the schemata before coming to the topic of the lesson. The main purpose of giving pre-reading activities is to get students' attention to the topic. According to Markstein and

Hirasawa (1981:83), if the teacher spends more time to introducing the reading, the result will be better. Careful reading preparation really helps the intermediate level students which give them benefit to be more receptive to the content. In general, pre-reading activity that will do in class as follows: brainstorming, showing picture, and asking question based on the topic.

Greeting

1. The teacher checks the students' attendance list.
 2. The teacher showing the picture as a media in order to attract students' interest and help the students understand the contents of the text.
 3. The teacher brainstorm the students' knowledge of the text by asking several questions related to the theme they just already heard.
 4. The students are informing the material they are going to learn, the goals of the learning to increase and reading technique the students use.
- b. While reading activity
1. The teacher make mind mapping as the example in the white board, for example lion story.
 2. The teacher make mind mapping in the center of blank page in the white board and use image in the central idea. After that, the teacher connect to each branches to central image and each branches, the teacher give the keywords to make students understand when they are fill in the branches.
 3. The students get the text from the teacher, after that the students read the text and the students make their own mind map on the paper.
 4. Some students explain their mind mapping.

5. Asks the students to answer the question that relates with the text which have given the teacher.

C. Post reading activity

1. The teacher asks the students to collect the assignment and evaluate the students by giving questions to be answer in written form
2. The teacher arise the students' reflection by asking them, what they have got and what they have learned.
3. The teacher closes the meeting while greeting the learners.

2.9. Advantages and Disadvantages of Mind Mapping

Mind mapping has some advantages and disadvantages for teaching. Although mind mapping is good technique for teaching, but mind mapping also have disadvantages.

2.9.1 The Advantages of Mind Mapping

The mind map according to Stine (1997: 103-104) has several advantages which helps reader to grab information so he can comprehend any text easily.

First is an information structure in the mind map simplifies a concept and description for the reader. Second is activating left brain to control verbal and analytical capability when the reader organizes a diagram, while the right brain controls spatial and visual capability. Third is to comprehend a text by writing main ideas and connecting each other in the readers' own way. Fourth is the reader is able to face a new thing because there are always some spaces for new idea and its correlation. Fifth is an easiness of remembering important connections

because they are in a piece of paper. Sixth is the reader could easily recall the information from the mind map or diagram.

DePotter and Hernacki (2004: 110) categorize way of learning into two. The first is how to grasp information called modality. The second is how to manage and process the information grasped called brain domination. Every learner has their own modality to learn something. The modality is classified into three types, according to DePotter and Hernacki (2004: 112). They are visual, audio, and kinesthetic.

For learner who belongs to visual type, they prefer to read and pay attention to illustration on the board. They also take notes well. So, the use of the mind map is appropriate for them. This technique is also appropriate for the adolescent learners because they will not be bored when they are reading a passage.

Using the mind map technique, the students are able to join the teaching and learning process in a simple way which guide the students learning reading skills easily so that they can comprehend any text well. The readers can improve their memory too because this technique links some things in the text the readers read to be remembered to some other idea. It also directs the students to think detail information within the text.

2.9.2. Disadvantages of Mind Mapping

The disadvantages of mind mapping technique can be time consuming activity. Since the students are not familiar with mind mapping technique it takes time to brain them using and applying mind mapping. According to Hofland (2007), creating mind map may take time but, this is help you to recall information and

will check your understanding. To make mind map more interesting, the students need media. They are difficult about media because they do not have media such as pencils color.

To overcome the disadvantages the researcher will give the students a media, such as give a picture, give some questions to brainstorming the students, give some keyword to fill all of the branches, and give pencil colors of each group. So, it can help the students to more understand by using and apply mind mapping technique.

2.10. Theoretical Assumption

Students' reading ability can be developed through various techniques. The same technique might be better to be applied in reading comprehension. One of the reading ability for the students is identifying main idea, references, interference, finding various types of texts.

