

**A COMPARATIVE STUDY OF STUDENTS' READING COMPREHENSION
IN NARRATIVE TEXT THROUGH MIND MAPPING TECHNIQUE AND
DIRECTED READING THINKING ACTIVITY (DRTA) TECHNIQUE AT
THE SECOND GRADE OF SMP NEGERI 25 BANDAR LAMPUNG**

(A Script)

By

Ulfah Shadrina Adani



**ENGLISH EDUCATION STUDY PROGRAM
DEPARTEMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
UNIVERSITY OF LAMPUNG**

2020

ABSTRACT

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The objectives of this research were to find out whether there was a significant difference of the students' reading comprehension after being taught through Mind Mapping technique and Directed Reading Thinking Activity (DRTA) technique, what aspects of reading that improved significantly after implementing Mind Mapping and DRTA techniques This research was a quantitative which used a pre-test and post-test experimental design.

The population of this research was the second grade students of SMP Negeri 25 Bandar Lampung. The research took two classes as the sample and they were VIII E as Mind Mapping class which consisted of 28 students and VIII B as DRTA class which consisted of 28 students. A pre-test and post-test were administered to collect the data. The data were analyzed by using Independent Sample T-Test in SPSS version 16.0. in which the significance was determined t-value was higher than t-table.

The result of this research showed that the t-value was higher than t-table (3.648 > 1.674). It meant that there was a significant difference of the students' reading achievement in reading narrative text. Then, main idea, vocabulary and reference were the aspects that improved better than another aspect.

Keywords: Reading Comprehension, Aspects of Reading, Mind Mapping Technique, Conventional Technique, DRTA Technique

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Ulfah Shadrina Adani

A Script

**Submitted in a Partial Fulfillment of
The requirement for S-1 Degree**

In

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



**ENGLISH EDUCATION STUDY PROGRAM
DEPARTEMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
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2020

Research Title : A COMPARATIVE STUDY OF STUDENTS' READING COMPREHENSION IN NARRATIVE TEXT THROUGH MIND MAPPING TECHNIQUE AND DIRECTED READING THINKING ACTIVITY (DRTA) TECHNIQUE AT THE SECOND GRADE OF SMP NEGERI 25 BANDAR LAMPUNG

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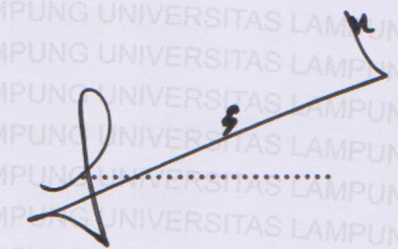
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Menyatakan bahwa skripsi ini adalah hasil karya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis oleh orang lain, kecuali bagian-bagian tertentu yang saya ambil sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

Bandar Lampung, 19 Desember 2019
Penulis,

Ulfah



Ulfah Shadrina Adani

CURRICULUM VITAE

The writer's name is Ulfah Shadrina Adani. She was born in Bandar Lampung, on March 20th 1996. She is the first child of a lovely couple, Maharta Syafrin Nur, S.E., and Ratna Wilis, S.H.. She has two sisters namely Yasmin Shafira Adani, and Alyaa Rizqi Adani.

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DEDICATIONS

This script is fully dedicated to:

My beloved parents

My beloved siblings

My beloved lecturers at the English Department

My beloved comrades of English Department batch 2015

My beloved almamater, University of Lampung

MOTTO

فَإِنَّ مَعَ الْعُسْرِ يُسْرًا ()

(Q.S. Al-Insyirah 94:5) “Sesungguhnya sesudah kesulitan itu ada kemudahan”

“I like living. I have sometimes been wildly, despairingly, acutely miserable, racked with sorrow; but through it all I still know quite certainly that just to be alive is a grand thing.”

Agatha Christie

ACKNOWLEDGEMENTS

Praise is only for Allah SWT, the Almighty God, for blessing the writer with health to finish the script. This script, entitled “A Comparative Study of Students’ Reading Comprehension through Mind Mapping Technique and directed reading thinking activity (DRTA) Technique at The Second Grade of SMP Negeri 25 Bandar Lampung” is presented to the Language and Arts Education Department at the Teacher Training and Education Faculty, University of Lampung as partial fulfillment of the requirements for S-1 degree in English Department.

It is important to be known that the script would never have come into existence without any supports, encouragements, and assistances by several generous people. The writer would like to take this opportunity to address her sincere gratitude and deep respect to:

1. Drs. Hery Yufrizal, M.A., Ph.D., as the first advisor, for his invaluable guidance, ideas, suggestions, and encouragements for the writer during the script writing process.
2. Dr. Feni Munifatullah, M.Hum., as the second advisor, who had contributed and given her evaluation, comments, suggestions during the completion of this script.
3. Drs. Deddy Supriyadi, M.Pd., as the examiner, for his encouragement and contribution during seminar until this script is finished.
4. Dr. Ari Nurweni, M.A., as the head of English Department Study Program.
5. All lecturers of English Department who have given great contribution in broadening and deepening my knowledge during my study and to all staff members of English Department, Bu Sures, Mba Nur, and Mas Dwi who have helped me to organize my seminar.
6. Hj. Euis Tati Darmati, M.Pd as the headmaster of SMP Negeri 25 Bandar Lampung and Drs. Fristi Susi Setyowati as the English teacher of SMP Negeri 25 Bandar Lampung who have given me the help and chance to conduct my research.
7. All students of SMP Negeri 25 Bandar Lampung, especially classes VIII A, VIII B and VIII E for their nice cooperation during this research.
8. My beloved parents, Maharta Syafrin, S.E., and Ratna Wilis, S.H.. Thank you for your endless love, for knowing my inside and outside, for teaching me to be serious in doing everything, for reminding me about my healthy, for supporting me to finish my script soon, and the most important, for always praying for me to be a good daughter.
9. My beloved sisters, Widya Rizki Eka Putri, S.E.,M.S.A.K., Andina Azmi Zhusifa, M.Psi., Astrid Nabilla Utami, Yasmin Shafira Adani, and Alyaa

Rizqi Adani who always help, support, and remind the writer of how precious her struggle was.

10. My dearest “Wak Sunari”, Rika, Rahma, Nadya, and Eka, who are never tired of supporting the writer to finish her study, always give trust, laughter, love and bullying.
11. My beloved partner in life, Tahta Putera Bintang, A.Md. L.L.A.J., who is strict for supporting, give a trust, laughter, love and also bullying.
12. Soesilo 43 Family, Kahen, Mbak Ambar, Key Rim, Mbak Felis, Mbak Nana, Mbak Erna, Kak Dian, Mbak Ayu, Mbak Luluk, Mbak Mala, Mbak Hana, thank you for the new experience, cares, jokes, and love.
13. Her big gratitude to ED Squad, Panji, and As’ad, and all the students of ED’15 that the writer cannot mention here.
14. My KKN Waway Karya Family, Wije, Icha, Ndes, Widya, Tinus, Cempaka, Joko, Ryan, and Dyah, thank you for your encouragement, cares, and jokes.
15. My seniors and juniors in English Department, thank you for your greatest motivation, help and kindness.
16. My Aiesec team, especially Public Relation Department, thank you for giving me such a great atmosphere during my college life.
17. Anyone who cannot be mentioned directly here who has contributed in complementing this script.

The researcher hopes that this research would be a positive contribution to the education development, the readers, and the other researchers.

Bandar Lampung, December 11th 2019
The Researcher

Ulfah Shadrina Adani

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1. INTRODUCTION

This chapter discussed the introduction of the research. It contains several points that deal with the background of the research, research question, the objective of the research, the use of research, the scope of research, and the definition of terms.

