

**THE USE OF MIND MAPPING AS A GUIDANCE ON STUDENTS' SPEAKING
ABILITY**

(A Study Conducted to Tenth Grade Students of Riyadul Zannah)

PAPER

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DECLARATION

I hereby declare that the paper entitled “The Use of Mind Mapping as a Guidance on Students’ Speaking Ability” is completely my own work. I am fully aware that I have quoted some statements and ideas from many resources. All quotation are properly acknowledge in the text. Should be there any claim on the originality of this paper, I would be prepared to take any legal responsibility.

Bogor, June 2020

Siti Nur Alfiah

PREFACE

Alhamdulillah, all praises be to Allah SWT, the Lord of the universe who has given health, strength and inspiration so this paper entitled “The Use of Mind Mapping as Guidance on Students’ Speaking Ability” can be finished. This paper is intended to fulfill one of the requirements for *Sarjana Pendidikan* Examination of English Language Education Study Program, Faculty of Teacher Training and Educational Sciences of Pakuan University, Bogor.

It is realized that this paper is still far from being perfect. There are still many mistakes because of limited time, ability and experience. Therefore, all the constructive comments, correction and suggestion are needed to make this paper better.

Any kinds of thankfulness are expressed to all people who have given their help in conducting this research, this paper will be useful for those who read it.

Bogor, June 2020

The Writer

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In the name of Allah. the Most Gracious and the Most Merciful

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ABSTRACT

Speaking ability is very important to have good communication, especially in international communication. The English learners should have this ability and they must focus the learning on speaking skill. In fact, Senior high school students mostly have difficulty in learning English such as constructing sentences either in written or spoken form because they are have lack of vocabulary. This research is conducted to find out the use of Mind Mapping technique on Students' Speaking Ability. This research is conducted at tenth grade students of *Riyadul Zannah*. In conducting this research, the writer used pre-experimental method with one group pretest and posttest design. Purposive sampling was used to take the sample and 21 students were taken as the sample. The data were taken from two tests: pre-test and post-test. Some steps were done to analyze the data and design of t-test formula was applied to get the final result. Based on the data calculation, the t-test value is 7.33. The result of the t-calculated and the t-table with $d.f = 20$ at significant level 05 is 2.09. It indicates that the t-calculated is higher than t-table ($7.33 > 2.09$). It means, the alternative hypothesis (H_a) is accepted. In conclusion, there is an effect of using Mind Mapping technique on Students Speaking Ability.

Keywords: Speaking, Mind Mapping Technique.

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CHAPTER I

INTRODUCTION

A. Background of the Study

Speaking ability is the students' ability in expressing their ideas orally. Thornbury (2005: 1) says speaking is a skill, and as such needs to be developed and practiced independently. It means that speaking is needed and frequently used in life or event has to be developed and practiced independently to make life goes well.

Richards and Renandya (2002: 201) suggests that learning speaking is very important for students. For many students, learning to speak English is a priority. They may need this skill for a variety of reasons, such as for exchanging information or for influencing people. They use it to persuade other people to believe about what they say. In speaking, students should concern about several aspects such as intonation, vocabularies and structure. The students can master all of the aspects if they practice speaking regularly.

The teacher need to create teaching and learning process that can facilitate students to learn. The process should be designed to make them active and creative in order that teaching and learning process is effective and pleasant.

The teachers may use various technique to enhance the students' ability in speaking. One of the techniques is Mind Mapping technique. According to Buzan (2005: 1) Mind Mapping is a very powerfull tool for

brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking. Mind Mapping is an important technique that improves the way to record information, supports, and enhances creative problem solving. By using Mind Maps, the students can see the way that pieces of information fit together, as well as recording the raw facts contained in normal notes. In another words, making Mind Map is the way to organize students' thought and ideas about what they are going to say before speaking. Furthermore, Mind Map encourages creative problem solving, as they hold information in a format that the students' mind find easy to remember and quick to review.

From the background above it is assumed that Mind Mapping technique is an effective way in teaching speaking. Therefore, this study is conducted to investigate the effect of Mind Mapping technique on students' ability.

