

**INCREASING STUDENTS' READING COMPREHENSION ABILITY
THROUGH MIND MAPPING TECHNIQUE OF REPORT TEXT
AT THE FIRST GRADE OF SMAN 2 NATAR**

(A Script)

**By
Nadya Oktarima Kusuma Ningtyas**



**ENGLISH EDUCATION STUDY PROGRAM
DEPARTMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
LAMPUNG UNIVERSITY
2020**

ABSTRACT

INCREASING STUDENTS' READING COMPREHENSION ABILITY THROUGH MIND MAPPING TECHNIQUE OF REPORT TEXT AT THE FIRST GRADE OF SMAN 2 NATAR

By

Nadya Oktarima Kusuma Ningtyas

Reading is one of the most important skills that needs to be comprehended well. 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 ability. This research is intended to find out whether there is significant increase of the students' reading comprehension ability after being taught through mind mapping technique and also intended to find out the most and the least increase in reading aspects.

The research was quantitative which used a one group pre test- post test design. The population of this research was the first grade students of SMAN 2 Natar of academic year 2019/2020. There were two classes taken by purposive sampling used in this research, X MIPA 2 was the tryout class which consisted of 30 students and X MIPA 1 as the experimental class which consisted of 28 students. The instrument for collecting data was multiple choice in form of reading comprehension test. The collected data in form of scores were analyzed by using t-test in which the significance was determined by $p < 0.05$. The research was conducted from 21st August to 6th September 2019. The instruments was reading tests.

The results of this research showed that there is a significant increase of students' reading comprehension after being taught through mind mapping technique. It could be seen from the result which showed that the significance level of $p < 0.05$ ($p = .000$), in which the students' mean score in the pre test was 82.36 with an increase of 95.02 in post test. It can be concluded that vocabulary is the aspect of reading which increases the most and finding detail information is the aspect of reading which increases the least. It can be inferred that mind mapping technique increases reading comprehension ability of report text.

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By :

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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
DEPARTMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
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**Research Title : INCREASING STUDENTS' READING
COMPREHENSION ABILITY THROUGH MIND
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THE FIRST GRADE OF SMAN 2 NATAR**

Student's Name : Nadya Oktarima Kusuma Ningtyas

Student's Number : 1543042003

Department : Language and Arts Education

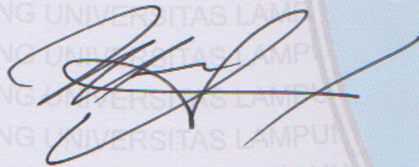
Study Program : Teacher Training and Education

APPROVED BY

Advisory Committee

Advisor

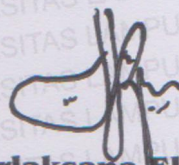
Co-Advisor



Drs. Deddy Supriyadi, M.Pd.
NIP 19580505 198502 1 001

Drs. Sudirman, M. Pd.
NIP 19550712 198603 1 002

**The Chairperson of
The Department of Language and Arts Education**



Dr. Nurlaksana Eko R., M.Pd.
NIP 19640106 198803 1 001

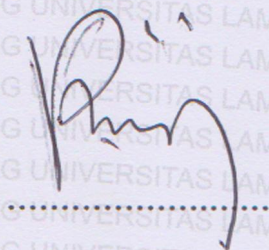
ADMITTED BY

1. Examination Committee

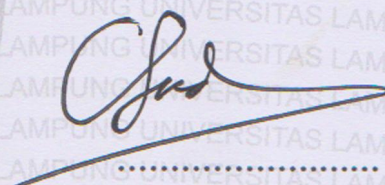
Chairperson : Drs. Deddy Supriyadi, M.Pd.



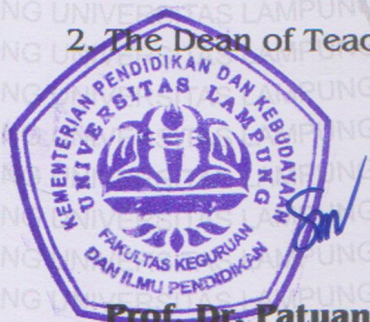
Examiner : Drs. Huzairin, M. Pd.



Secretary : Drs. Sudirman, M.Pd.



2. The Dean of Teacher Training and Education Faculty



Prof. Dr. Patuan Raja, M.Pd.
NIP 19620804 198905 1 001

Graduated on: December 20th, 2019

LEMBAR PERNYATAAN

Yang bertanda tangan dibawah ini, saya:

Nama : Nadya Oktarima Kusuma Ningtyas
NPM : 1543042003
Program Studi : Pendidikan Bahasa Inggris
Jurusan : Pendidikan Bahasa dan Seni
Fakultas : Keguruan dan ilmu pendidikan
Judul Skripsi : Increasing Students' Reading Comprehension Ability
through Mind Mapping Technique of Report Text at The
First Grade of SMAN 2 Natar

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, 20 Desember 2019
Penulis,



Nadya Oktarima Kusuma Ningtyas

CURRICULUM VITAE

The writer's name is Nadya Oktarima Kusuma Ningtyas. She was born in Bandar Lampung on October 21st, 1997. She is the second child out of two brothers, Ilham Bimo Hutomo Prakoso and Omar Liandro Aryo Setiyaqi from a lovely couple, Suhendro and Evi Lidya Susanti.

She graduated from TK Al-Hikmah in 2003. She continued her study at SD Al-Azhar 2 Bandar Lampung in 2003 and graduated in 2009. In the same year, she continued studying at SMP Negeri 29 Bandar Lampung. Then, in 2012, she continued her study at SMA Negeri 5 Bandar Lampung and graduated in 2015.

She was registered as a student of English Education Study Program in 2015 at University of Lampung. From July to August 2018, she did KKN program in Pasir Sakti, Lampung Timur and a teaching practice program (PPL) at SMP Negeri 1 Pasir Sakti. Finally, she did her research from August to September 2019 at SMA Negeri 2 Natar.

DEDICATION

By the name of Allah Subhanahu Wa Ta'Ala who blesses my life until an unspecified time, this script is proudly dedicated to:

The spirit of my life: my beloved parents,
Suhendro, S.E., and Evi Lidya Susanti, S.Pd.

The greatest inspiration of my life: My beloved grandparents,
Hi. Paidi and Hj. Aisyah, A.Ma.

My beloved brothers:
Ilham Bimo Hutomo P. and Omar Liandro Aryo S.

My overwhelming people and my mood jumpers

My lecturers at English Education Study Program

My comrades of English Education Study Program 2015

My almamater, University of Lampung

MOTTO

**“Always go with the choice that scares you the most,
because that’s the one that is going to require the most from you.”**

(Caroline Myss)

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The writer would like to express her gratitude and honor to all those who helped and supported the writer in completing this work. The writer would like to acknowledge her sincere gratefulness to her supervisor committee, Drs. Deddy Supriyadi, M.Pd., as her first advisor and Drs. Sudirman, M.Pd., as her second advisor, who have given assistance, knowledge, suggestions, encouragement and valuable guidance during the process of accomplishing the writing. Her sincere thankfulness also goes to Drs. Huzairin, M.Pd., who has given constructive suggestions and encouragement for the betterment of this script.

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Finally, the writer expects that this work will be meaningful to readers and will be beneficial as a reference for other researchers who want to conduct similar research.

Bandar Lampung, 25 November 2019
The writer

Nadya Oktarima Kusuma Ningtyas

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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 the research problem, objectives of the research, uses of the research, scope of the research, and definition of the terms.