1.1 Background of the research

Reading is one of the important skills in language learning because it helps students to master English. According to Harmer (2007), reading is useful for language acquisition. The use of reading as an important skill is not only making the students enrich the knowledge, but also makes the students understand the content of the written text. Grellet (1981) states that reading is a constant process of guessing, and what one brings to the next is often more important than what one finds in it. In reading, the students should be taught to use what they know to understand the elements. It means that reading is the ability to interact by understanding the idea and interpreting the text.

Since reading is one of the skills that help students to master English. Reading needs comprehension to understand the content, idea, and information in reading. According to Armbruster (2000) comprehension is the reason for reading. It means that if readers can read the words but do not understand what they are reading, they are not really reading. Based on Boardman (2007) states reading comprehension is the process of constructing meaning by coordinating a number of complex processes

that include word reading, word knowledge, and fluency. It refers to the ability in interpreting the words, understanding the meaning and conveying the relationship between ideas in a text. Therefore, reading comprehension is a complex process of how to construct meaning, understanding of the text in order to able to discover information of the text by using the skill of thinking highly.

Based on the pre-observation at SMPN 25 Bandar Lampung, the researcher found some problems. First, the students had difficulties to understand the meaning of words because of the lack of vocabulary. According to (Nuttall, 1982) there are five aspects of reading which the students should understand to comprehend text well, including determining the main idea, making an inference, identifying reference, finding detail information, and the last is understanding vocabulary. Second, the lack of vocabulary also affected students to understand and to get the main idea of the text. Another problem is students are lack of appropriate teaching media, they feel afraid or nervous in learning English. The last teacher used a commercial book for teaching English, and teacher did not use the appropriate technique in teaching-learning process. A good technique is needed to make students pay attention in the classroom and media are needed to be used in the classroom to make them interested in the learning process.

There are some reasons of comparing mind mapping technique and DRTA technique. Those techniques are good and believed can make the students more active in the class. Then, it will be easy for students to work together with their friends in comprehending a text, it can be work in pairs or in groups. Next, both of these techniques improve the students' social interaction with others by sharing the idea. After that, in these techniques, every student gets a chance to comprehend and

elaborate the idea of the text because before sharing the idea to others, every student should comprehend their own part of the text which is different from others. Therefore, the researcher wants to find out which technique is better in reading narrative text, either work in groups or work in pairs.

Directed Reading Thinking Activity (DRTA) technique that can be applied to increase the students' reading comprehension. DRTA was developed in 1969 by Russell Stauffer. DRTA is intended to develop students' ability to read critically and reflectively. DRTA helps students comprehend texts by activating their background knowledge related to the texts and promote the use of reading strategies. In addition, the students' comprehension progress before, while and after reading is monitored during the discussion so as to prevent the students from misunderstanding the texts. Also, DRTA uses media and activities that can help the students understand the text and make them actively involved in the teaching and learning process.

Another technique is mind mapping. According to Buzan (2005), mind mapping is a very powerful tool for brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking. Mind mapping involved writing down a central idea and thinking up new and related ideas which radiate out from the center. It is a good technique that can help students memorizing something because it enables the students to arrange the facts and ideas of the texts. Based on the previous research Malekzadeh. (2015) suggest that mind mapping technique is influential in enhancing the students' reading comprehension.

In reference to the description above, the researcher was interested in comparing mind mapping and DRTA techniques to improve students' reading comprehension at the second grade of SMPN 25 Bandar Lampung because the students' reading comprehension was still insufficient. Therefore, the title of this research is "A Comparative Study of Students' Reading Comprehension in Narrative Text through Mind Mapping and Directed Reading Thinking Activity (DRTA) Technique at the Second Grade of SMPN 25 Bandar Lampung".

1.2. Research Questions

Based on the background above, the researcher formulated the research questions as follows:

1. Is there any significant difference in students' reading comprehension after being taught by using a mind mapping technique and DRTA technique?
2. Which aspect of reading comprehension has the highest increase after being taught through mind mapping technique and DRTA technique?

1.3. Objectives

Based on the research questions above, the researcher formulated the objectives as follows:

1. To find a significant difference in students' reading comprehension after being taught by using a mind mapping technique and DRTA technique.
2. To find out which aspect of reading comprehension has the highest increase after being taught through mind mapping technique and DRTA technique.

1.4. Uses

The findings of the researchers are expected to be beneficial whether theoretically and practically:

1. Theoretically, the results can be used as a reference for those who want to conduct research in English teaching process by using DRTA technique and mind mapping technique. This research might be useful and relevant for supporting the theory of DRTA and mind mapping techniques in helping the readers to comprehend a reading text better.
2. Practically, the results can be used to provide the English teachers with new insight that might be taken as a guideline in teaching reading so that the students are able to comprehend English texts better. Furthermore, the finding of this study is hoped to inspire and motivate students to learn reading. They can improve their achievement of reading comprehension. Besides, they can enjoy the class, build the motivation and focus on their materials.

1.5. Scope and Limitation of the Research

The research conducted in the second grade of junior high school at SMPN 25 Bandar Lampung. As can be noticed that reading is also crucial in the curriculum of junior high school for the second grade, there are many kinds of text that the students should achieve such as descriptive, recount, narrative, hortatory exposition, etc. However, this research was limited to narrative text based on the syllabus of the second grade of junior high school. This study mainly focused on five aspects of reading, such as main idea, specific information, inference, reference, and vocabulary. In teaching reading, there are several techniques such as Jigsaw, Think Pair Share (TPS), Read Ask Paraphrase (RAP), Listen Read Discuss (LRD), Mind Mapping, Directed Reading Thinking Activity (DRTA), etc. This research is focused on comparing mind

mapping technique and DRTA technique to find out the significant difference in students' reading comprehension. In this research, the researcher focused on reading comprehension of narrative text. This research also measured students' understanding of main idea, detail information, references, inferences, and vocabulary to find out what aspect that would improve the most after being taught through mind mapping technique and DRTA technique.

1.6. Definition of Terms

There are some terms used by the researcher and to make it clear, the research 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. Technique

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

3. Narrative

It refers to an account of a series of related events, experiences, or the like, whether true (episode, vignette, travelogue, memoir, autobiography, biography) or fictitious.

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 keyword or idea by lines and typically it contains words, idea, short or picture related together.

5. Directed Reading Thinking Activity (DRTA).

This is a comprehension technique that guides students in asking questions about a

text, making predictions, and reading to confirm or refute their predictions. DRTA process encourages students to be active, thoughtful readers and to enhance their comprehension (Stauffer, 1969).

As can be clearly seen that the introduction of this research has already covered some points:(1) background of research, (2) research questions, (3) objectives of the research, (4) uses of the research, (5) scope of the research, and (6) definition of terms. Afterward, the next chapter will discuss the literature review of this research.

II. LITERATURE REVIEW

This chapter elaborates on the theories of the research. They are classifying like the following: a review of previous researches, reading, teaching reading, aspects of reading, the concept of narrative text, concepts of mind mapping and DRTA, advantages and disadvantages of mind mapping and DRTA, theoretical assumption and the hypothesis.

2.1. Review of the Previous Research of Mind Mapping and DRTA

There are several studies of mind mapping and DRTA. The first study relates to students' reading comprehension using mind mapping. Cahyani (2015) states that the use of mind mapping improves students' reading comprehension. Moreover, mind mapping enhances the English class situation, especially in reading class. Students will very enthusiastic in following the teaching and learning process and their motivation in English lessons can also get better. Mind Mapping, as new and interesting technique, helps them to have higher motivation and activeness in joining reading class.