In correlation with theories above, in mind mapping technique the students can express their idea, try to think creatively and get the deep meaning of the story on the text. Transferring these visual words, phrases, and sentence make it easier as the idea and comprehension of the texts has become much clearer of them. The use of mind mapping can motivate the students to read the text and make the students more active in the class after using mind mapping.

The written assumes that mind mapping technique can be used to increase students' reading comprehension in reading achievement.

2.11. Hypothesis

Based on the theoretical assumption above, the researcher formulated the hypothesis as follow:

There is significant increase of students' reading comprehension achievement after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung.

Reference aspect of reading skill has highest increase after being taught through mind mapping technique at SMP Muhammadiyah 3 Bandar Lampung.

III. METHOD

This chapter discusses about research methods which consist of research design, population and sample, instruments, data collecting procedure, try out of the instrument (validity, reliability, level of difficulty, and discrimination of power), data treatment, data analysis, and hypothesis testing.

3.1. Research Design

The research was a quantitative method to analyze the result of the research. In this research, the researcher focused on the implementation of mind mapping to increase students' reading comprehension achievement in descriptive text. The researcher gave a pre-test of reading text to the students before treatment, then after treatments the researcher gave a post-test of reading text. The subject of the research was only one class, so the researcher used *One-group Pretest – Posttest Design*, and the formula can be seen as follows:

T1 X T2

T1 : Pretest for students' reading achievement before treatment

X : Teaching reading using mind mapping (treatment)

T2 : Post test for students' reading achievement after treatment

In this research there were two variables that were dependent variable and independent variable. The dependent variable was the media that would be used as a treatment in teaching reading for the students. Independent variable was students' score in reading test. Before the test was given, firstly the researcher would be gave tryout to students. The tryout test would be given before all of the tests and treatments were given to the students. The aim of the try out test was to find out the quality of the items of the research.

After the tests were used in this research, the score would show a data about students' reading ability. This research was to find out the students' reading ability by using pre-test and post test. Pre-test would be administered before the treatment by mind mapping, then, post test was analyze the students score after being taught using mind mapping.

3.2. Population and Sample

The populations of this research are students in the second year of SMP Muhammadiyah 3 Bandar Lampung which consists of eighteen classes. Six classes of second grade and twelve for each other grade. The researcher would choose one class in the second year as a sample that consists of 32 students. The researcher choose SMP Muhammadiyah 3 because in that school there was no priority class more easier to apply mind mapping technique in the type of this school, and took class for sample with randomly by using lottery.

3.3. Instruments of The Research

The data of the research are the students' reading ability in form of score related to determining main idea, finding detailed information, references, interferences and vocabulary of the text before and after the treatment. The instrument of the research was multiple choice tests, where the researcher gave a pre-test and post-test in order to evaluate and to measure the reading ability.

1. Pre-test

A pre-test was administered to the students before treatments were implemented. The pre-test was used to know the reading ability of the students before the students are taught by using mind mapping. The test was in the form of multiple choices that consists of 30 items from reading text with four options (A, B, C, and D). The time allocation was 60 minutes. The result of the pre-test would be compared with the post test result to find out their achievement.

2. Post test

The researcher administered the posttest in order to evaluate the result of the research after gave the treatments. Almost the same as pretest, it consisted of 30 items in the form of multiple choices with four options. The time allocation was 60 minutes. The questions or the items in the post test were the same as the pre-test. However, the researcher changed the question number and the order of the options.

3.4. Data Collecting Procedure

In collecting the data, the researcher carries out the following procedures which can be described as follows:

1. Determining Population and Sample of the Research

The populations of this research are the students of SMP Muhammadiyah 3 Bandar Lampung. Then, the sample of this research was one class of second grade of junior high school.

2. Selecting the Materials

In this research, the researcher chooses concreted of determining main idea, Specific information, References, Inference, and vocabulary.