1.1 Background

Broadly, English has many interrelationships with various aspects of life owned by human being. As it can be seen now, the more modern technology world has, the more use of international language is needed. The use of English keeps increasing. Therefore, it is important for us to master English to be more competitive. English can be learned through productions (speaking and writing) as well as through receptions (listening and reading). Reading is one of the most important skills that needs to be comprehended well. Reading is a process of looking at series of written symbols and getting meaning from them. Through reading, students will enlarge their vocabulary directly. In addition, they are able to understand the development of knowledge, science, and technology. It is supported by Afflerbach (2007:12) who says that reading is a dynamic and complex process that involves skills, strategies, and prior knowledge.

The process of reading does need a comprehension. When the reader does not comprehend the information in the text, the reading skill is totally meaningless. The readers need to understand the idea and information that they can get from the text. The comprehension does really occur when the reader understands fully

information and idea written in the text. There will be no reading when there is no comprehension. Nuttall (1982:17) stated that the purpose of reading comprehension is a part of the process of reading comprehension, that is characterized by the process when the readers get the messages and meaning of the text they have read. Furthermore, the message or the meaning conveyed can be in the forms of information, knowledge, and even happy or sad expression messages.

As stated in Curriculum 2013 of senior high school, one kind of text types that students should achieve is report text. Report means information arranged narratively in specific periods of time. Report is a work which is used as informational texts, such as writing, television, film describing specific things for a particular intension of relaying information.

According to Gerot and Wignell (1994: 196), the social function of report is to describe the way things are, with reference to a range of natural, man-made and social phenomena in our environment. Reports are used for finding specific things, which can bring facts and needs towards particular information. Written reports such as documents displayed, focused and detailed information to a specific audience, used in governmental places, business, education, science, and many other fields, are often to display the result of an experiment, investigation, or inquiry.

Based on the researcher's observation, there are some difficulties faced by the first grade students of SMAN 2 Natar on report text. The first difficulty is that students are difficult to identify the information in generic structure of report text like general classification and description. The second difficulty is that students do not really understand about language features on report text. The third difficulty is that students lack of vocabulary. The last, students are difficult to understand the

implicit meaning and conclusion of the text. This information is gained based on the explanation of the English teacher of SMAN 2 Natar.

There are many factors of the students' problem in SMAN 2 Natar on report text, one of the factors which causes the problem in reading is that the technique or method used by the teacher is monotonous and tend to be boring. The technique that the teacher used that is three phase technique. It makes the students do not have any challenge to read more and more. The direct implication is that the students find difficulty to understand the material given and hate reading activity. It creates the laziness of students in doing reading activity because the students cannot find an effective and interested reading technique. Based on the problems stated above, the students might need cooperative learning strategy to increase their reading skills. There are so many techniques that deal with cooperative learning, such as mind mapping, jigsaw, think-pair-share, three-step interview, etc.

One effective way that can be used to help students build up their ideas is through mind mappin 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.

Besides the theories, there are some previous researches that have been conducted. Firstly, Riska, Asib and Rais (2015) suggested that mind mapping technique can improve both the students' reading comprehension and the class situation when Mind Mapping is implemented in the reading class of the seventh year students of SMP N 3 Colomadu. Secondly, Suryani (2015) in her result of mind mapping, she stated that it stimulated the students to work based on their own actual capability. Thus, the students got more experiences and improved their achievement. Additionally, Bahareh and Abbas (2015) in proved that mind mapping strategy was influential in enhancing the students' reading comprehension and null hypothesis will be rejected. The findings of the study can assist to teachers, instructors, teacher trainers and researchers. Furthermore, Buran and Filyukov (2015) suggested that mind mapping technique could encourage students' creativity, imagination and motivation in their learning process.

According to those previous statements, the researcher convinces that is important to apply a more interesting teaching of reading comprehension by using mind mapping. Therefore, the researcher is focuses on increasing students' report text ability through a research entitled "Increasing Reading Comprehension Ability through Mind Mapping of Report Text at The First Grade of SMAN 2 Natar".

1.2 Research Questions

Dealing with the issues presented in the background, the research questions in this research are:

- 1). Is there any significant increase on the students' reading comprehension ability after being taught through mind mapping technique at the first grade of SMAN 2 Natar?
- 2). Which aspect of reading comprehension has the most and the least increase after being taught through mind mapping technique at the first grade of SMAN 2 Natar?

1.3 Objectives of the Research

The objective of this research are:

- 1). To find out whether there is significant increase on the students' reading comprehension ability after being taught through mind mapping technique at the first grade of SMAN 2 Natar.
- 2). To find out which aspect of reading comprehension has the most and the least increase after being taught through mind mapping technique at the first grade of SMAN 2 Natar.

1.4 Uses of the Research

The uses of research are as follows:

- 1). Theoretically, hopefully the results of this research can give contribution to teachers and curriculum developers about the quality of mind mapping in reading comprehension ability.
- 2). Practically, the uses of this research are:
 - a. To be make as consideration for English teachers to apply mind mapping technique in teaching reading comprehension in their classroom.
 - b. To encourage students' awareness of identifying the specific information in various types of reading texts through mind mapping technique.
 - c. To motivate the students in understanding report text using mind mapping technique.

1.5 Scope of the Research

This research was quantitative research dealing with the use of mind mapping technique in understanding reading comprehension ability. It was conducted at the first grade in academic year 2019/2020 of SMAN 2 Natar. The materials of

reading were taken from students' English handbook for the first grade. In this research, the researcher focused on mind mapping technique to determine the skill of the students in reading comprehension skill by using questions about report text. This study mainly focused on macro skills of five aspects of reading, such as finding main idea, specific information or supporting detail, reference, inference and understanding vocabulary of difficult words.

1.6 Definition of Terms

In this research, there are several definitions of terms which are use by the researcher, namely:

Reading

Reading is an active process which involves readers, material of reading and the readers' previous knowledge in order to get meaning of the text they read.

Reading Comprehension

Reading Comprehension is a process in which readers used their formal schemata (rhetorical structure of language knowledge) and content schema (background knowledge of context) in order to get meaning of printed symbol.

Mind mapping

Mind Mapping is a visual representation of concept and understanding that help people generating and organazing ideas. It is usually using non-linear diagram, graphic, picture, and also colors.

Report text

Report text is a type of text which functions to describe general features of something or some phenomena.

Ability

Ability is the level of someone in skill or the capability of skill. In this research is the level of students' reading skill or the students' ability in reading shown by score in pre-test and post-test.

Increase

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

Those are all about background, formulation of the problems, objectives uses, scope, and definition of terms that are used in this research. The researcher thinks that this chapter still has many weaknesses. It is because restrictiveness of knowledge and references that related to the topic of this research.

II. LITERATURE REVIEW

This chapter elaborates theories which support the script. They are classifying like the following: review of the previous research, concept of reading comprehension, teaching reading comprehension, concept of report text, concept of mind mapping technique, teaching reading comprehension through mind mapping technique, advantages and disadvantages of mind mapping technique, steps of teaching reading through mind mapping technique, the theoretical assumption and the hypothesis.

2.1 Review of Previous Researches

Reading skill is crucial because it is highly connected with the language ability of people. It makes reading very important especially in language learning. Getting involved in reading comprehension needs appropriate techniques or strategies. As the result, there are many researches had investigated about how to increase reading comprehension mainly in language teaching concept. Mind Mapping takes apart as one of techniques in teaching reading comprehension. The previous study about the use of Mind Map showed that Mind Map is effective.