B. Reason for Choosing the Topic

In conducting this research, there are two main reasons for choosing the topic. First, some students in the tenth grade of senior high school get difficulties in speaking class. The information is based on the interview with the English teacher. The second reason is because mind mapping technique can help the students organize what they are going to say.

Based on the interview with the English teacher in Riyadul Zannah senior high school, some students have difficulty to speak English spontaneously. It is because English is not their everyday language and they lack the mastery of English vocabulary.

The second reason is mind mapping technique can help the students to organize what they are going to say. It makes them easy to understand what they going to say and they can write the points they will deliver.

It is summed up that mind mapping can help students to learn English and help them to convey what they will deliver. With mind mapping, they write and draw it to make it easy to memorize.

C. Statement of the Problem

Based on the background of the study, the problem that will be investigated is; “Is there any effect of mind mapping technique on students’ speaking ability?”

D. Aim of the Research

In conducting the research, there is aims to be achieved. The aim of this research is to find out the effect of mind mapping technique on students’ speaking ability.

E. Hypothesis

The alternative hypothesis (*Ha*) is chosen for this research that means there is an effect of using Mind mapping technique in students' speaking ability.

F. Limitation of the Problem

With regard to the identification of the problem, it is impossible for the researcher to solve all problems influencing the quality of students speaking teaching and learning process. Mind mapping in this research focused on improving the quality of students' speaking skill in the teaching and learning process by using Mind Mapping technique. The research is limited on describing something based on Mind Mapping they make before.

G. Operational Definition

Based on the writers understanding, here are the meanings of each variable.

1. Speaking is one of the language skills that play an important role for students in daily activities. This includes how to speak properly and how to make the listener understand what is meant.
2. Mind mapping is a diagram for representing tasks, words, concepts, or items linked to and arranged around a central concept or subject using a

non-linear graphical layout that allows the user to build an intuitive framework around a central concept.

H. Significance of the Research

The result of the study hopefully can give some benefits not only theoretically but also practically as follows;

1. For the English teachers: it can help them to solve the problems and determine the teaching learning strategy in order to teach speaking.
2. For the students: it can help them apply mapping technique to organize ideas or thought that will be delivered.
3. For further researcher: this research can be used as a contribution to conduct further research especially in senior high school using different subject or design.

CHAPTER II

THEORETICAL FOUNDATION

A. Speaking Ability

1. Definition of Speaking

Fulcher (2003: 23) states. "Speaking is the verbal use of language to communicate with others". It means that language is a systematic tool for conveying thoughts, ideas, opinions, agreements, information and others through speaking.

Speaking is to express their needs, to communicate information at least in short burst. Brown and Yule (1999: 14) stated that speaking is depending on the complexity of the information to be communicated. Speaking is not just word spontaneously issued, but speaking is for people to disclose information that they have and to inform what people needs.

According to Nunan (2003: 48) speaking is productive or oral skill. It consists of producing verbal utterances to convey meaning. It means that speaking is an ability to convey messages by using verbal utterances.

Somjai and Jansem (2015: 29) state, "Speaking is interaction between speaking with a listener". Based on the statement, the interaction between speaker and listener is to convey message or information and communicating ideas each other. Not only produce sounds in speaking, but also it must have meaning. Linse (2005: 47)

also states. "Speaking is equally important in children's overall language development". It means that the teacher needs to develop speaking ability of students.

Based on the statements above it is concluded that speaking is an interacting activity between two or more people. People not only learn about language usage, but also language use because language use is used as a media for communication. Speaking becomes one of the skill of that have to be mastered by students because by speaking they can interact and communicate with others and present information and ideas. In addition, speaking aims to inform, entertain, persuade, invite, argue and convince the listener.