3. Administering the Tryout Test

This test was multiple choice tests. The number of the test items were 40 with four alternative answers for each (A, B, C, D), one as the correct answer and the rest are the distracters. The try out was conducted in 90 minutes. The aim of try out test was make sure the quality of the test which covers validity, reliability, level of difficulties and discrimination power of the test which was used as the instruments of the research. After try out was conducted, 10 items were dropped and the rests were used in the pre-test and post test.

4. Administering the Pre-test

The pre-test was conducted to find out the students reading ability before the students were taught by using mind mapping. The test was in form of multiple

choices with 30 items and four alternative answers for each (A, B, C, D). One as the correct answer and the rest were the distractors. The pre-test is conducted in 60 minutes.

5. Conducting the Treatment

After giving the pretest to the students, the researcher conducted the treatment for four meetings with three lesson plans with 90 minutes in every meeting.

6. Administering Post-test

Post test was conducted to find out the students reading ability after the students are taught by using mind mapping. The test was in form of multiple choices with 30 items and four alternative answers for each (A, B, C, D). One as the correct answer and the rest were the distractors. The pre-test would be conducted in 60 minutes.

7. Analyzing the Data

This step was conducted in order to find out the students' reading comprehension achievement. The researcher analyzed the data by using Paired Sample T-Test, and the data were computed through Statistical Package for Social Science 16.0 (SPSS) program to investigate the score.

3.5. Try out of the Instrument

Before administering the pre-test, the tryout test was conducted on September 19th, 2016 in class VIII C of SMP Muhammadiyah 3, which was chosen randomly to analyze level difficulty, reliability, and discrimination power to

achieve good test instrument criteria. There were 40 items administered based on descriptive texts. Those items were in the form of multiple choices, which contained four options of answer for each A, B, C or D. The time allocation was 90 minutes.

In order to get the data needed in the research, the researcher tried to use an appropriate instrument to measure the result of the research. A good research is a research on which the instrument is based on validity, reliability, level of difficulty, and discrimination power. So, it was necessary to conduct a tryout of the test. The try out test was to know the quality of the instruments before they were used in a pre-test and post test.

3.5.1. Validity

According to Heaton (1991:159), the validity of the test is the extent to which it measured what it was supposed to measure. There are four types of validity but the researcher used only two types of validity, they are content validity and construct validity.

A. Content validity

Content validity was intended to see whether the test was good reflection of what have been taught. The test would be based on school curriculum and it was about reading ability of students. The composition of the test items was presented in the table of specification below :

Table 3.1. Specification of Test Items for The Reading Comprehension

NO	Reading skill	Items of number	Percentage
1.	Main idea	1,6,11,16,21,26,31,36	20%
2.	Finding information	2,7,12,17,22,27,32,37	20%
3.	References	3,8,13,18,23,28,33,38	20%
4.	Inferences	4,8,14,19,24,29,34,39	20%
5.	Vocabulary	5,10,15,20,25,30,35,40	20%
total		40	100%

The percentage of each reading skill was same because the researcher would find out which aspect that was mostly increased by using mind mapping technique in teaching reading.

This test conducted to determine the quality of the data collecting instrument of the research they were, validity, reliability, level of difficulties, and discriminating power. Students were given 40 items of multiple choices test in 90 minutes.

Table 3.1 (appendix 4), shows that there were 40 items in the tryout test. After analyzing the criteria of good test by using level of difficulty and discrimination power, it could be seen that 10 items were dropped, such as items number 9, 12, 17, 19, 20, 26, 29, 30, 34, and 37. The criteria for the item that should be dropped were the number has easy or difficult in level of difficulties and result for discrimination power. The tryout consisted of 5 difficulties items (3, 19, 27, 30, and 39); 20 average items (2, 4,5, 6, 7, 8, 10, 11,12, 14, 15, 16, 21, 23, 25, 28, 35, 37, 38, and 40); and 15 easy items (1, 9, 13, 17,18, 20, 22, 24, 26, 29, 31,

32,33,34, and 36) while the average and satisfactory items were administered in the pre test and posttest.