Firstly, Riska, Asib and Rais (2015) conducted a study about Improving Students' Reading Comprehension Through Mind Mapping. The objectives of the research were: (1) to identified whether or not and to what extent the use of Mind Mapping improves the reading comprehension; and (2) to described the class situation when Mind Mapping is implemented in the reading class of the seventh year students of

SMP N 3 Colomadu. The problems faced by the students include the difficulty in identifying the main idea, implicit information, explicit information, referent, and word meaning in the text. The research data were collected by using techniques of observation, interview, field note, photographs, and test (pre- test and post-test). The quantitative and qualitative analyses show that mind mapping can improved both the students' reading comprehension and the class situation. It can be seen by compared the pre-test and the post-test score. Their mean score of pre-test, post-test 1, and post-test 2 were 57.99, 68.29, and 80.31.

Suryani (2015) also used improving the students' reading skills by using the mind map technique in the process of reading teaching and learning. She used two cycles. It was conducted collaboratively with the English teacher. The subjects of her research were 25 students of class XI IPA 1 in SMA N 1 Kretek, Bantul, Yogyakarta. The data in her research were collected through observations, interviews, and documentations. The data were in the form of fieldnotes, interview transcripts, photographs, and students' portofolios. She used qualitative method in analysing the data. She also enhanced the trustworthiness of the data and the subjectivity by using the two forms of triangulation: time and her triangulation. The result of the two cycles showed that the use of the mind map technique could improve the students' reading skills. The students got improvements in the paraphrasing sentence, finding topic sentence, and vocabulary mastery. Moreover, through the mind map technique, the students were motivated to be active in the classroom activities. The students actively involved in the process of teaching and learning. The condition stimulated the students to work based on their own actual capability. Thus, the students got more experiences and improved their achievement.

The third was conducted by Bahareh and Abbas (2015) about study *The Effect of Mind Mapping Strategy on Comprehending Implicit Information in EFL Reading*

Texts. Bahareh and Abbas (2015) suggested that the ability to read English as a foreign language (EFL) and a Second Language (ESL) is required to the language proficiency of intermediate level of students. To extend the students' reading comprehension, mind mapping strategy becomes a variety solution to be utilized in teaching. Hence, the reseachers tried to determine the effectiveness of leading mind mapping strategy in enhancing the students' comprehension in reading instruction text. The participants consisted of 130 students at intermediate level from Safir Institute in Tehran, Hafthouz Branch. The study has used a quasi-experimental design. The researchers carried out a treatment by using mind mapping strategy containing brainstorming to the experimental class, while the control group didn't receive such treatment. The data were assessed using independent sample t-test to determine where there is a vital discrepancy between the test scores of experimental and control classes. Then, it results that had the difference between the two means is important. So, mind mapping strategy was influential in enhancing the students' reading comprehension and null hypothesis will be rejected. The findings of the study can assisted to teachers, instructors, teacher trainers and researchers.

The last was conducted by Buran and Filyukov (2015) from National Research Tomsk Polytechnic University, Russia. Buran and Filyukov (2015) suggested that mind mapping technique could encourage students' creativity, imagination and motivation in their learning process. When the students are making their mind mapping, they feel challenged to draw appropriate symbols or pictures because each student's wanted their mind mapping the most interesting one. Therefore, it can motivate them to be more creative in their learning process because unconsciously they need to increase their imagination. The process to designing the branches made students unconsciously involved with the information.

The researcher assumes that Mind Mapping be applied to help or to increase students' comprehension ability for low achieving students. Even though here was many researches in increasing reading comprehension using Mind Mapping, no researches were available in using report texts. So that in this time, the researcher applied the Mind Mapping technique to increase students' reading comprehension in report text.

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 Nuttall (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.

Other linguists, Finichiaro and Bonomo (1973: 199) print out that reading is bringing and getting meaning from the printend or written materials. Joycey (2006: 2) says that reading is an active skill, where the reader interacts with the text, and to some extent the writer. Smith (1982: 5-6) argues that reading certainly implies comprehension, and reading is something that makes sense to the reader." The readers try to understand and get the meaning and the information in the written texts in form of symbols, letters, graphs, etc. Thus they grasp the writers' messages from the texts.

Reading is a construct process of guessing (Grellet, 1985; 81: 7); Reading is an active process of deriving meaning (Goodman, 1976, Smith, 1978). Mackey (1979: 15) states that reading is an active process because it involves an

interaction between thought and language. Reading as an active skill, where the reader interacts with the text, and to some extent the writer. It means if a reader finds a reading passage is interesting, his/her mind is fully engaged in trying to understand the reading.

In addition, Howart (2006: 1) cites that reading just as communicative as any other form of language. It means that in reading there is an interaction between the writer and the readers through the texts. The writer tries to encode the messages to the readers. Then the readers try to decode the messages that is sent by the writer.

Rubin (1993: 194) states that reading comprehension is a complex intellectual process involving a number of abilities. The two major abilities involve word meanings and verbal reasoning. Without word meaning and verbal reasoning, there will be no reading comprehension; without reading comprehension, there will be no reading. From the statements above, it can be inferred that reading need comprehension. According to Doyle (2004) comprehension is a progressive skill in attaching meaning beginning at the same level and proceeding to attach meaning to an entire reading selection. All comprehension revolves around the reader's ability in finding and determining main idea and topic sentence from the text.

Nuttall (1985:2) states that there are naturally five aspects of reading skills, they are: 1) the main idea, 2) specific information, 3) reference, 4) inference, 5) vocabulary. These aspects are important to comprehend in an English text. Each of them is clarified as follows.

1). Main Idea

Principally, the main idea in reading is a crucial element because it is a skill to grasp and find the main point of a passage by summarizing its passage and looking for repetition of ideas/words. According to Segretto (2002:12) states that

determining main idea of a reading selection is what the passage is mostly about. The author often states the determining main idea in the first or last sentence of the first paragraph, nevertheless the author may state the determining main idea anywhere in the part of text. Sometimes the author only suggests the determining main idea by leaving clues within the passage. Then, the longer text can have more than one determining main idea.

2). Specific Information or Supporting Detail

Segretto (2002:16) states that supporting details provide the reader with more information about the determining main idea or subject of a passage. They are pieces of information that help the reader to see the big picture in a text. Detail in a fictional story also supports determining main ideas about the setting, characters, and events in the story.

3). Reference

References can be used to make the text coherent because they are used to avoid unnecessary repetition of words or phrases. It means that such words are used, they are signals to the reader find the meaning elsewhere in the text. According to Latulippe (1986:20), references are words or phrases which are used before or after the reference in the reading material.

4). Inference

In relation to inferences, Kathleen (1983:31) states that an inference is an educational guess or prediction about something which is unknown based on available facts and information. It is needed a logical connection that bridges the thing that readers know and the thing they do not know.

5). Vocabulary

Understanding vocabulary means to comprehend what the words mean. Vocabulary is essentially needed when there adding process is going because according to Machado (2012:56), a child's vocabulary is strongly related to his comprehension and ease of learning to read. It is the ability to determine the meaning of understanding vocabulary items from context is one of the most important aspects of successful reading.

Therefore, the researcher used those five reading aspects in the reading comprehension test in terms because they are very essential for the students to increase students' reading comprehension ability.

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) stated that any reading component of an English language teaching may include a set of learning goals for:

- a. The ability to read a wide range of texts in English. This is the long-range goal most teachers seek to develop through independent readers outside EFL/ESL classroom.
- b. Building a knowledge of language which will facilitate reading ability.
- c. Building schematic knowledge.
- d. The ability to adapt the reading technique according to reading purpose.
- e. Developing an awareness of the structure of written texts in English.
- f. Taking a critical stance to the contents of the texts.

It is important to build up students' ability to adapt the reading technique according to reading purpose (i.e. mind mapping technique) as goal in teaching reading.