2. Types of Speaking

According to Brown (2007: 327) there are several of speaking classroom performance as follows.

a. Imitative

Imitative speaking is kinds of practicing an intonation or trying to point a certain vowel sound. It is carried out not for the purpose of meaningful interaction, but for focusing on some particular element of language form.

b. Intensive

Intensive speaking goes one step beyond imitative to include any speaking performance that is designed to practice some phonological

or grammatical aspect of language. It can be in the form of self-initiated or pair work activity.

c. Responsive

Responsive speaking is meant by being able to give replies to the questions or comments in meaningful in authentic one.

d. Transactional (dialogue)

In this case transactional is ere done in the dialogue. It is aimed at conveying or exchanging specific information, an extended form of responsive language.

e. Interpersonal (dialogue)

Like in the transaction, interpersonal speaking here is also carried out in a dialogue. It is purposed for maintaining social relationship than for the transmission of facts and information, and extended form of responsive language.

f. Extensive (monologue)

Students are intermediate to advance levels are called on to give extended monologues in the form of oral reports, summaries, perhaps short speeches. These monologues can be planned or impromptu.

3. Speaking Elements

According to Syakur (1987: 5) Speaking is a complex skill because at least it is concerned with components of grammer,

vocabulary, pronunciation, and fluency. It means that if students want to be able to speak English fluently, they need to consider some elements. There are some elements that should be considered:

a. Fluency

This aspect measure students' fluency in the target language, and measure students' ability to speak easily and well.

b. Grammar

This aspect implies being able to operate the structure and tenses in producing the language.

c. Vocabulary

This aspect measure accuracy, variety and quantity of vocabulary on students' response. Vocabulary trains the students' accuracy in choosing the appropriate words to make sentences in the target language.

d. Pronunciation

This aspect measure pronunciation as effect of communication. At this level, students measure their ability in pronounce word, speech sounds, stresses, and intonation, so that they can understand and interpret sound of its intended meaning.

B. Mind Mapping Technique

1. The Definition of Mind Mapping Technique

Mind Mapping/Concept Mapping is a process which identifies concept within an oral or written text, organizes these concept in hierarchy from the most general to the most specific concept, and illustrates by using linking words the meaning relationships between concepts (Phail in Buzan, 2007: 36). The diagram produced map of the hierarchical arrangement of the identified concept and the meaning relationship between these concepts. On a concept map, concepts are represented by boxes or circles which are joined with lines or arrows. The linking words are written on or near the line which link the concept. The linking words are particularly important because they provide an indication of what the learner understands and the depth of that understanding.

According to Tony Buzan 2000 (as cited by Nikhilkumar D. Parikh, 2016: 149), Mind mapping is an application that gives us the meaningful information to understand in a simple way. Mind mapping technique prepare the mind in a way so the information can be written first before the student expose the idea. This method is suitable for teachers and students for easy to understand hard topics. This technique increases the creastive power in new concepts and help to increases students motivation in study.

Mind Mapping is a diagram used to represent words, ideas, tasks or other items linked to and around a central key word or idea. Mind maps may also and recall of concept mapping. Invited by Buzan (2005: 1), mind mapping is a very powerful tool for brainstorming, creative thinking, problem solving, organizing of ideas and of course, note taking. Mind mapping as a note taking technique can be used for almost any subject and done in any language. It is especially useful for students in tertiary education and beyond, and this is because the more advanced the study material, the greater the need to condense and simplify it in a form that is easy to learn.

Based on all of the definition above, it can be concluded that mind mapping is a technique to teach speaking in which the students need to express their ideas by writing a keyword about what they are going to speak before they speak up. Not only the keywords, but they also can write symbol, icons and colors based on their own styles. Mind Mapping is easy and creative way to develop students' mind, organize their ideas and share the ideas.

2. The Characteristics of Mind Mapping

The five essential characteristics of Mind Mapping based on Buzan in the *Mind Mapping Book in Radiant Thinking* (1993: 2) are:

- a. the mind idea, subject or focus is crystallized in a center image,

- b. the main themes radiate from the central images as 'branches' it's associated line,
- c. topic of lesser importance is represented as 'twigs' of the relevant branch,
- d. the branches from a connected nodal structure.

So, to get a good teaching process the researcher must fulfill all of the five characteristics of mind mapping.