Based on discrimination power analysis there were 10 poor items (9, 12, 17, 19, 20, 26, 29, 30, 34, and 27); 5 good items (5, 22, 23, 24, and 35); and 25 satisfied items (1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 18, 21, 25, 28, 31, 32,33, 36, 37, 38, 39, and 40) the items which had average level of difficulty, good and satisfied level discrimination indexes were administrated for the pre test posttest (Appendix4).

After analyzing the level of difficulty and discrimination power, it was found that 30 items were good and administered for pretest and posttest. On the other hand, 10 items were bad and dropped because they did not fulfill the criteria of level of difficulty and discrimination power.

Table 3.2. Specification of The Test Items for Reading Comprehension in Pretest

NO	Reading Skill	Items of number	Percentage
1.	Main idea	1, 6, 10, 14, 16, 23, 27	23,3%
2.	Specific information	2, 7,17, 21, 24	16%
3.	References	3, 8, 11, 15, 18, 22, 25, 28	26,7%
4.	Inferences	4, 12, 19, 29	13,3%
5.	Vocabulary	5, 9, 13, 20, 26, 30	20%
Total		30	100%

Table 3.3. Specification of The Test Items for Reading Comprehension in Posttest

NO	Reading Skill	Items of number	Percentage
1.	Main idea	1, 5, 9, 14, 18, 25, 27	23,3%
2.	Specific information	2, 10, 15, 19, 23	16%
3.	References	3, 6, 11, 16, 20, 24, 26, 28	26,7%
4.	Inferences	7, 12, 21, 29	13,3%
5.	Vocabulary	4, 8, 13, 17, 22, 30	20%
Total		30	100%

From the explanation above, the researcher would give the test which consisted of 30 point of questions, which was consisted the reading comprehension skills for each number, the options were a, b, c, or d.

B. Construct validity

Construct validity is concerned with whether the test is actually in line with the theory of what it means to know the language (Shohamy, 1985: 74). Knowing the test is true reflection of the theory in reading comprehension, the researcher was examined whether the test questions actually reflect the means of reading comprehension or not the test consist of some reading skill namely, determine the main idea, finding information, references, inferences, and vocabulary.

3.4.2. Reliability

Reliability refers to the extent to which the test is consistent in its scores, and it gives an indication of how accurate the score of the test is. Hatch and Farhady (1982:243) state that reliability of the test can be defined as the extent to which a test produces consistent result when administered under similar condition. To measure the coefficient reliability between the first half and the second half items the researcher used the Pearson Product Moment formula as follows:

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

rl : Coefficient of reliability between odd and even number items

x : Odd number

y : Even number

x^2 : Total score of odd number items

y^2 : Total score of even number items

xy : Total score of odd and even numbers

The criteria of reliability are:

0.80 – 1.00 = very high

0.50 – 0.79 = moderate

0.00 - 0.49 = low

To know the coefficient correlation of whole items, Spearman Brown's prophecy formula will be used. The formula is as follows:

$$r_k = \frac{2rl}{1 + rl}$$

r_k : the reliability of the test

r_l : the reliability of the half test

3.5.3. Level of Difficulty

Level of difficulty is used to classify the test items into difficult items and easy ones. The items should not be easy for the students. To see the difficulty of the test items; this research uses the following formula:

$$LD = \frac{U + L}{N}$$

Notes:

LD : level of difficulty

N : the total number of students following the test

U : The total of correct answers of the higher group

L : The total of correct answers of the lower group

The criteria are:

<0.30 : difficult

0.30-0.70 : average

>0.70 : easy

(Shohamy, 1985: 79)

3.5.4. Discrimination Power

The discrimination power (DP) referred to the extent to which the item differentiates between high and low level students on the test. To know the discrimination power of the test, the researcher uses the following formula:

$$DP = \frac{U - L}{\frac{1}{2} N}$$

Notes:

DP : Discrimination Power

U : The total of correct answer of the higher group

L : The total of correct answer of the lower group

N : Total number of students

The criteria are:

DP	: 0.00 – 0.20	Poor
DP	: 0.21 – 0.40	Satisfied
DP	: 0.41 – 0.70	Good
DP	: 0.71 – 1.00	Excellent
DP	: - (Negative)	Bad items (should be omitted)

If the value is positive discrimination – a large number or more knowledgeable students than poor students get the item correct. If the value is zero, it means that there is no discrimination.