Alyousef (2005: 143) says that in teaching reading, contemporary reading tasks, unlike the traditional material as, involve three-phase procedures: pre-, while-, and post- reading stages. The pre-reading stage helps in activating the relevant schema. For example, teacher can ask students some questions that arouse their interest while previewing the text. The aim of while-reading stage (or interactive process) is to develop students' ability in tackling texts by developing their linguistic and schematic knowledge. Post-reading includes activities, which enhance learning comprehension using matching exercises, close exercises, cut-up sentences, and comprehension questions.

The aim of teaching reading is to develop students' skill so that they can read the texts effectively and efficiently. To be able to do so the readers should have particular purposes in their mind before they interact with the texts. Effective and efficient reading is always purposeful and tends to focus mainly on the purpose of the activity. Then the purpose of reading is implemented into the development of different reading techniques: mind mapping, skimming, scanning. These can be real when the students read and interact with a various types of texts.

In short, in teaching reading the teacher should provide technique to the students to anticipate different type of reading texts. Therefore, reading technique should be matched with reading purpose to read efficiently and effectively. As Suparman (2005: 1) stated that there are two major reasons for reading (1) reading for pleasure; (2) reading for information (in order to find out something or in order to do something with the information readers get). To apply mind mapping as the technique in teaching reading means the students can get the main idea of text easier and specific information quickly by the keywords.

The researcher assumed that in teaching reading, appropriate and possible technique should be applied based on the purpose of reading in order to get the comprehension. They used reading technique to make their reading effective and efficient. Mind mapping as one of reading technique may possible to be applied by Senior High School students in their reading various types of text (narrative, descriptive, and fairy tale texts).

2.4 Concept of Report Text

Report is a kind of text that tells the readers about the descriptive of objects generally. Siahaan and Shinooda (2008:43) stated that report is a text which can be written out with a descriptive technique. It describes an object to the readers. The purpose of the text is to inform or entertain the readers. It should be mastered by the students of senior high school on the first grade.

Generic Structure of Report:

1. **Title:** a title that describes the subject being discussed.
2. **General Classification:** Stating clasification of general aspect of things; animal, public place, plant, etc which will be discussed in general.
3. **Description:** describing the thing which will be discussed in detail.

Language Feature of Report:

1. Using action verbs: make, begin, surroun, do.
2. Not use personal pronouns I, You,We.
3. Using relational verb is, are, have, has.
4. Using simple present tense.

Social Function of Report:

1. Report text is a text which present information about something, as it is. It is as a result of systematic observation and analyses.
2. Its social purpose is presenting information about something. They generally describe an entire class of things, whether natural or made: mammals, the planets, rocks, plants, countries of region, culture, transportation, and so on.

Example of report text:

Penguins

Penguins are a group of flightless aquatic birds living almost exclusively in the Southern Hemisphere, particularly in Antarctica. Highly adaptive to live in the sea, penguins have countershaded dark and white feather, and their wings have evolved into flippers. Most penguins feed squid, fish, and other forms of sealife caught while they are swimming underwater. They spend about half of their lives in the oceans.

Eventhough all penguin species are native to the Southern Hemisphere, they don not live only in cold climates, such as Antarctica. In fact, only a little species of penguin live too far south. Some species are found in the temperate area, and one species, the Galápagos penguin, lives not too far with the equator.

*The vast living species is the emperor penguin (*Aptenodytes forsteri*): when they are adults they are about 1.1 m (3 ft 7 in) tall and 35 kg weight or more. The smallest one is the little blue penguin (*Eudyptula minor*), which is known as the fairy penguin, which stands around 40 cm height and 1 kg weight. Among the species of penguin, larger penguins live in colder regions, while smaller penguins*

generally inhabit tropical climates places. Some prehistoric species of penguin attained enormous sizes, becoming as heavy as an adult human.

(Adapted from <https://www.scribd.com/document/338756604/Bahasa-Inggris>)

1). Determining the Main Idea

Here is an example question about the main idea can be: *what is the determining the main idea of the second paragraph?*

Here is the second paragraph of Report text about Penguins determining the main idea.

Eventhough all penguin species are native to the Southern Hemisphere, they don not live only in cold climates, such as Antarctica. In fact, only a little species of penguin live too far south. Some species are found in the temperate area, and one species, the Galápagos penguin, lives not too far with the equator.

Thereby, the answer of the question is “*All penguin , they don not live only in cold climates*” because that paragraph is mostly about the places where penguins live besides cold climates such as Antarctica. The determining main idea is found at the beginning of a paragraph or deductive paragraph. In brief, the main idea directs the reader to detect the main information of the passage or the paragraph.

2). Finding the Specific Information or Supporting Detail

Here is an example question about finding specific information can be: *Why is the little blue penguin also called as the fairy penguin?*

Here is the example sentence to find the specific information.

The smallest one is the little blue penguin (Eudyptula minor), which is known as the fairy penguin, which stands around 40 cm height and 1 kg weight.

As a result, the answer of the question is “*because the little blue penguins only measure around 40 cm height and 1 kg weight*)” it has been clearly explained in the third line of the third paragraph. In this case, it gives the detail information about the reason (cause and effect).

3). Finding Reference

Here is an example question about finding reference can be: *They spend about half of their lives in the oceans*”. the word “they” refers to...

Here is the example sentences for finding the reference.

Most penguins feed squid, fish, and other forms of sealife caught while they are swimming underwater. They spend about half of their lives in the oceans.

Therefore, the answer of the question is *the penguins*. The word “they” is called reference because they is pronoun to refer “*the penguins*”.

4). Making Inference

Here is an example question about finding inference can be: *Which statement is not true based on the text?*

Here is the example paragraph to make making an inference.

Eventhough all penguin species are native to the Southern Hemisphere, they don not live only in cold climates, such as Antarctica. In fact, only a little species of penguin live too far south. Some species are found in the temperate area, and one species, the Galápagos penguin, lives not too far with the equator.

Thus, the answer of the question is “*Penguins live only in cold climates, such as Antartica*” because based on the text, the true statement is “*they don not live only in cold climates, such as Antarctica.*”. That statement is in the second paragraph.

5). Understanding Vocabulary

Here is an example question about understanding vocabulary can be:

1). *“Some prehistoric species of penguin attained **enormous** sizes”. The synonym of the word “enormous” is.....*

2) *“...larger penguins live in **colder** regions”. The antonym of the word “colder” is.....*

The question will brainstorm students’ understanding of vocabulary skill in answering the antonym and synonym of the word.

Therefore, the researcher used those five reading aspects in the reading comprehension test because they are very essential for the students to increase students’ reading comprehension ability.

2.5 Concept of Mind Mapping Technique

Mind mapping is popularized by Buzan (2006) who claims that it is an enormous superior note taking method. According to Buzan (2006) mind mapping is a diagram which created as a way to organize idea and to represent words, task, or another link to an arranged radically around a central keyword by lines and typically it contains words, colors, short phrase and picture.

Mind mapping has a natural organizational structure that radiates from the center and use lines, symbols, words, colors and images (Margulies, 1991). A mind mapping changes the paradigm of teaching and learning process and converts monotonous information into a colorful, memorable and highly organized diagram that works in line with someone’s brain (Hobartswan, 2010).

The Example of Mind Mapping:



There are five essential characteristics in mind mapping:

1. The central point is the starting point from mind map that gives a brief description of story (Eppler, 2006: 2);
2. The main themes of the subject radiate from the central image as branches. The first level of branches is called basic ordering ideas that can be organized into different sections or topics (Eppler, 2006: 2 & Margulies, 1991);
3. The topics of lesser importance are represented as 'twig' of the relevant branch (Margulies, 1991);
4. Keywords are the words given to each of branches to convey meaning of the topic (Eppler, 2006: 2);
5. Images are widely seen as the best way to describe a mind mapping because it can give better meaning than words. It can be used anywhere, as a substitute for the central topic, the branch or instead of a keyword on a branch (Eppler, 2006: 2).