3. The Principles of Teaching Using Mind Mapping

The principle at the implementation of the Mind Mapping Strategy in teaching and learning process based on Suparlan in Buzan (2007: 49) are follows :

- a. The teacher distributes a text to the students.
- b. The students find out the keywords in each subtopic.
- c. The students make a scheme or concept in a map form.
- d. Explaining of the relationship of each concept.

The principles to construct mind maps are few and easy to understand. The best way to learn it is by practicing. After short time learners will do it automatically. To make mind maps they have to draw ideas from the center of the paper and move in a radial and parallel way, to do that learners have to use both their creative and their logical brain. With some experience they develop their own style, own pallet of colors, symbols, and their own icons, etc.

4. The Implementation Mind Mapping Technique

A complete Mind Mapping may have mind topic lines radiating in all directions from the center, sub-topic and facts will branch of these, like branch and twigs from the trunk of a tree. Learners do not need to worry about the structure produced, as this will evolve as learn to develop their Mind Mapping. Here are the steps and purpose to draw Mind Mapping (Buzan, 2004: 21-23) in *Mind Map untuk Meningkatkan Kreativitas Book*.

- a. The students need to write the topic in the middle of paper, and they should use single word or simple phrase for information as the keywords, it gives freedom of brain to explore their mind.
- b. The students should use picture or symbol from the central idea, because using a picture can help them in imagining their ideas.
- c. The students also can use colors, using colors can make them creative and make mind mapping is interested to be read.
- d. The students should connect the branch of keywords to the central picture, make cross-linkages continuously. It can help students to understand and memorize the information, because the information is connected to each other.
- e. The students should use key for every line because single key word given the power and flexible for mind mapping.
- f. The students can use picture, because picture can help them to remember information more effective than words.

After reading the steps above, the researcher gets the conclusion that the mind mapping mast is fun, interesting and enjoyable to learn. It can make the students more creative.

C. Teaching Speaking Using Mind Mapping Technique

A mind or concept map is a way of recording information. It allows the students to organize their ideas either as a class, small group or individually. A mind map is often associated with brainstorming and is useful for drawing connections between ideas and concepts, assisting in the further research of a topic (*Teaching Strategies and Practices in Human Society and Its Environment Book*).

In connection with mind mapping, there are two steps which can be done by the teachers to teach mind mapping. The steps are divided into nine specific steps. Here are the steps that are mentioned by Buzan (2004).

1. Planning

Planning is the preparation before teaching speaking through mind mapping, here are several steps in planning:

- a. select a form of mind map which is appropriate to the topic.
- b. determine whether a class, group or individual mind map is the most appropriate.
- c. decide, or have students decide on the most useful concepts around which the mind map is to be developed.

2. Managing

Managing is the way how the teacher organize the steps in applying mind mapping technique.

- a. A mind map can take different forms, making very simple connections to a main idea in Stage 1, or containing a range of ideas and 'sub' ideas linked in various ways in Stage 2 and 3. Mind maps can include pictures and representations as well as words.
- b. Identify and communicate to students the purpose and use of a mind map.
- c. Model how to create and interpret mind maps.
- d. Give students time to develop their own mind maps and make connections in their own ways.
- e. Display mind maps for students to refer to and use.
- f. Explain that mind maps can be used in a variety of ways-as the basis for information reposts, to provide the basis for organizing information, as topic for further investigation.

The teaching technique will be used enjoyable to learn when the researcher conducts in the planning and managing. The good planning and managing will affect the good teaching and learning process in the speaking class.

D. Related Research

To support this research, there are two research which are related to this study are presented here. First, research was done by Riska Susilawati (2017) entitled, “The Effect of Using Mind Mapping Technique Tow Ards Students’ Speaking Skill at the Second Grades of SMPN 30 Muaro Jambi.” The research design used in this research was quasi-experimental by using non-equivalent group design with pretest and posstets. The population of this research was 59 students and sample were 40 students of two classes were experimental class and control class in second graders of SMPN 30 Muaro Jambi. The result of the data was analysis showed that the mean score of pretest in experimental and control class were 9.30 and 7.47 while the mean score of posstest in experimental and control class were 13.65 and 10.05. Moreover, the result of independent sample test of posttest score in experimental and control class showed that the result of Sig.(2-tailed) was $0.00 < 0.05$. It means that alternative hypothesis (H_a) was accepted. It can be concluded that the students second graders of SMPN 30 Muaro Jambi have better achievement in their speaking skill by using mind mapping.