Another previous study, Malekzadeh (2015) this study is to determine the effectiveness of leading the mind mapping technique in enhancing the students' comprehension in reading instruction text. The result shows that mind mapping strategy is influential in enhancing the students' reading comprehension and the findings of this study can assist teachers, instructors, teacher trainers, and researchers. The next previous study finds that the learners that are taught by mind mapping improve the cohesion and coherence; content paragraph structure and

length in writing. The result shows that the hierarchical structure of the mind mapping technique that is used in the pre-writing process enhances the EFL learners' writings (Bukhari, 2016).

The next study by Mirza (2016), this study are to find out whether mind mapping improves students' speaking ability and to find out how did mind mapping enhances students' speaking ability. The result of this study presents that mind mapping improved students speaking ability and helped them to generate idea in speaking. According to the last previous research, the objective from this study is to find out the effectiveness of using mind mapping technique on students' writing ability of the text. This study shows that there is a positive effect after using the mind mapping technique in students' writing ability (Rahmah, 2017).

Based on the previous studies above, the research used the same technique as well. Although has the same technique it also has the differences. In the previous researches, the researchers used the mind mapping technique to find out the effect of the technique in writing and speaking skill, while this study focused on reading comprehension. Another researcher applied mind mapping as a technique in teaching reading comprehension to the first year students of SMPN 3 Colomadu. In this research, Mind Mapping was applied to the second grade students of SMPN 25 Bandar Lampung. Moreover the technique was also used in improving students' reading comprehension in implicit information of reading text, while in this research the researcher used Mind Mapping technique to improve students' reading comprehension in narrative text.

Next, there are several studies of DRTA that proves the technique is effective for reading comprehension. Al Odwan (2012) stated that the effect of Directed Reading Thinking Activity (DRTA) on English secondary students in Jordan is

successful and effective instructional strategy to improve students' reading comprehension. Based on the result, this study uses a combination of two strategies together, DRTA and cooperative learning, as one strategy to teach Jordanian secondary stage students reading, to enhance students' achievement in reading comprehension. These activities are rich with more communicative tasks and consequently provided students with new concepts, ideas, suggestions, styles of thinking as well as opinions so that improved students' reading comprehension.

Another study is conducted by Kusumawardani (2012). The research subject was the second grade of sciences 3 at SMAN 1 Klirong which consisted of 30 students. This study uses some steps, such as preliminary observation, preparing the materials and creating a lesson plan using DRTA technique and media. This research also provides the questionnaire to the students and analyzes the result. Some students are braver to show their ability and ask the teacher when they had difficulties in the class. The students answer questions and give their opinion during the teaching-learning process. It can be seen from the assessment result. The results gained from questionnaire showed that most of the students gave positive responses.

The next previous research is Somadayo (2013). Based on the result, there is a difference between the reading comprehension skills of students who took learning model DRA, PQRST, and model DRTA. There are also differences in the reading comprehension skills of students who have the high interest show better understanding than students who have moderate and low reading interest. Then, there is an interaction of learning models and reading interest toward reading comprehension skills. There is a difference or effect of the learning model for reading comprehension skills among students taught by DRA, PQRST, and DRTA learning models. Since the largest average score of reading comprehension

ability is in DRTA, so it can be concluded that DRTA learning model has advantages over the other two models, namely DRA and PQRST.

Yazdani (2015). This study reveals that the impact of Directed Reading Thinking Activity (DRTA) and Guided Reading (GR) on reading comprehension for Sixty three Iranian students of grade one in Shahed high school in the city of Bojnourd. The results of the study shows that DRTA has a more significant positive effect than GR. The last previous study is Zakiyah (2015). This study is conducted at the second grade of SMAN 9 Bandar Lampung. The research aims to find out whether there is a difference in students' reading achievement of narrative text before and after being taught DRTA technique and to find out whether or not there is an increase in students' reading achievement of narrative text after being taught through DRTA technique. This study shows that there is an increase in students' reading achievement after being taught through DRTA technique in terms of reference aspect.

Table 1. Summary of the Result of Relevant Studies

Researcher	Focus on the study	Method	Result
Cahyani (2015)	Students' reading comprehension	Mind Mapping	The use of mind mapping improves the students' reading comprehension and improves the English class situation especially in reading class.
Malekzadeh (2015)	Comprehending Implicit Information in EFL Reading Texts	Mind Mapping	Mind Mapping strategy is influential in enhancing the students' reading comprehension and the findings of this study can assist to teachers, instructors, teacher trainers and researchers.
Bukhari (2016)	Students' writing skill	Mind Mapping	Mind Mapping can improve the cohesion and coherence; content paragraph structure and length in writing. It

			shows that mind mapping Technique that is used in the pre-writing process enhance the EFL learners' writings
Mirza (2016)	Students' speaking ability	Mind Mapping	This study presents that mind mapping improves students speaking ability and helps them to generate idea in speaking.
Rahmah (2017)	Students' writing ability	Mind Mapping	There is a possitive effect after using the mind mapping technique in students' writing ability
Al Odwan (2012)	Students' reading comprehension	Directed Reading Thinking Activity (DRTA) using cooperative learning	DRTA through using cooperative learning is successful and effective instructional strategy to improve students' reading comprehension.
Kusumawardani (2012)	Students' reading comprehension ability	DRTA	There is improvement of students' reading comprehension ability
Somadayo (2013)	Learning model DRTA towards students' reading comprehension ability seeing from their interest.	DRTA, PQRST, and model DRA	There is a difference of students' reading comprehension.
Yazdani (2015)	Reading comprehension	DRTA and GR	DRTA has a good effect than GR
Zakiyah (2015)	Reading achievement	DRTA	There is an improvement in students' reading achievement

2.2. Reading

Reading is a process of understanding the written text. According to Nunan (2003), reading is a fluent process of readers combining information from a text and their background knowledge to build meaning. While reading process, the students try to understand the text and it makes reading become a process putting the readers in contact and communicate with ideas. Based on Harrison (2003), reading not only increases our life skills and extends our knowledge, it goes much deeper. By reading we can get more information about something. Hasibuan and Fauzan (2007) state that a student may read to gain information or verify existing knowledge. Harmer (2007) states that reading is useful for language acquisition. Reading also has a positive effect on students' vocabulary knowledge, on their spelling and their writing.

Reading cannot be separated from comprehension. Based on Neufeld (2005) Comprehension is the process of constructing a supportable understanding of a text. He states that comprehension has two important features: being actively involved with the text and using appropriate background knowledge to interpret the text. Comprehension has the same meaning as understanding. According to Fielding and Pearson (1994) comprehension seems as a much more complex process involving knowledge, experience, thinking, and teaching which is it inherently involves inferential and evaluative thinking, not just literal reproduction of the author's words . It means that the readers need to comprehend what the writer tells about and grasp meaning from the writer's idea in a text. (Freire, 1983) states the understanding attained by critical reading of a text implies perceiving the relationship between text and context. In addition, reading is a interactive and critical thinking process by comprehending the text. Reading comprehension is crucial for reading process. With the ability to comprehend

what they read, readers are required to construct their idea in understanding the meaning of the text.

2.3 Teaching Reading

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) any reading component of English language teaching may include a set of learning goals for: The ability to read is a wide range of text English. This is the 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 the text. For instance, if students are reading about the animal, they should have known most words related to the topic of the animal, *such as a dog, lion, cat, etc.*

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. Therefore, to achieve the purpose of teaching reading, the teachers should find an appropriate technique to be used that can stimulate students to be actively involved in the learning process. From the explanation above, the researcher assumes that by applying an appropriate technique, students' interest and achievement in reading and reading comprehension will be increased. Mind Mapping technique is one of the techniques that can be applied in junior high-school level because is a very powerful tool for brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking.

2.4. Aspects of Reading

According to Nuttall (1982) there are five aspects in reading comprehension. These are identifying main idea, finding specific information, determining reference, making inference, and understanding vocabulary.