Mind mapping can help someone to maximize the potential ability of the brain to memorize and organize ideas (Wycoff, 2003, cited in Kusumaningsih 2008)

because a mind map helps to enhance the brain's capacity to recall information (Beare, 2009). It can be also motivating way for the students to summarize a unit, because it assists in digesting information, retaining it and exploring new concept and topic in our own unique way (Margulies, 1991).

In addition, according to Hobartswan (2010), mind mapping is an important technique that improves the way to record information, and enhances creativity, imagination, and also motivation, especially in drawing and coloring image to represent information in mind map. In line with that, usage of visuals and colors can provide an interesting way to make sense in something the students is learning (Margulies, 1991) and maximize the brain ability in associating number with visual qualities (image and color) and as result, the memory will be able to store more facts (Beare, 2009).

Based on explanation above, mind mapping is an effective technique to represent and rearrange ideas which come in mind. The mind mapping stores large amounts of information efficiently. Their visual basis help one to distinguish word and ideas, often with colors and symbols that play apart to recollect information for long time. 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 fact contained in normal notes.

2.6 Advantages and Disadvantages of Mind Mapping

Buzan (2007) proposes to use mind mapping technique because it makes students to be imaginative, to find new idea, to save time, to be creative, to keep note, to develop a concept, and to perform a presentation. Moreover, Plotnik (1997 cited in Dolehanty, 2008) states that "the main advantages to concept mapping are the use of the visual symbols which are easily recognized. It is also easy to scan for a

specific word or general idea and it allows for a more holistic understanding of a concept”.

In addition, Hofland (2007) argues that mind mapping can contribute to learner’s motivation because of its creative aspects. This statement is supported by Bono (1969 cited in Hofland) who states that “creativity is a great motivator because it makes people interested in what they are doing. Creativity gives hope that there can be a worthwhile idea. Creativity gives the possibility of some sort of achievement everyone. Creativity makes life more fun and more interesting”.

Furthermore, Pandey (2009) affirms that mind mapping helps students transform vague ideas into concrete projects. Mind maps can be drawn during lectures, sessions, interviews and corporate meetings. Once these techniques are mastered, they prove to be an excellent tool to make quick decisions. Sari (2010) found that the students were easier and faster in understanding in reading report text, easier to remember information, increase creativity, enjoyable, and save the time while utilizing mind mapping technique.

Additionally, Porter (1999, cited in Kusumaningsih, 2003) states that mind mapping could increase the freedom of expression and instructs the innovative and comprehensive approach in ideas arrangement. It is also supported by Stanley (2004, cited in Kusumaningsih, 2003) who affirms that mind mapping techniques can help students generate their ideas more easily.

Based on theories above, it can be concluded that the use of mind mapping technique in classroom is effective because it could increase student’s motivation and make the teachers easier to explain the learning material.

In other hand, the disadvantage is the students need a lot of time to read and review in deciding sub topics or branches. They still confuse to transfer the important information from the text to be appropriate branches in their mind map. According to Hofland (2007), creating mind map may take time, but this helps you to recall information and will check your understanding.

2.7 Teaching Reading Comprehension through Mind Mapping Technique

According to Hofland (2007: 38), “Reading is a linear process. When we read, we process words or sentences one after the other. The human brain is not very good in linear processing.” Meanwhile, many pupils find story reading interesting and think that they understand the story. Yet, when they are requested to retell the story and describe what message the story conveys, they look blank. Some pupils will say that they forget what the story is about, some will only recall one or two pieces of information and some others can only tell the beginning and the ending of the story (Beare, 2009).

The problems identified as barriers to understanding brought the teachers to the awareness of the students. Therefore, the teachers intended to adopt a strategy that could help them construct the meaning of the text. That is why it might be a good idea to use mind mapping to improve pupils’ reading skill.

The use of mind mapping in teaching and learning process is not a new thing (Beare, 2009). In line with that, Hobartswan (2010) states that mind maps are used all around the world. Murley (2007) defines that in education, mind mapping technique serves three powerful functions: as a student presentation tool, as a pre-writing tool, and as a teaching tool. Mind mapping can strongly help visual learners in learning process and maximize their ability in adsorbing information

which is presented via diagrams and similar visual aid better, than through the written text (Buzan, 2000).

The students can use mind mapping to get the deep meaning of a story on the text. Mind mapping is a cognitive strategy that helps to improve the students' ability in reading such as in note taking and summarizing the crucial information for better understanding and memorization (Beare, 2009). When the students interpret the texts visually, it reflects their understanding of what they have read in a unique way. Transferring these visuals into words, phrases and sentences becomes easier as the ideas and comprehension of the texts has become much clearer to them. The use of mind mapping makes it possible to create meaningful reading experiences for students in the classroom. Mind mapping can be easily implemented to modify different teaching styles and providing an opportunity to the teachers, making their learning extremely simple for all.

2.8 Steps in Teaching Reading through Mind Mapping

According to Buzan (2007) there are some steps that will be used in teaching reading through mind mapping in the classroom. They are:

- 1). Start the mind map on a blank sheet of paper or blank document in a word processing computer program. Select a book or article to focus on. Place the title of the book or article within the text box in the top center of the document.
- 2). The teacher is going to flash the mind map in front of them for a second or two before taking it away. They must read the entire title of the book or article within brief moment.

- 3). Ask the students to write down the titles they read. Review their responses for accuracy. Continue practicing with reading titles only on the mind maps until students' perception is correct each time.
- 4). Move on to use complete sentences on the mind maps. Select one or two sentences from the same book or article. Split the sentence into two or three text boxes on the mind map. Flash the mind map in front of the students, now instructing them to read the words within each text box as if they were just one word.
- 5). Test students' comprehension of the sentences by having them explain in writing what they read. Encourage them to anticipate, also in writing, what they believe the following text they read.
- 6). Advance to create mind maps with text boxes that contain entire sentences. Having students practice reading all the sentences at once, trying to assimilate the separate words into one main idea.
- 7). Complete the speed reading lessons with the most advanced mind maps. These text boxes holding several sentences clustered around one main idea. Encourage students to read the text within each box, looking for one main idea.
- 8). Ask the students to answer the question that relates with the text which has been given by the teacher.

2.9 Theoretical Assumption

The frame of the theories was assumed that the students' reading ability could be developed through mind mapping technique. Through this technique, it could be effectively because the students can express their idea, try to think creatively and get the deep meaning of the story on the text. In short, this technique helped the students to transferring their visual words, phrases, and sentence into make it easier as the idea and comprehension of the texts have become much clearer to be

understood. Therefore, the researcher assumes that mind mapping technique can be used to increase students' reading comprehension in reading ability.

2.10 Hypothesis

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

There is significant increase of students' reading comprehension ability after being taught through mind mapping technique at SMAN 2 Natar.

This chapter already discussed the literature review of this research which deals with several points of theories. The next capter discusses about the method of this research.

III. RESEARCH METHOD

This chapter discuss about research methods which consist of research design, population and sample, data collecting technique, try out, procedures of collecting data criteria of good test of reading, data analysis, data treatment, and hypothesis testing.

3.1. Research Design

The research was a quantitative method to analyze the result of the research. In terms of reading score in this research, the researcher focused on the use of mind mapping technique to increase students' reading comprehension ability in report text. The researcher gave a pre-test of reading text to the students before treatment, then after treatments the students gave a post-test of reading text. The subject of the research is only one class, so the researcher used One-group Pretest and Posttest Design. This research design of pre-test and post-test is illustrated as follows:

$$T_1 \text{ X } T_2$$

The design can further be described as follows:

- T1 : relates to pre-test of reading comprehension which is given before treatment.
- X : refers to treatment by means of teaching reading comprehension using Mind Mapping technique.