Second, research about “The Use of Mind Mapping Strategy to Improve Students’ Speaking Ability” was done by Asrifal Mirza (2016), who was a student from Islamic State University of Ar-Raniry Darussalam, *Banda Aceh*. The research was conducted at MAS Darul Ihsan, the sample of this study was class IA and IB. To obtain the data, the

research applied quasi experimental research. The research gave pre-test and post-test, based on the obtained data by using T-test and degree of freedom 48 at significant level of $\alpha=0.05$ showed that the gained score was 6.23. As T-test was higher than T-table $6.23 > 1.68$. H_0 of this research was accepted. Moreover, the interview was made available to the six selected participant from experiment class. The interview revealed that students perceive mind mapping strategy helps them to generate idea in speaking. Overall findings, mind mapping strategy improve students speaking ability. Finally, the research concludes that mind mapping strategy is one of strategies which can be used in order to improve the students' speaking ability.

CHAPTER III

RESEARCH METHODOLOGY

A. Research Method and Design

In conducting the research, Pre-Experimental method and one group pretest posttest design will be used. The method and design refer to Sugiyono's (2014: 75) as follows.

$O_1 \times O_2$

Notes:

O1 : Pretest on speaking descriptive before giving treatment.

O2 : Posttest on speaking descriptive after giving treatment.

X : Treatment (using Mind Mapping technique)

At the beginning of the research, the sample is given pretest to know their speaking ability to describe something. O₁ is used as a symbol of pretest result. Next, the students as the sample are given treatment using mind mapping technique (X) in the teaching learning process. It is conducted four times. At the end of teaching learning process, posttest is given to find out the effect of mind mapping technique on students' ability to describe something (things, places or people). The symbol of O₂ is used as the posttest result.

B. Population and Sample

The population of the research is the tenth grade students of senior high school in Riyadul Zannah. There are four classes and each class consists of 38 students, so the total numbers is 158. In conducting the research, the writer uses purposive sampling technique with one class taken as sample. It is 10-B.

C. Research Instrument

Speaking test is used as the instrument to collect the data. It is to know the effect of mind mapping technique on students' ability to describe something (things, places or people).

In assessing students' speaking ability, the rating scale is used. There are six components in assessing oral test: pronunciation, fluency, vocabulary, grammar, comprehension, and task. Meanwhile, in this research, there are five components which are chosen to asses students' speaking ability: pronunciation, fluency, vocabulary, grammar, and comprehension. The scoring rubric for those components are described on the oral proficiency scoring catagories of speaking skill that is stayed by Brown (2007: 352), as follows.

The Scoring Categories of Speaking Skill

Pronunciation

Point	Description
1	Errors in pronunciation are frequent but can be understood.

2	Accent, though often are quite faulty, is intelligible.
3	Errors never interfere with understanding, accent maybe obviously foreign.
4	Errors in pronunciation are quite rare.
5	Equivalent to and fully accepted by educated native speaker.

Fluency

Point	Description
1	(No specific fluency description. Refer to other four language areas for implied level of fluency.)
2	Can handle with confidence but not with facility most social situation, including introductions and casual conversations about current events, as well as work, family, and autobiographical information.
3	Can discuss particular interest of competence with reasonable ease. Rarely has to grope for words.
4	Able to use the language fluently on all levels normally pertinent to professional needs. Can participate in any conversation within the range of this experience with a high degree of fluency.
5	Has complete fluency in the language such that his speech is fully accepted by educated native speakers.

Vocabulary

Point	Description
1	Speaking vocabulary is adequate to express anything but the most elementary needs.
2	Has speaking vocabulary sufficient to express himself simply with some circumlocutions.
3	Vocabulary is broad enough.
4	Can understand and participate in any conversation with a high degree of precision of vocabulary.
5	Speech on all levels is fully accepted by educated native speakers.