1. Identifying Main Idea

In this case, this skill is one of the most important specific comprehension skills. According to Suparman (2011) states main idea is the most important idea stated in the topic sentence and developed by supporting sentence in a single paragraph. So, finding the main idea means finding the important point that the author develops throughout the paragraph.

2. Finding Specific Information

Theoretically speaking, information develops the topic sentence by giving definition, examples, facts, an incident, comparison, analogy, cause and effect statistics and quotation. On other hand, readers should be concerned on finding specific information of a text because it is very useful when knowing exactly what the readers are looking for in a text. Since they have a very specific goal in mind, when they read, they only read the relevant parts and ignore the irrelevant. For example, the question of the text is about asking the year, place, time, etc. Then, the reader only reads some sentences that related to the question in order to find the specific information.

3. Determining Reference

Basically, reference is a significant citation for specified matter. In other words, it is a remark that has a relation of information in somewhere in the text.

4. Making Inference

Theoretically, Inference is an assumption or conclusion that is rationally and logically made based on the given facts or circumstances. It is a guess that we make or an opinion that we form based on the information that we have. The

reader will be able to do this by making use of the context in which the word occurred, in order to give a rough idea of its meaning.

5. Understanding Vocabulary

Vocabularies are all the words which exist in a particular language or subject. Harmer (2004) states that the ability to determine the meaning of vocabulary items from context is one of the most important aspects of successful reading. Concerning with those statements indeed vocabulary is basic for everyone who intends to develop or to produce utterances for reading. If they cannot understand the meaning of words in the text, so they will not catch the information of that text.

2.5. Narrative Text

Anderson and Anderson (1997) states that narrative text is a type of text that tells a story which has a purpose to present a view of the world that entertains the reader or listener. Some of the story of narative text presents a set of experience of the world life. In most of cases, narrative text is not only to entertain but also to convey the moral value of the story to the readers.

There are five main parts of narrative text. The generic structures of a narrative text are explained as follows:

1. Orientation

The readers are introduced to the main characters and possibly some minor characters. Some indications of where the action is located and when the event is taking place are generally given in this paragraph.

2. Complication

This is where the problems in the story develop. The complication consists of serious events which something unexpected happen.

3. Sequence of events

The sequence of the events is a number of events or things that come one after another in a particular order. This is where the narrator tells how the characters react to the complication. The event can be told in chronological order (the order in which they occur) or with a flashback.

4. Resolution

Resolution is when the problem finds a way out to be resolved.

5. Coda

Coda is a closing remark to the story. Usually, coda consists of a moral lesson/moral value from the writer.

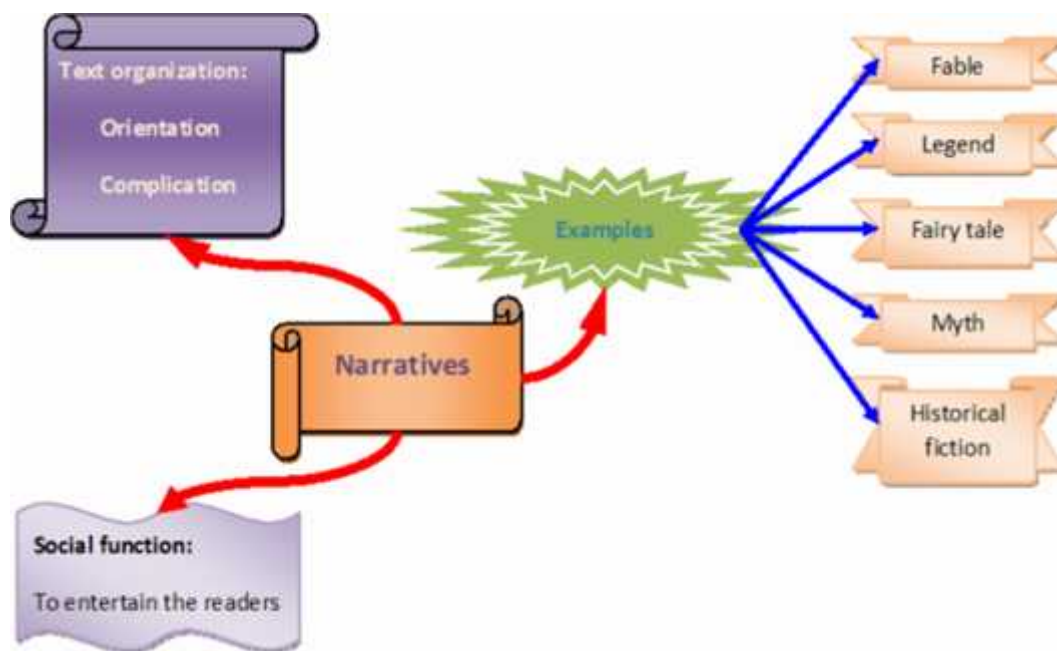
Based on the statements above, narrative text is a text that deals with a story which presents a set of experience which has a purpose to entertain or amuse the readers or listeners. A good narrative text has to complete the generic structure such as orientation, complication, and resolution.

2.6. Mind Mapping

Mind mapping is a common technique in the English teaching-learning process. Mind mapping involves writing down a central idea and thinking up new and related ideas which radiate out from the center. It is a good technique that can help students memorizing something because it enables us to arrange the facts and ideas. Not only mind maps show facts, but also show the overall structure of a subject and the relative importance of individual parts of it. It helps students to associate ideas, think creatively, and make connections that might not otherwise make (Buzan,2010).

Mind mapping technique can be used to explore almost any topic, though discursive essays and narrative work particularly well as they front students' ideas and lend them to discuss ideas in group. Buzan (2008) says that by using mind mapping, people can represent ideas into visualization and graphic forms where one idea is connected to another idea by using braches. Besides he also says that by using mind mapping, it is easy for people to put information into their memory. Mind mapping is highly effective way of getting information in and out of your brain. Mind map is a creative and logical means of note-taking and note-making that literary maps out your ideas.

Example of Mind Mapping



(source: <https://linggris.wordpress.com/2010/07/22/narratives/>)

Based on 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.

2.7. Directed Reading Thinking Activity (DRTA) Technique

Directed Reading Thinking Activity (DRTA) is a technique that encourages students to make predictions while they are reading. After reading segments of a text, students stop, confirm or revise previous predictions, and make new predictions about what they will read next (Stauffer, 1969). DRTA is used in each of the three stages of reading, i.e. prereading, during reading, and post-reading.

In DRTA, predictions play an important role to provide students with reading purposes. The teacher can raise questions that help students activate their prior knowledge and uses clues such as the title and pictures from the text so as to stimulate the students to make an accurate prediction. Questions raised by the teacher before the students begin reading make those reading strategies effective. The questions make the students have reading purposes, such as to find answers to the questions. Those reading strategies, in practice, should be used before reading by previewing the text and setting reading purposes, while reading by monitoring comprehension, and after reading by summarizing the text.

DRTA is a strategy to build independent readers because the readers are equipped with the abilities to set reading purposes, examining reading material based on these reading purposes, and making decisions based on the information from the text. Moreover, DRTA helps students become aware of the reading strategies, understand the reading process, and develop prediction skills.

Based on the explanation above, DRTA aims to have students employ reading strategies, to elicit their prior knowledge related to the topic of the text, to set a purpose for reading and to encourage them to monitor their comprehension while they are reading. These steps later can make students an independent reader. The sequences of DRTA are: first, students make predictions before reading; after they

read a segment of a text, the students stop and confirm or revise the previous predictions; finally, the cycle continues until they finish reading the whole text. In short, DRTA consists of three main stages, namely predicting before reading, reading, and proving/disproving the prediction after reading.