If the value is negative, it means that more low students than high level students get the item correct.

In general, the higher, the discrimination index, the better. In classroom situation most items should be higher than 0.20 indexes Shohamy (1985: 79).

3.6. Data Treatment

The researcher collected the data by looking at the result of pre-test and post test of reading texts to find out the result of the students' reading achievement. The result of the test was in the form of interval data. After getting the result the researcher analyzes how far mind mapping can be use to increase the students' reading achievement.

3.7. Data Analysis

After collecting data by using tests, the researcher analyzed the data in form of score in order to know whether there was an increase of the students' reading achievement by using Paired Sample T-Test of Statistical Program for Social Science (SPSS) version 16.0. The results of the test were in the forms of score or interval data. The researcher analyzed the students' reading achievement by doing these activities:

- 1) Scoring pre-test and post test,
- 2) Tabulating the score of students' reading test results using Paired Samples T-Test,
- 3) Then, summarizing the finding from the tabulated result of the pre-test and post test. The researcher used statistical computerization i.e. Paired Samples

T-Test of Statistical Program for Social Science (SPSS) version 16.0 to test whether there was an increase or not.

3.8. Hypothesis Testing

After collecting the data, the researcher tries to analyze them in order to find out whether the use of mind mapping can increase students' reading achievement. The hypothesis testing is used to prove whether the hypothesis proposed in this quantitative research is accepted or not. The hypotheses are analyzed by using Paired Samples T-test of Statistical Package for Social Sciences (SPSS) at the significance level of 0.05 ($P < 0.05$).

H_0 : There is no significant increase of students' reading comprehension achievement after being taught through mind mapping technique.

H_1 : There is significant increase of students' reading comprehension achievement after being taught through mind mapping technique.

V. CONCLUSIONS AND SUGGESTIONS

This chapter presents conclusions that are based on the research's result and discussions in the previous chapter. It also presents some suggestions for English teachers and other researchers who want to try apply mind mapping technique in teaching reading.

5.1. Conclusions

In line with the results of the data analysis and discussion, the writer comes to these following conclusions:

1. Based on the result and discussion , it is concluded that there is significant increase of students' reading comprehension achievement after being taught through mind mapping technique. The increase can be seen from the mean of students' pretest and posttest. There is significant level 0.05 ($0.000 < 0.05$) its means that H_0 is reject and H_1 is accept The mean score of the pretest is 59.18, in the posttest is 69.46 and the gain is 10.28.
2. All of aspects of reading comprehension increased. It was proven from the students' pretest and posttest scores of the increase in students' reading comprehension achievement aspects: 2.68% for mind idea, 1.64% for specific

information, 2.97% for references, 0.18% for interferences and 1.27% for vocabulary. Evidently, references gained the highest increased aspect.

5.2. Suggestions

Based on the research findings, some suggestions are proposed for teacher and future research. The suggestion as follows:

1. It is suggested to English teacher to apply mind mapping technique in reading comprehension. The teacher is also shout brainstorm before asking the student to make mind mapping. It is important to make students know what they have to do with the text and what kind of the information that they need to find from the text.
2. It is suggested that the teacher before having mind mapping technique, the teacher is better to make a group discussion before applying mind mapping technique, in order to make the students be well organized in making mind mapping. For example one group make a map from the text and each student fill in the branches and answer the questions.
3. In this research the researcher applies mind mapping technique in teaching reading descriptive text at the second grade of junior high school. Other researcher can conduct other kinds of text, i.e. exposition, recount, or report text.

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