Grammar

Point	Description
1	Errors in grammar are frequent but can be understood by native speaker use of dealing with foreigners attempting to speak his language.
2	Can usually handle elementary construction quite accurately but does not have thorough confidence control of the grammar.
3	Control of grammar is good. Able to speak the language with sufficient structural accuracy to participate efficiently in most formal and informal conversation on

	practical, social and professional topics.
4	Able to use the language accurately on all levels normally pertinent to professional needs. Errors in grammar are quite rare.
5	Equivalent to that of an educated native speaker.

Comprehension

Point	Description
1	Within the scope of his very limited language experience can understand simple questions and statement allowing for slow speech, repetition, or paraphrase.
2	Can get the gist of most conversation of non technical subject.
3	Comprehension is quite complete for a normal rate of speech.
4	Can understand any conversation within the range of his experience.
5	Equivalent to that of an education native speaker.

D. Data Collection Technique

There are some steps in doing this research. First, pretest is given to the sample in order to know their speaking ability about describing something (things, places or people). Second, four-times treatment is given to the sample by applying Mind Mapping technique. Third, after the treatment is done, posttest is given to measure students' speaking ability and to find out the effect of mind mapping technique on students' ability to describe something (things, places or people).

E. Data Analysis

To analyze the result after the treatment, t-test is used to calculate it. It is used to analyze the data of pre-test and post-test. The following formulas are taken from Supardi (2013: 325). The steps are shown below.

1. Calculating Gain (d)

$$d = [y - x]$$

Y = the post-test result of one student

X = the pre-test result of one student

2. Calculating Mean of gain (M_d)

$$M_d = \frac{\Sigma d}{n}$$

M_d = Mean of gain

Σ_d = Sum of gain

n = total of sample

3. Calculating t-test

$$t = \frac{M_d}{\sqrt{\frac{\Sigma x_d^2}{n(n-1)}}}$$

t = t-test

M_d = Mean of gain

Σ_{x_d} = Deviation of gain score (x_d = d₁ - M_d)

Σ_{x_d}² = Quadrate deviation of gain score

n = total of sample

4. Testing the Hypothesis

The degree of freedom formula is taken from Arikunto (2002: 350).

$$df = N - 1$$

Df = Degree of freedom

N = Number of students

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

A. Research Finding

The research was conducted to the tenth grade students of *Riyadul Zannah*. It was strated from April 10th – April 26th 2019. There was one class taken as sample that consisted of 21 students. Purposive sampling is used in order to take population as the sample because this strategy is appopriate to be applied in this research. Moreover, this strategy chosen because there was only one group in this research, that is chosen as the experimental group. The instrument that is used to collect the data is speaking test describing something (things, place or people). The result of pre-test and post-test were counted by t-test formula to find out the effect of Mind Mapping techniques on students' speaking ability.

1. The Result of Pre-test and Post-test Scores

In this research, the tests were given to the students twice: before the treatment (pre-test) and after the treatments (post-test). The following tables are the pre-test and post-test scores of students' speaking ability.

2. Calculating Frequency Distribution of Pre-Test

From the result of pre-test, It is shown that the highest pre-test score is 80 and the lowest score is 48. The scores are presented in the table of frequency distribution and histogram graph.

Table 4.1

Frequency Distribution of Pre-Test Score

No.	Interval Class	Class Boundary	Midpoint	F _{absolute}	F _{relative} (%)
1	48 - 52	47,5 - 52,5	50	6	28.5%
2	53 - 57	52,5 - 57,5	55	5	23.8%
3	58 - 62	57,5 - 62,5	60	2	9.5%
4	63 - 67	62,5 - 67,5	65	1	4.8%
5	68 - 72	67.5 - 72,5	70	5	23.8%
6	73 - 77	72,5 - 77,5	75	1	4.8%
7	78 - 82	77,5 - 82.5	80	1	4.8%
	Total			N=21	100%

The description of table 4.2 is as follows: class interval is the students' score of speaking test, class boundary is the limitation of students' speaking test score, midpoint is the middle of the range score, f_{absolute} is frequency of variable X, F_{relative} is number percentage and N is number of respondents.