T2 : denotes post-test of reading comprehension which is given after treatment.

(Hatch and Farhady (as cited in Setiyadi 2006:132)

In this research there were two variables that are dependent variable and independent variable. The dependent variable is the media 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 gave tryout to students. The tryout test was 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 used in this research, the score showed the data about students' reading ability. This research was to find out the students' reading ability by using pre-test and post test. Pre-test was administering before the treatment by mind mapping, then, post test was analyzing the students score after being taught using mind mapping.

3.2 Population and Sample

The populations of this research were students in the first grade of SMAN 2 Natar which consists of seventeen classes in academic year 2019/2020. Five classes of first grade and six for each other grade. The researcher chose the first grade students because the researcher assumed that it was appropriate with the Basic Competence that the researcher took. In selecting the sample in this research, the researcher used one kinds of nonprobability sampling. For this study, purposive sampling to choose the sample was applied. This purposive sampling referred to as judgment sampling-sample elements judged to be typical, or representative is chosen from the population (Ary et al, 2010:156). It focused on sampling technique where the sample that is investigated is based on the judgment of

the researcher. By using purposive sampling, the expected criteria for sample obtained completely in accordance with the research to be conducted.

Choosing the sample is based on purposive sampling depends on what criteria are used. The researcher chose X MIPA 1 in the first grade as a sample, the samples are 28 students that consists of 18 female's students and 10 male's students. The researcher chose SMAN 2 Natar because in that school there is no priority class and more easier to apply mind mapping technique.

3.3 Variables of the Research

There were two variables in this study; namely, (1) dependent variable, and (2) independent variable. This study employed two variables, are: (1) reading comprehension is a dependent variable (Y) because this variable is observed and measured to determine the effect of the independent variable, and (2) Mind Mapping technique is an independent variable (X) because this variable can influence or have the effect to the dependent variable.

3.4 Data Collecting Technique

This research clarified the data collection technique which was used in this study. Since the data were in the form of students' reading comprehension, the data was collected by using two reading tests; pre-test and post-test. The students have to answer reading tests of report text. The students' scores from pre-test and post-test were analyzed to find out the students' ability before and after having the treatments. The technique of collecting data was clarified as follows.

1). Pre-test

This test was given in order to find out how far the students' reading comprehension before being given the treatment. The test was an objective

test in the form of multiple choices. The number of items is 40 items and each item has five options of answer (a, b, c, d, and e). The time allocation was 90 minutes. The result of pre-test was compared with the post-test in order to find out their achievement.

2) .Post-test

After conducting the teaching through Mind Mapping technique as the treatment, the researcher was administrated post-test to the students as the last steps. It was done in order to know the students' development in reading comprehension after having the treatment. The questions were the same as the pre-test. However, the researcher changed the order of the questions from those in the pre-test in order that the students not only memorize the order of the answer of each question but they could really understand the questions. The post-test consisted of 40 items and each item has five options of answers (a, b, c, d, and e). The time allocation was 90 minutes.

3.5 Try Out

Before conducting the research, the data collecting techniques were try out in order to make sure whether the instruments are valid and reliable to collect the data. The try out test was in objective test type consisting of 50 items, each item consists of five options (a, b, c, d, and e). The type of the instruments was multiple choice test and time allocation was 90 minutes. The try out test was conducted in experimental class since to make an equal proficiency with the sample of the research. The number of the students for the experimental class was 30.

3.6 Procedures of Collecting Data

In collecting the data, the researcher uses the following steps:

1). Determining research instruments

The test was made for pre-test and post- test. The multiple choices were a form of the test. The questions which were present in the test consist of five aspects of reading, which was related to the main idea, specific information, inference, reference, and vocabulary.

2). Try-out the instrument

This activity was conducted in order to investigate the quality of the test items, whether the test was appropriate for the students or not. The test was in the form of multiple choices. There were 50 items that should be answer by the students with the five options (a, b, c, d and e). It require 90 minutes for the try-out.

3). Administering the pretest

Pretest was conducted before the treatments. It was aim to check students' reading ability in determining mind idea, references, inference, finding detail information, and vocabulary in texts. Pretest is administer for about 90 minutes on first week of the research.

4). Conducting treatments

After giving the pre-test, the treatment was conducted in three meetings. It took 90 minutes for each meeting of the treatments. The researcher taught report text by applying Mind Mapping technique.

5). Conducting posttest

Post test was conducted after the treatment. Posttest was conducted to find out whether there is a significant students' reading ability after the treatments. It was administer for 90 minutes in experimental group.

6). Analyzing data

After conducted the pre-test and post-test, the data of students' answer were analyze by using Paired Sample T-Test. It was use in order to know whether or not Mind Map technique can increase the students' reading comprehension in report text. If there was an increase in the score of the post-test, it simply mean that the research gave a good progress for the students to master reading comprehension.

3.7 Criteria of Good Test of Reading

In this research, to prove whether the test of reading has good quality, it must be try out first. As Heaton (1991:5) states that a reading test will be said to have a good quality if it has good validity, reliability, and difficulty level and discrimination power. The reading test will also be called as a good test if it has good validity and reliability.

3.7.1 Validity

A test can be consider valid if the test measure the object to be measure and suitable with the criteria (Hatch and Farhady, 1982; 250). The discussion of the validity of reading test are provided below.

1). Validity of the Reading Test

a. Content validity

Content validity is concern whether the test is sufficiently representative and comprehensive for the test. In the content validity, the material is given suitable with the curriculum. Content validity is the extent to which a test measures a representative sample of the subject meter content, the focus of content validity is adequacy of the sample and simply on the appearance of the test. (Hatch and Farhady, 1982; 251).

The topic chosen is report text. The topics are the representative of reading materials of School Based Curriculum as a matter of tailoring the lesson to students' need. To know whether the test has a good content validity, the items of the test will be discuss with the expert (advisors), the researchers' colleague, and the English teacher of SMAN 2 Natar. The composition of the test items is present in table 2: table of specification below.

Table 3.1 Specification of Reading Test Items for Try Out

No	Reading Aspects	Item Number	Num ber	Perce ntage
1	Main idea	1, 5, 8, 13, 22, 32, 37, 41, 44, 47	10	20%
2	Inferences	2, 6, 9, 18, 20, 26, 29, 30, 33, 38	10	20%
3	References	4, 12, 19, 23, 25, 35, 40, 48, 49, 50	10	20%
4	Detail information	3, 7, 11, 14, 16, 17, 24, 31, 42, 45	10	20%
5	Vocabularies	10, 15, 21, 27, 28, 34, 36, 39, 43, 46.	10	20%
Total		50	50	100%

b. Construct Validity

It is concerning to whether the test is actually based on the theory of which it means to know the language that is being measured. In this research the researcher focus on reading comprehension in the form of report texts. Nuttall (1985) states that the relation validity of the instrument refers to construct validity in which the question represents five of sort reading skills, i.e. determining main idea, finding detail information, reference, inference and vocabulary mastery. Skills of reading in the test are a part of the construct validity and the item numbers are a part of the content validity.

The test is compare to the table of specification to know whether the test has a good reflection of what will be teach. A table of specification is an instrument that helps the test constructor plans the test.