Based on the explanation above, it is known that in the implementation of DRTA, readers should make predictions before reading a text. To make predictions, they should use any hints they find in the text and their background knowledge of the text as well. Then, their reading purpose is to find whether their predictions about the text are accurate or not. These activities of predicting and proving/disproving predictions help the students monitor their comprehension before, while, and after reading. As a result, the implementation of DRTA will help students comprehend a text. Each of the three stages of DRTA is described in details in the next section.

2.8. Advantages and Disadvantages

In this part, there are some advantages and disadvantages of each technique. Advantage is the benefit of the technique, while disadvantage is the opposite of advantage. Here are some advantages and disadvantages of mind mapping Technique and DRTA Technique according to some experts.

2.8.1. 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. According to Stine (1997) there are the several advantages of mind mapping 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.

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 disadvantage 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.

2.8.2. Advantages and Disadvantages of DRTA

There are some advantages and disadvantages of DRTA technique. DRTA as one of the techniques can bring some advantages when it is implemented. First, The directed reading thinking activity engages students in an active process where they must use their reasoning abilities and their own ideas (Almasi, 2003). Next, Directed Reading/Thinking Activity actively teaches students the skill of comprehension. It allows the active reader who uses what has already known and the text to construct meaning with the guidance of the teacher (Allen, 2004).

DRTA is a motivating teaching strategy. By using this technique, students enjoy making predictions and then finding out whether or not their predictions were correct. DRTA is also a very flexible strategy in that it can be used individually, with a small group, or with an entire class. It can also be used in any subject and can meet the needs of any levelled reader. DRTA is a critical thinking skills. It can help students become critical readers. In this case, DRTA can give a freedom to the readers to examine their own thinking to raise questions and seeks answer diligently and boldly.

In addition to the advantages, DRTA technique has disadvantages that should be considered. First, DRTA technique is only useful if students have not read or heard the text being used. If the students have known about the story, this technique cannot work well. Second, DRTA technique will make the classroom management may become a problem. The teacher will get the problem because the students will speak up and make a noise. It causes the learning process becomes not conducive.

2.8. Theoretical Assumption

Based on the literature review, it can be assumed that reading is the extremely complex skill of learning a language. This study assumed that mind mapping and DRTA techniques made the students more active in learning process. By using this technique, the students are also helped to keep a good relationship with other members by giving the information.

So, this research believed there would be a significant difference of students' reading achievement after the students were taught through mind mapping and DRTA techniques and mind mapping is better than DRTA technique because the procedures mind mapping is more interesting than DRTA. Then, it is also

believed that there are aspects of reading comprehension which improved significantly after conducting the two techniques, especially determining main idea and finding specific information because in the procedures of both techniques students are asked to share the information of the text.

2.9. Hypothesis

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

H₀: there is no significant difference of students' reading comprehension after being taught by mind mapping technique and DRTA technique.

H₁: there is significant difference of students' reading comprehension after being taught by mind mapping technique and DRTA technique.

The criteria for accepting the hypothesis are as follows:

H₀ is accepted if the t-value is lower than t-table.

H₁ is accepted if the t-value is higher than t-table.

III. RESEARCH METHODS

This chapter discussed the following topic such as research design, population and sample, variables, data collection technique, research procedure, data treatment, data analysis, and hypothesis testing. In this research, the researcher used the design based on the theory from Hatch & Farhady (1982), Setiyadi (2006), and Shohamy (1985).

3.1. Research Design

In this research, the researcher conducted quantitative research. This study applied two groups pretest-posttest design of pre-experimental design. This research compared students' reading achievement between mind mapping technique and Directed Reading Thinking Activity (DRTA) technique. This study used two classes for conducting the research. The first class was VIII B, in this class DRTA was conducted in teaching reading. The second class was VIII E, in this class mind mapping technique was conducted in teaching reading. Before conducting the research, the researcher applied pre-test to the students, then after giving treatments, the students were given a post-test for both classes. The research design could be illustrated as follows :

G1 T1 X1 T2

G2 T1 X2 T2

(Setiyadi, 2006:135)

Notes:

T1 : Pre-test for students' reading achievement before the treatment is given.

T2 : Post-test for students' reading achievement after the treatment is given.

X1 : Treatment using DRTA technique.

X2 : Treatment using mind mapping technique.

G1 : The class taught by using DRTA technique.

G2 : The class taught by using mind mapping technique.

3.2. Population and Sample

The population of this research was students in the second year of SMP Negeri 25 Bandar Lampung which consists of twenty-seven classes. The researcher used two classes as an experimental class. Each class consists of 28 students. There was no priority class therefore it was easy to apply the technique in the type of this school.

3.3. Variables of the Research

There were three variables in this research, they were a dependent variable and two independent variables. Dependent variable (Y) is the main variable that a researcher is interested in to observe and measure to determine the effect of the independent variable. Meanwhile independent variable (X) is a variable which has a function that affects the dependent variable. This research consists of variables as follows:

1. Mind Mapping technique as the independent variable (X) because this variable affected the dependent variable.
2. DRTA as the second independent variable that affected the dependent variable.
3. Reading comprehension as the dependent variable (Y) because this variable is observed and measured to determine the effect of the independent variable.

3.4. Instruments of the Research

Data had an important role in research. In doing the research, the researcher collected some significant data by doing experimental teaching. To collect the data, the researcher had to use the instrument of collecting data. In order to obtain an appropriate data, the instrument of this research was the objective reading test. The objective reading test which is selected is a multiple-choice text which was used for pre-test and post-test. The test is in the form of multiple choices that consists of 30 items. Each question has four alternative answers (A, B, C, and D), one is the correct answer and three others are distracters.

3.4.1 Developing Instrument

In order to prove whether the test of reading had good quality, it must be tried out first. It could be concluded as good quality if it had good validity, reliability, level of difficulty, and discrimination power.

3.4.1.1. Validity

The test is considered valid if the test measures the object to be measured and suitable with the criteria. It means that a test can be considered to be valid if the test can accurately measure the quality of a test. The test should reflect all the areas to be assessed in suitable proportions and represent a balanced sample. The researcher used face, content, and construct validity to measure whether the test had good validity. Criterion-related validity is concerned with measuring the success in the future, as in the replacement test. Three types of validity that will use in this research are:

a. Face Validity

Face validity could easily be called surface validity or appearance validity since it merely a subjective, superficial assessment of whether the measurement procedure we use in a study appears to be valid measure of a given variable or construct. If

the redaction of the content is appropriate and gramatically correct, then the test has fulfilled face validity.

b. Content Validity

Content validity was the extent to which a test measure was a representative sample of the subject matter content. The focus of content validity was adequacy of the sample and simply on the appearance of the test. In this research, try-out test, pre-test, and post-test were in form of multiple-choices (a, b, c, and d). To get the content validity of reading comprehension, the test was based on 2013 English Curriculum and the syllabus of the second grade of junior high school then represents of the material that had been taught by the teacher. It meant that the test was valid.

c. Construct Validity

Construct validity measures whether the construction has already referred to the theories meaning that the test construction has already in line with the objective of the learning. Construct validity is used to measure certain aspects of reading which are supposed to measure. Construct validity can be measured by evaluating all item in the test. The researcher made five indicators of the test, they were determining the main idea, finding specific information, inferring, referring, and vocabulary. The test compared to the table of the specification to know whether the test has a good reflection of what had been taught. If the items on the test have measured students' reading comprehension, this instrument has fulfilled construct validity.

3.4.1.2. Try-out of the Instrument

The try-out was used to determine the quality of the data collecting instrument of the research, such as reliability, validity, level of difficulty, and discrimination power. The try-out test was conducted in the first meeting in the try-out class. It consisted of 40 questions of multiple choices and the time allocation was 60

minutes. The class which was selected for the try-out class was VIII A. The test can be specified good if it is reliable and valid. The composition of the test items was shown in the table below.