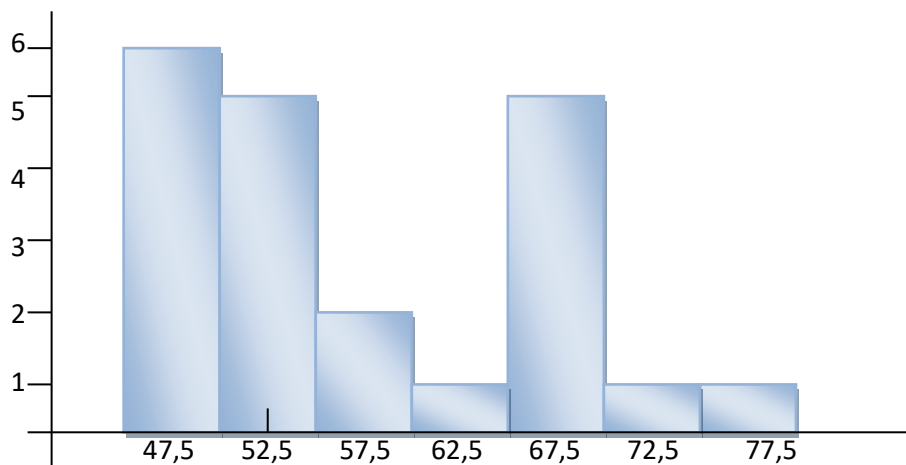
The frequency distribution in table 4.2 shows that the score of students' pre-test in range of score 48 – 52 with the number of students' is six and percentage is 28,5%; range score 53 – 57 with the number of students' is five and percentage is 23,8%; range score 58 – 62 with the number of students is two and percentage is 9,5%; range score 63 – 67 with the number of students is one and percentage is 4,8%; range score 78 – 72 with the number of students is five and percentage is 23,8%; range score 73 – 77 with the number of

students one and percentage is 4,3%; and range score 78 – 82 with the number of student one and percentage 4,8%.

The histogram and polygon graph of pre-test score can be seen in figure 4.1

Figure 4.1

The histogram of pre-test score



From the histogram and polygon graph above the data from the table 4.2 can be seen clearer and easier. It can be seen there are different heights of each bars in the graph while each bar presents frequency of students. The highest bar shows the most of students score in that range. The lowest bar shows the least of students score in that range.

3. Calculating Frequency of Post-Test Score

The highest score of pre-test is 80 and the lowest score is 48. After giving four treatments, the highest score of post-test is 90 and the lowest is 55. It shows that the result score of post-test is higher than that of pre-test score.