3.7.2 Reliability of the Test

Reliability referred to the consistency of the measure. A test can be said reliable if its scores remain relatively stable from one administration to another. It meant that a test was reliable if it had a stable score from one test to another test. To estimate the reliability of the test this research used the Split-Half technique. 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 (reliability of half test) in the following formula:

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

The design can further be notified as follows:

r_{xy} relates to the coefficient of reliability between odd and even numbers item

- xy relates to the sum of the multiplication of the x and the y variables
- $\sum x^2$ denotes the sum of x quadrate
- $\sum y^2$ refers to the sum of y quadrate
- $\sum (x)^2$ denotes the sum of x is quadrate
- $\sum (y)^2$ refers to the sum of y is quadrate

Before calculating the reliability of the half-test, the table of reliability analysis of try- out test (see Appendix 6). In reference to the table, the results of computation by using Split-Half technique showed that the reliability of the half test (r_{xy}) was 0.73. (see Appendix 7).

After getting the reliability of half test, the researcher used Spearman Brown's Prophecy formula (Hatch and Farhady, 1982: 247) to determine the reliability of the whole tests, as follows:

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

- r_k refers to the reliability of the whole test.
- r_{xy} designates the reliability of the half test.

The criteria of reliability are as follows:

- A high reliability ranges from 0.90 to 1.00.
- An average reliability ranges from 0.50 to 0.89.
- A low reliability ranges from 0.00 to 0.49.

(Hatch and Farhady, 1982: 127)

After acquiring the test, it was found that the results of the whole test (*rk*) was 0.84 (see Appendix 7). It can be stated that the test had average reliability is 0.50-0.89.

3.7.3. Level of Difficulty

Level of difficulty relates to “how easy or difficult the item is in the form of the point of view of the students who took the test. It is important since test items which are too easy (that all students get right) can tell us nothing about differences within the test population.” (Shohamy, 1985: 79).

Level of difficulty is calculated by using the following formula:

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

LD level difficulty

U denotes with the proportion of upper group students who answer correctly

L is concerned the propotion of lower group students who answer correctly

N refers to the total number f students

The criteria are:

LD < 0.30 refers to difficult

LD = 0.31- 0.70 refers to average

LD > 0.71- 1.00 refers to easy

(Arikunto, 1997:214)

For the results of the level of difficulty (see Appendix 5)

3.7.4. Discrimination Power of the Test Items

Discrimination power refers to “the extent to which the item differentiates between high and low level students on that test. A good item which is according to this criterion, is one in which good students did well, and bad students failed.” (Shohamy, 1985:81)

The formula is:

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

DP is concerned with discrimination power

U refers to proportion of “upper group” students getting the item correct

L refers to proportion of “lower group” students getting the item correct

N designates a total number of students

The criteria are follows:

LD = 0.00-0.19 = poor

LD = 0.20-0.39 = satisfactory

LD = 0.40-0.69 = good

LD = 0.70-1.00 = excellent

(Arikunto, 1997:223)

For the results of discrimination power (see Appendix 5).

3.7.5. Scoring System

The scoring system that was used in this research was dividing the right answer by total items times 100. The ideal highest score was 100. To calculate the score of pre-test and post-test, the researcher used the formula by Arikunto (1997) which was employed:

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

Where:

S is the score of the test

R is the right answer

N is the total of the items

3.8 Normality Test

Normality test was used to know whether the data were normally distributed 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 (Asymptotic Significance) as follows:

1. Asymp. Sig. (2-tailed) > 0.05, the data is distributed normally.
2. Asymp. Sig. (significat) < 0.05, the data is not distributed normally.

In this research, the researcher used the level of significant 0,05. For the results of normality test (see Appendix 20).

(Santoso, 2012)

3.9 Data Analysis

After the data were collected in form of score by using tests, the researcher analyzed the data in order to know whether there is an increase of the students' reading ability from pretest result to posttest result by using Paired Sample T-Test of Statistical Program for Social Science (SPSS 2016). The results of the test were in the forms of score or interval data. The researcher analyzed the students' reading ability 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 2016) to test whether there is an increase or not. The mean was calculated by applying the following formula:

$$M = \frac{\sum x}{N}$$

M refers to the mean (average score)

x denotes the total students' score

N designates the total number of students

(Hatch and Farhady, 1982)

3.10 Results of the Try-out Test

Try-out test was conducted on August 21st, 2018 in X MIPA 2 class. The class consisted of 30 students. Class X MIPA 2 was chosen randomly to analyze the reliability, level of difficulty, and discrimination power to achieve a good test instrument criteria. The students were given 50 items of multiple-choices questions. Multiple-choices contained five options (a, b, c, d and e). The multiple-choices format many make WH-questions easier to answer than no-choice WH-questions because the gave the students some possible answers. The students can be able to check the text to see if any of the choices were specifically discussed then make a choice. In this research, there were 50 items in the try-out test. The results of the try-out test can be seen in the table below.

Table 3.2. Results of Try-out Test

Criteria	Items	Decision
Bad	5, 37	Dropped
Poor	6, 7, 29, 30, 35, 36, 49, 50	Dropped
Satisfactory	1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 20, 22, 24, 26, 27, 28, 31, 32, 33, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50, 51, 52	Administered
Good	14, 19, 21, 25, 34, 38, 43, 44, 48	Administered

Table 3.2. showed that there were 2 items which were negative discrimination power (bad) and there were 8 items which were poor and should be dropped. There were 35 items which were satisfactory and there were 9 items which were good and should be administered, so, 40 items were administered for pretest and posttest (see Appendix 5). In reference 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 results of computation by using Split-Half technique showed that the reliability of the half test (r_{xy}) was 0.73.

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 results of the whole test (r_k) was 0.84 (see Appendix 7). It can be stated that the test had average reliability is 0.50-0.89 (Hatch and Farhady, 1982:127).

3.11 Teaching Procedures

According to Alyousef (2005), the teaching reading activity is divided into three parts. They are pre- reading, while- reading and post- reading. Those procedures are modified by the researcher as follows:

Pre-activity:

1. The teacher asked the students about their experiences about report text. (What do you know about report text? Is it difficult for you? What are your difficulties in reading report text?)
2. The teacher asked the questions related to the topic they will learn. (E.g. Do you know about earthquake? Why it can happen?, etc.)

While activity:

1. The teacher explained about the generic structure, grammatical features and social function of report text.
2. The teacher explained about Mind Mapping technique that will ease them in comprehending the report text.
3. The teacher asked the students to read the text “Dolphin”.
4. The teacher gave the example of Mind Mapping from the text “Dolphin”.
 - a. The teacher drew “Dolphin” at the center of the whiteboard using black marker.
 - b. The teacher asked the students what they know about Dolphin.
 - c. The teacher made some branches and wrote any supporting idea about Dolphin on the branches using many different colors.
 - d. Added some pictures related to the ideas.
5. The teacher and the students discussed the answer of reading comprehension test related to the text “Dolphin”.
6. The teacher gave the second text “Banana”, and asked the students to read and mind map the text based on the teacher’s previous example.
 - a. Asked the students to take a sheet of paper.
 - b. Asked the students to write and draw the title of second text at the center of the paper.

- c. Let the students did like what has been done previously by the teacher, without instruction.
 - d. Let them free to expressed their mind to comprehend the text.
7. The teacher let the students answered the reading comprehension text.
 8. The teacher collected the students answer.

Post-activity:

1. The teacher asked the students about what they have learnt.
2. The teacher asked the students about the difficulty in understanding the lesson.
3. The teacher asked the students to make a conclusion of the lesson.

3.12 Hypothesis Testing

After collecting the data, the researcher try to analyze them in order to find out whether the use of mind mapping has positive effect by knowing the increase on students' reading ability. The hypothesis testing was used to prove whether the proposed hypothesis in this quantitative research was accepted or not. The hypothesis was analyzed by using Paired Samples T-test of Statistical Package for Social Sciences (sma) at the significance level of 0.05 ($P < 0.05$). The hypothesis testing is tested with the following criteria:

H_0 : There is no significant increase of students' reading comprehension ability after being taught by using mind mapping technique.