Table 2. Specification of Try-out Test

No.	Reading Aspects	Items Number	Percentage
1	Main Idea	3,6,11,16,21,29,31,36	20%
2	Spesific Information	5,7,12,17,22,28,32,37	20%
3	Reference	4,10,14,19,25,30,33,40	20%
4	Inference	1,8,15,20,24,27,35,39	20%
5	Vocabulary	2,9,13,18,23,26,34,38	20%
Total		40 items	100%

Before the pre-test was conducted, the researcher administered a try-out test on August 13th, 2019 in VIII A SMP Negeri 25 Bandar Lampung. The class consisted of 30 students. VIII A class was chosen randomly to analyze the reliability, level of difficulty, and discrimination power to achieve a good test instrument criteria. The students were given 40 items of multiple-choice questions which contained four options (A, B, C, and D). The students were required to finish the test within 60 minutes. After analyzing the data, the researcher obtained that 30 items were good and 10 items should be dropped from the test.

3.4.1.3. The Result of the Try-out Test

After conducting the try-out test, the result can be seen in the table as follows:

Table 3. Result of Try-out Test

Criteria	Items	Decision
Poor	5,8,18,21,28,29,30,33,38,39	Dropped
Satisfactory	1,2,4,6,7,9,12,15,16,17,19,20,22,23,24,25,26,27,31,32,34,36,40	Administered
Good	3,10,11,13,14,35,37	Administered

Based on table 3 above, there were 10 items which were poor and should be dropped. Based on the try-out test related to the criteria level of difficulty, the try-out test consisted of 7 good items, 23 items were satisfactory, and 10 items were

poor. The result of the try-out level of difficulty and discrimination power could be seen in appendix 5.

According to the table above, Split-Half technique was used to find the reliability of the half-test and to measure the coefficient of the reliability between odd and even group. The result of computation by using Split-Half technique showed that the reliability of the half-test (r_{xy}) was 0,69. After acquiring the test, the researcher used Spearman Brown's Prophecy formula to determine the reliability of the whole test. It was found that the result of the whole test (r_k) was 0.81. It could be stated that the test had average reliability in the range 0.50-0.89 (Hatch and Farhady, 1982). The result of the try-out test indicated that this test could be used as the instrument of the study since it could produce a consistent result when administered under similar condition, to the same participants, and at different time (Hatch and Farhady, 1982). The result of reliability can be seen in appendix 7.

3.4.1.4. Reliability

Reliability is a consistency of measurements or how far that measurement can be measured the similar subjects at a different time but showed a consistent result. A test will not be a good parameter unless the test is suitable or constant. The reliability of the test in this research can be determined by using the spilled-half technique. The technique is used in order to estimate the reliability of the test to measure the coefficient of the reliability in the first and second half group, the researcher used the following formula:

$$r_x = \frac{n \sum x - (\sum x)(\sum y)}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

Notes:

r_{xy} : coefficient of reliability between odd and even number item

- x : total numbers of the odd number
 y : total numbers of the even number
 x : total score of the odd number items
 y : total score of the even number items
 xy : total score of the odd and even number items

a. Reliability of the Half Test:

$$r_x = \frac{n \sum x - (\sum x)(\sum y)}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

$$r_x = \frac{3 \times 3.6 - (3 \times 3)}{\sqrt{(3 \times 4.0 - (3)^2)(3 \times 3.4 - (3)^2)}}$$

$$r_x = \frac{1.4 - 1.0}{(1.0 - 1.2)(1.3 - 0.2)}$$

$$r_x = \frac{1.4 - 1.0}{(1.8)(9.1)}$$

$$r_x = \frac{74}{9} = \frac{74}{1.7}$$

$$r_x = 0.6$$

According to Hatch and Farhady, after obtaining the reliability of half test, the researcher used the Spearman-Brown Prophecy formula to ensure the reliability of the whole test with the formula is as follows:

$$r = \frac{2}{1+r}$$

Notes:

rk : the reliability of the test

rx : the reliability of half the tests

The criteria of reliability are:

0.90-1.00 : high

0.50-0.89 : moderate

0.00-0.49 : low

b. Reliability of the Whole Test:

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

$$r_k = \frac{2(0.6)}{1+0.6}$$

$$r_k = \frac{1.3}{1.6}$$

$$r_k = 0.81$$

3.4.1.5. Level of Difficulty

Level of difficulty is related to how easy or difficult the items of the test are from point of view of the students who take the test. Level of difficulty is generally expressed in the percentage of the students who answer the item correctly. To find out the level difficulty, the researcher used the following formula:

$$LD = \frac{R}{N}$$

Notes:

LD: Level of difficulty

R: the number of students who answer correctly

N: the number of students who join the test

The criteria are as follows:

<0.30 : Difficult

0.30-0.70 : Average

> 0.70 : Easy

For the result of level of difficulty see appendix 5.

(Shohamy, 1985)

3.4.1.6. Discrimination Power

The purpose of discrimination power is to determine between the low and high level of students on the test. The students of try out class divided into two groups higher and lower students. The higher students were the students who answer the question correctly and the lower students are the students who answer the question incorrectly. To determine the discrimination power, the researcher used the following formula:

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

Notes:

DP : discrimination power

U : the proportion of upper group students

L : the proportion of lower group students

N : the total number of students

The criteria of discrimination power are:

0.00 – 0.19 : poor

0.20 – 0.39 : satisfactory

0.40 – 0.69 : good

0.70 – 1.00 : excellent

- (negative) : bad items, must be omitted

For the result of level of difficulty see appendix 5.

3.4.1.7. Normality Test

Normality test was used to find out whether the test in experimental class was distributed normally or not. The researcher used SPSS 16.0 for windows to

calculate it. In this case, the researcher used One Sample Kolmogorov-Smirnov Test. The criteria for normality test can be based on probability (Asymp. Sig. (2-tailed) >0.05 , the data is distributed normally. In this research, the researcher used the level of significant 0.05. For the result of normality test see appendix 8.

3.4.2 Data Collection

In this research, the researcher used the test as a data collecting method and also treatments. The test was used to collect the needed data by conducting some techniques as follows:

1. Pre-test

The pre-test was conducted before the treatment of teaching reading comprehension through mind mapping technique in narrative text. The purpose of the pre-test was to see the students' reading comprehension before the treatment. The pre-test was given as an objective test in multiple choices form. There were 30 items of multiple-choices of comprehension questions which each of it has four alternative answers (A, B, C, and D). The students were required to finish the test within 30 minutes. The material was given based on the 2013 curriculum of the senior high school, which considers suitable vocabulary, grammar, and structure. The distribution of test was presented as follows:

Table 4. Specification of Pre-test

Aspect of Reading	Items Number	Percentage
Main Idea	1, 5, 9, 14, 24, 28	20%
Specific Information	6, 10, 15, 18, 25, 29	20%
Reference	2, 7, 11, 16, 19, 30	20%
Inference	3, 12, 17, 20, 23,26	20%
Vocabulary	4, 8, 13, 21, 22, 27	20%
Total	30	100%

2. Post-test

The post-test was given to the students after the treatments in order to find out the significant difference between the score of the students' reading comprehension

achievement after being taught through mind mapping technique in narrative text. The result of the post-test was compared with the result of the pre-test. The test consists of 30 items of multiple choices of comprehension questions which each of it has four alternative answers (A, B, C, and D). The students are required to finish the test within 30 minutes.

Table 5. Specification of Post-test

Aspect of Reading	Items Number	Precentage
Main Idea	1, 4, 14, 18, 23, 27	20%
Specific Information	2, 5, 10, 15, 19, 24	20%
Reference	3, 11, 16, 20, 25, 28	20%
Inference	6, 9, 12, 17, 21, 29	20%
Vocabulary	7, 8, 13, 22, 26, 30	20%
Total	30	100%

3.5. Scoring System

Arikunto's formula (1997) is used in order to calculate the score of pre-test and post-test. Students' scores of pre-test and post-test is calculated by using formula as follows:

$$S = \frac{R}{N} \times 100$$

Notes:

S : The score of the test

R : The total number of right answer

N : The total number of items on the test

3.6. Data Analysis

In order to find out the students' progress in comprehending the text, the researcher analyzed the data using some steps as follows :

1. Scoring the pre-test and post-test.
2. Tabulating the result of the tests and calculating the scores of the pre-test and post-test.
3. Drawing a conclusion from the tabulated results of the pre-test and post-test by comparing the gain score from the two classes which was statistically analyzed using independent sample t-test computed through SPSS 16.0.
4. Making a conclusion from the tabulated results of the aspects of reading in pre-test and post-test which was statistically analyzed using one way anova through SPSS 16.0. In analyzing the data, the researcher did four steps, started from scoring the pre-test and post-test until making the conclusion.

3.7. Teaching Procedures

3.7.1. Mind Mapping Treatment

Mind mapping represented ideas into visualization and graphic forms where one idea is connected to another idea by using branches. It could stimulate students to put information into their memory easily. By teaching with mind mapping technique, the students could be able to associate their ideas, think creatively, and staying longer in the memory relation. The teaching procedures process is divided into three stages: (a) pre-activities, (b) whilst-activities, (c) post-activities. The use of mind mapping could be seen from the description of the treatments in these following explanations.

The treatment was administered on August, 20th 2019, August 23rd 2019, and August 27th 2019 in class VIII E. Before the researcher delivered the materials, the researcher had done some pre-activities. The researcher greeted the students' by using English. The researcher checked the students attendance list. Afterward, in while-activity, the researcher built students' background knowledge by providing them branches of mind mapping which correlated with the materials

that would be given. The researcher presented a picture of The Fox and The Goat story and asked them some questions. Then the researcher explained the narrative text, five aspects of reading, and the media that they would be applied to the learning process. After that, the researcher divided the students into seven groups which consisted of 4-5 students of each group.

The researcher distributed the task and explained to them what they would do. In task 1, the students considered to arrange the branches of mind mapping which consisted of five branches (main idea, action verbs, setting, conflict, and characters). Meanwhile, in task 2 the students had to answer multiple choices which consisted of five aspects of reading. At the post-activity, the researcher asked the students how their feeling after they were taught through mind mapping technique. Next, the researcher gave a reward for the best groups which had the highest score. Then, the researcher gave some questions to know whether the students have understood the topic that they had discussed together. At the end of the meeting, the researcher gave the students some feedback and summed up the day's activity.

3.7.2. Directed Reading Thinking Activity (DRTA) Treatment

Directed reading thinking activity engaged students in an active process where they must use their reasoning abilities and their ideas. It allowed the reader who uses what has already known and the text to construct meaning with the guidance of the teacher. By using this technique, students enjoyed making predictions and finding out whether or not their predictions were correct. It also made students become critical readers because it gave freedom to the readers to examine their thinking to raise questions and seeks to answer diligently and boldly. The treatment of DRTA was administered on 15th August 2019, 21st August 2019, and 22nd August 2019 at VIII B.

In pre-activity, the researcher greeted the students by using English and checked their attendance. Furthermore, in the while-activity, the researcher asked some ice-breaking questions to relate to the materials. To build the students' background knowledge, the researcher showed a picture of The Monkey and The Crocodile. The researcher asked some questions related to the picture. In the while-activity, as usual, the students were divided into 7 groups. The researcher instructed to the students to analyze the story of the text and discussed it together with the DRTA technique. In the first task, the students had to identify verb 2, characters, and settings related to the story. Then, the researcher asked the students to sum up the story based on their opinion. Furthermore, the researcher asked some students to answer the multiple-choice in task 2 that is consisted of five aspects of reading. In the post-activity, the researcher asked the students how their feeling about the technique. Then, the researcher gave a reward for the best group which had the highest score. At the end of the meeting, the researcher greeted and summed up the days' activity.

3.8. Research 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 were the students of SMP Negeri 25 Bandar Lampung. Then, the samples of this research were three classes of the second grade of junior high school. The first class was VIII A as a tryout class. The second class was VIII E as mind mapping class and the third class was VIII B as DRTA class.

2. Selecting the Materials

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

3. Administering the Tryout Test

The try-out test conducted before the pre-test to measure the test which is used during the research was appropriate and applicable to collect the data. The try-out test consisted of 40 items of multiple-choices of comprehension questions which each of it has four alternative answers (A, B, C, and D). The students required to finish the test in 60 minutes. A good test can be measured by considering several factors, such as validity, reliability, level of difficulty and discrimination power.

4. Administering the Pre-test

The pre-test is conducted to find out the students' reading comprehension ability before the students are taught by using mind mapping and DRTA techniques. The test was in the form of multiple choices with 30 items and four alternative answers for each (A, B, C, and D). One as the correct answer and the rest are distracted. The pre-test conducted in 60 minutes.

5. Conducting the Treatment

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

6. Administering Post-test

Post-test is conducted to find out the students' reading comprehension ability after being taught by using mind mapping technique and DRTA technique. The test was in form of multiple choices with 30 items and four alternative answers for each (A, B, C, and D). One as the correct answer and the rest are the distracters. The post-test conducted in 60 minutes.

7. Analyzing the Data

This step conducted to find a significant differences score between students who are taught by using a mind mapping technique and those who are taught by using DRTA technique. The data computed through Statistical Package for Social Science16.0 (SPSS) program to investigate the score using Independent Sample T-Test.

3.9. Hypothesis Testing

Hypothesis testing is used to prove the hypothesis in this research is accepted or not. The researcher used SPSS 16.0 to find out the significance improvement of treatment affect. The hypothesis is approved if $t\text{-value} > t\text{-table}$. In this case, independent sample t-test was used in this research. The formulation of the hypothesis could be seen as follows:

H_0 : There is no significant difference between students taught by using a mind mapping technique and those who are taught by using DRTA technique.

H_1 : There is significant difference between students taught by using a mind mapping technique and those who are taught by using DRTA technique.

The criteria of accepting the hypotheses are as follows :

1. H_0 is accepted if the t-value is lower than T-table.

If H_0 is accepted and the t-value is lower than T-table, it means that there is no significant difference of student's reading achievement among those who are taught through mind mapping and those who are taught by using DRTA Technique.

2. H_1 is accepted if H_0 is rejected.

If H_1 is accepted means that there is a significant difference of student's reading achievement among those who are taught through mind mapping and those who are taught by using DRTA technique.

The researcher also analyzed what aspect of reading skill that improves the most after being taught by using mind mapping technique. The researcher used One-Way ANOVA in SPSS 16.0 for windows to calculate the result. This hypothesis was analyzed at significance level of 0.05 in which the hypothesis is approved if $\text{sig} < .$ It means that the probability of error in the hypothesis is only about 5%. The hypothesis can be seen as follows:

H_0 : There is no aspect of reading that improve the most after being taught by

using mind mapping technique.

H₁: There is an aspect of reading that improve the most after taught by using mind mapping technique.

V. CONCLUSIONS AND SUGGESTIONS

In this chapter, the study presented the conclusion and suggestions. The suggestions were proposed for the teacher and for other researcher who are going to conduct any similar research.