H_1 : There is significant increase of students' reading comprehension ability after being taught by using mind mapping technique.

The criteria for accepting the hypotesis are as follows:

H_0 is accepted if the t-vvalue is lovwer than t-table.

H_1 is accepted if the t-value is higher than t-table.

V. CONCLUSION 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 ability after being taught through mind mapping technique. The increase can be seen from the mean of students' pretest scores and posttest scores. There is significant level 0.05 ($0.000 < 0.05$) its means that H_0 is rejected and H_1 is accepted. The mean score of the pretest is 82.36 in that the posttest is 95.02 and the gain is 12.64. It can be inferred that mind mapping technique is appropriate, useful, and also applicable technique in teaching reading comprehension.
- 2). All of the aspects of reading comprehension increased. It was proven from the students' pretest and posttest scores of the increase in students' reading comprehension ability aspects: 2.38% for mind idea, 1.38% for detail information, 1.75% for references, 1.75% for inferences and 5.38% for vocabulary. Evidently, vocabulary gained the most increase and detail

information gained the least increase aspect of reading comprehension (Table 4.12.)

5.2. Suggestions

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

Firstly, it is suggested to English teachers to apply mind mapping technique in reading comprehension. The teacher also should 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 information that they need to find from the text.

Secondly, it is suggested to 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 makes a map from the text and each student fill in the branches and answer the questions.

The last, in this research the researcher applied mind mapping technique in teaching reading report text at the first grade of senior high school. The researcher suggests to further researchers to conduct, in another kinds of text, i.e. exposition, recount, or descriptive text.

REFERENCES

- Afflerbach, P. (2007). *Understanding and using reading assesment K-12*. Maryland: University of Maryland
- Alyousef, H.S. (2005). *Teaching reading comprehension to ESL/EFL learner*. The Reading Matrix vol 5, No.2, September 2005.
- Arikunto, S. (1997). *Dasar-dasar evaluasi pendidikan*. Jakarta: Bina Aksara.
- Bahareh., & Abbas. (2015). *The effect of mind mapping strategy on comprehending impPLICIT information in EFL reading test*. Teheran: Islamic Azad University.
- Beare, K. (2009). *Reading – Identify skill requirement*. Available at Abaout.comGuide. Accessed on September 19th, 2019.
- Brown, H.D. (2001). *Teaching by principles: An interactive approach to language pedagogy*. New York: Longman, Inc.
- Buran., & Filyukov. (2015). *Mind mapping technique in language learning*. Tomsk: National Research Tomsk Polytechnic University.
- Buzan, T. (2000). *The power of mind mapping: How to use mind maps to boost your creatifity, achieve faster success, greater result and develop winning ideas at the speed of thought*. [Online]. Available at www.FortuneWell.com. Accessed on 2nd November 2019.
- Buzan, T. (2005). *The ultimate book of mind maps*. England: Harper Collins Publisher, Ltd.
- Buzan, T. (2006). *Mind mapping: Kickstart your creativity and transform your life (Buzan Bites)*. London: Pearson Education Limited.
- Buzan, T. (2007). *Buku pintar mind map*. Jakarta: Gramedia Pustaka Utama.
- Dolehanty, C. (2008). *Concept mapping and reading comprehension*. From: <https://els.earlham.edu/dimicre/files/30/150/CherieD2008.pdf>. Accessed on November 24th, 2019.

- Doyle, B.G. (2004). *Teaching of reading*. New York: CBS College.
- Eppelerr, M.J. (2006). *A comparison between concept maps, mind maps, conceptual diagrams and visual metaphors as complementary*. Available at <https://doi.org/10.1057/palgrave.ivs.9500131>. Accessed on November 24th, 2019.
- Finocchiaro., & Bonomo. (1973). *The foreign language learner: A guide for teachers*. New York: Regents Pub. Co.
- Gerot, L., & Wignell, P. (1994). *Making sense of functional grammar*. Sydney: Antipodean Educational Enterprises.
- Goodman, K. S. (1967). *Reading: A psycholinguistic guessing game*. *Journal of Reading Specialist*, (4).
- Grellet, F. (1985). *Developing reading skills*. Cambridge: Cambridge University Press.
- Hatch, E., & Farhady, H. (1982). *Research design and statistic for applied linguistics*. London: New Bury House Production, Inc.
- Heaton, J.B. (1991). *Writing english language teaching*. USA: New Bury House Publishers.
- Hedge, T. (2003). *Teaching & learning in the language classroom*. UK: OUP.
- Hobartswan. (2010). *Mind mapping: Learning and teaching with both sides of the brain*. [Online]. Available at <http://www.thefacilitator.com/htdocs/Mind%20Mapping.pdf>. Accessed on August 26th 2019.
- Hofland, C. (2007). *Mind mapping in the EFL classroom*. Fonsy Teacher Training College Sittard.
- Howart, P. (2006). *Making reading communication*. <http://academic.cuesta.edu.Html>. Accessed on June 15th, 2019.
- [https://www.scribd.com/document/338756604/Bahasa Inggris](https://www.scribd.com/document/338756604/Bahasa%20Inggris))
- Joycey, E.D. (2006). *Reading comprehension: An interactive process*. 17th June 2019. <http://ilc-iral.com/737/1018/1017/-21k>.
- Kusumaningsih, L.W. (2008). *The effectiveness of mind mapping techniques in improving students' narrative text writing ability*. An Unpublished Paper.
- Latulippe, L.D. (1986). *Developing academic reading skills*. Englewood: Prentice Hall.

- Lado. (1983). *Individual differences in second language learning*. London: Hodder and Stoughton Ltd.
- Machado. (2012). *Creating reading for all children*. Boston: Allyn & Bacon.
- Mackay. (1979). *Definition of reading*. Available at <http://www.ncrel.org/sdrs/areas/issues/content/cntareas/reading/li7lk1.htm>.
- Margulies, S. (1991). *Mapping inner space: Learning and teaching mind mapping*. Zephyr, Tucson, AZ.
- Murley, D. (2007). *Mind mapping complex*. Retrieved from Acrobat Reader- (2007-11.pdf). Accessed on 26th August 2019.
- Nuttall, C. (1982). *Teaching reading skills in a foreign language*. Oxford: Heinemann publishers.
- Nuttall, C. (1985). *Teaching reading skills in foreign language*. London: British library cataloguing in publication.
- Riska, Asib., & Rais. (2015). *Improving students' reading comprehension through mind mapping*. Solo: Universitas Sebeas Maret.
- Segretto, M. (2002). *Roadmap to 8th Grade Reading: Virginia Edition*. New York: Random House, Inc.
- Setiyadi, B. (2006). *Metode penelitian untuk pengajaran bahasa asing pendekatan kuantitatif dan kualitatif*. Yogyakarta: Graha Ilmu.
- Setiyadi, B. (2006). *Metode penelitian untuk pengajaran bahasa asing*. Lampung: Universitas Lampung.
- Shohamy, E. (1985). *A practical handbook in language testing for the second language teachers*. Tel Aviv: Tel-Aviv University.
- Smith, F. (1982). *Understanding reading*. New York: Holt.
- Suparman, U. (2007). *Reading strategies of English as a Foreign Language (EFL)*. Tangerang: Matabaca Publisher.
- Suryani, L. (2014). *Improving students' reading skills by using mind mapping technique at SMAN 1 Kretek*. Yogyakarta: Universitas Negeri Yogyakarta.