5.1. Conclusions

With reference to the previous chapters, it can be summarized that the results of the implementation of mind mapping and Direct Reading Thinking Activity (DRTA) techniques enabled the students to increase their ability in reading comprehension. The conclusions can be drawn as follows :

1. There is a significant difference of students' reading achievement after being taught through mind mapping technique and DRTA technique. It showed that the t-value was higher than t-table ($3.468 > 1.674$). It means that there was an improvement of the students' reading achievement in learning English, especially narrative text. Then, mind mapping technique is more effective than DRTA technique to help students to increase their reading achievement. That can be identified from the gain in mind mapping class is 10.95 and in DRTA class is 6.78. It means that the gain in mind mapping class is higher than DRTA class.
2. In order to answer the second research question, the researcher also analyzed the improvement of reading aspects in pre-test and post-test. The aspect of reading that improved significantly in mind mapping and DRTA classes are main idea, reference, and vocabulary. In mind mapping class,

are main idea, reference, and vocabulary. were the aspect of reading which improved significantly because in mind mapping technique students could gather all information of text by representing the ideas into visualization and graphic forms where one idea is connected to another idea by using a branch. Therefore, it is easy for students to put information into their memory. In DRTA class, main idea and vocabulary were the aspects of reading which improved significantly because the directing or predicting of DRTA technique.

5.2.Suggestions

Regarding the several conclusion above, the researcher would like to propose some constructive suggestions. Firstly, for the teacher, the researcher suggests the English teacher to implement mind mapping technique in teaching reading. There must be good preparation and time allocation, because the materials have to be explained and delivered to the students clearly. The teachers also have to make a clear regulation in order to control the class, to make sure that the students can follow the instruction and focus to the material. Moreover, the teachers should ask the students who are smarter among the others to be the leader of the group in order to help their friends during the learning process. Furthermore, there is an aspect of reading which the students' have difficulty to understand, such as finding inference. This aspect actually improved but the students' correct answers of this aspect were very low. Therefore, the teacher should pay more attention in this aspect while teaching reading.

Secondly, further researcher is suggested to conduct this technique on different level of students, different skill or different type of text. For those who wants to conduct the same research, it is highly recommended to balance the number of table specification in order to get the accurate data. Use an observation sheet in

order to monitor students' activity in the class. Make sure that the try-out test items are already good in order to lower the number of bad items for pre-test and post-test.

REFERENCES

- Al Odwan, T. A. (2012). The effect of the directed reading thinking activity through cooperative learning on English secondary stage students' reading comprehension in Jordan. *International Journal of Humanities and Social Science*, 2(16), 138-151.
- Allen, J. (2004). *Tools for teaching content literacy*. Portland, ME: Sten House Publishers.
- Almasi, J. (2003). *Teaching strategic processes in reading*. New York: The Guilford Press.
- Anderson, M, & Anderson, K. (1997). *In text types in English 1*. South Yarra: Macmillan Education Australia.
- Arikunto, S. (2000). *Prosedur penelitian: suatu pendekatan praktek*. Jakarta: PT. Rineka Cipta.
- Asrifal, M. (2016). The use of mind mapping strategy to improve students' speaking ability. Banda Aceh: UIN Ar-Raniry Banda Aceh.
- Bonnie, B. A. (2000). *Put reading first: the research building blocks for teaching*. USA: National Institute for Literacy.
- Boardman, A., Klingner, J. K., & Vaughn, S. (2007). *Teaching reading comprehension to students with the learning difficulties*. Cambridge: The Guilford Press.
- Brown, H. D. (2001). *Teaching by principles*. San Francisco: Addison Wesley.
- Bukhari, F. (2016). Mind mapping techniques to enhance EFL writing skill. *International Journal of Linguistics and Communication*, 4(1), 58-77.
- Buzan, T. (2005). *Learning skills: Mind mapping, whole brain note taking, uses both sides of your brain to study subjects usually only studied with your left brain*. Available at www.FortuneWell.com. Accessed on April 18 2019.
- Buzan, T. (2008). *Buku pintar mind map untuk anak*. Jakarta: PT. Gramedia Pustaka Utama.
- Buzan, T. (2010). *Buku pintar mind map untuk anak*. Jakarta: PT. Gramedia Pustaka Utama.

- Cahyani. (2015). Improving students' reading comprehension through mind mapping. Surakarta: Sebelas Maret University.
- Fielding, L. G., & Pearson, P. D. (1994). Synthesis of research/reading comprehension: what works. teaching for understanding. *Education Leadership*, 51(5), 62-68.
- Freire, P. (1983). The importance of the act of reading. *Journal of Education*, 165(1), 5-11.
- Grellet, Françoise. (1981). *Developing reading skills*. Cambridge: Cambridge University Press.
- Harmer, J. (2004). *How to teach writing: Effective sentence, paragraph, and essay*. New York: San Fransisco State University.
- Harmer, J. (2007). *The practice of english language teaching*. Harlow: Pearson Education Limited.
- Harrison, C. (2003). *Understanding reading development*. New Jersey: SAGE Publications.
- Hasibuan, K., & Fauzan, M. (2007). *Teaching English as foreign language (TEFL)*. Pekanbaru: Alaf Riau, 113-115.
- Hatch, E. M., & Farhady, H. (1982). *Research design and statistic for applied linguistic*. Massachusets: Newbury House Publisher.
- Hedge, T. (2003). *Teaching & learning in the language classroom*. Oxford United Kingdom: Oxford University Press
- Hofland, C. (2007). *Mind mapping in the EFL classroom*. Fontys Hogescholen: Fontys Teacher Training College Sittard.
- Hornby, A.S. (1972). *Oxford advance learning dictionary of current English*. New York: Oxford University Press.
- Kusumawardani. (2012). The implementation of DRTA technique to improve students' reading comprehension ability of the 11th grade science at SMAN 1 Klirongin the academic year of 2012/2013. Purworejo: Muhammadiyah University.
- Malekzadeh, B., et al. (2015). The effect of mind mapping strategy on comprehending implicit information in EFL reading texts. *International Journal of Educational Investigations*, 2(3), 81-90.

- Neufeld, P. (2005). Comprehension instruction in content area classes. *International Reading Association*, 302-311.
- Nunan, D. (2003). *Language teaching methodology*. London: Prentice Hall International.
- Nuttall, C. (1982). *Teaching reading skill in foreign languange*. London: Heineman Educational Books.
- Rahmah, U. (2017). The effectiveness of using mind mapping technique on students' writing ability in descriptive text (A quasi experimental study at the eight grade of MTs Negeri 1 Kota Tangerang Selatan in academic year 2016/2017). Jakarta: UIN Jakarta.
- Shohamy, E. (1985). *A practical handbook in language testing for the second language teacher*. Tel Aviv: Tel Aviv University.
- Stine, J. M. (1997). *Double your brain power meningkatkan daya ingat anda dengan menggunakan seluruh otak anda*. Paramus: Prentice Hall, Inc.
- Setiyadi, A. B. (2006). *Metode penelitian untuk pengajaran bahasa asing*. Yogyakarta: Graha Ilmu.
- Somadayo. (2013). *The effect of learning model DRTA towards students' reading comprehension ability seeing from their interest*. Yogyakarta: Graha Ilmu.
- Stauffer, R. G. (1969). *Directing reading maturity as cognitive process*. New York: Harper & Row.
- Suparman, U. (2011). *Developing reading comprehension skills and strategies*. Tangerang: Mata Baca.
- Yazdani, M. (2015). The explicit instruction of reading strategies: Directed reading thinking activity vs guided reading strategies. *International Journal of Applied Linguistics & English Literature*, 4(3), 53-60.
- Zakiyah. (2015). *The implementation of DRTA technique in increasing students' reading achievement in narrative text at second grade of SMAN 9 Bandar Lampung*. Bandar Lampung: Lampung University.