The frequency distribution score of post-test is shown in the table 4.3

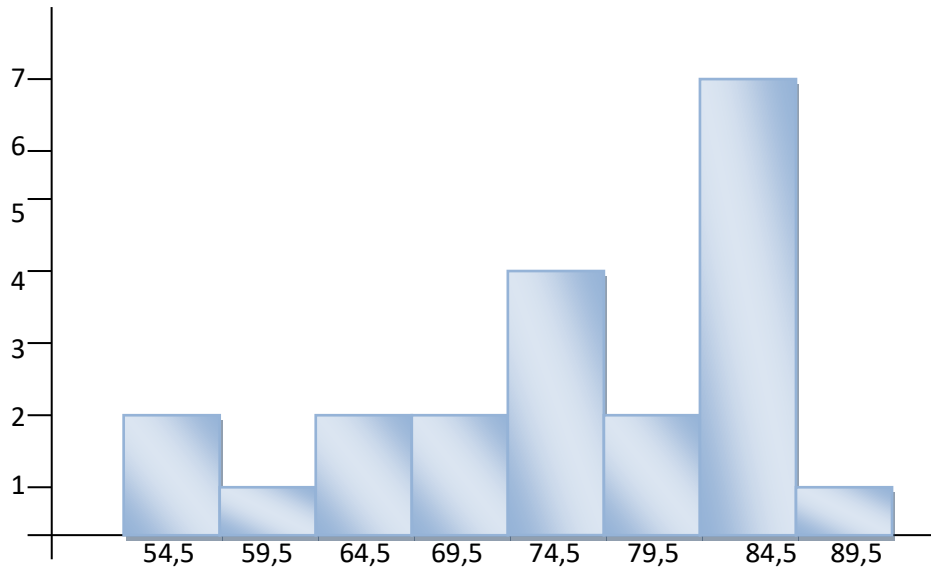
Table 4.2

Frequency Distribution of Post-Test Score

No.	Interval Class	Class Boundary	Midpoint	F _{absolute}	F _{relative} (%)
1	55 - 59	54,5 - 59,5	57	2	9.5%
2	60 - 64	59,5 - 64,5	62	1	4.8%
3	65 - 69	64,5 - 69,5	67	2	9.5%
4	70 - 74	69,5 - 74,5	72	2	9.5%
5	75 - 79	74,5 - 79,5	77	4	19.0%
6	80 - 84	79,5 - 84,5	82	2	9.5%
7	85 - 89	84,5 - 89,5	87	7	33.4%
8	90 - 94	89,5 - 94,5	92	1	4.8%
Total				21	100%

The post-test score of students' vocabulary knowledge is in range of 55 – 59 has 9,5% with two students. Range 60 – 64 has 4,8% with one students. Range 65 – 69 has 9,5% with two students. Range 70 – 74 has 9,5% with two students. Range 75 – 79 has 19,0% with four students. Next, range 80 – 84 has 9,5% with two students, and the range of 85 – 89 has 33,4% with seven students. Last, 90-94 has 4,8% with one students. The histogram and polygon graph of post-test score can be in figure 4.2

Figure 4.2
The histogram of post-test score



Based on the graph above, the highest bar shows most of the students score in that range with the frequency is 7 students. The lowest bar shows the least of students' score in that range with only 1 student who got it.

4. Calculating the Mean of Difference

The mean can be found by dividing total scores of difference with the total number of students. Here is the calculation.

$$M_d = \frac{\Sigma d}{n}$$

$$= \frac{324}{21}$$

$$= 15.42$$

5. Calculating Deviation of Difference

$$X_d = d - M_d$$

$$= 25 - 15.42$$

$$= 9,58$$

6. Calculating the t-test

After finding the mean and deviation, the writer needs to calculate the t-test to find out t-test value. The calculate is as follows.

$$t = \frac{M_d}{\sqrt{\frac{\sum x_d^2}{n(n-1)}}}$$

$$t = \frac{15,423}{\sqrt{\frac{1859,144}{21(21-1)}}}$$

$$t = \frac{15,423}{\sqrt{\frac{1859,144}{420}}}$$

$$t = \frac{15,423}{\sqrt{4,427}}$$

$$t = \frac{15,423}{2,104}$$

$$t = 7.33$$

7. Finding Degree of Freedom and Testing Hypothesis

Testing the hypothesis is done by first of all finding out the value of degree of freedom (df). The degree of freedom is calculated after the t- test value is found out. It is intended to gain the value of t-table. The calculation is as follows:

$$\begin{aligned}d.f &= n - 1 \\ &= 21 - 1 \\ &= 20\end{aligned}$$

The result shows that the degree of freedom is 20. Based on t-table, the degree of freedom 20 at significant level 0.05 is 2.09.

Based on the calculation, it is found that t-calculated is 7,33. The value of degree of freedom ($d.f$) is 20, and the list of t-table value at significant level 0.05 is 2.09. The result of the test can be shown as $7,33 > 2.09$. It means that the value of t-table is lower than the value of t-calculated. If t-calculated is higher than t-table, it means that there is an effect of mind mapping technique on students' speaking ability. Therefore, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected.

B. Discussion

In conducting the research, speaking test was given to the students. The test was given twice: before the treatments (pre-test) and after the treatments (post-test). The pre-test was given to find out the basic speaking ability of the students. First, the students were given pre-test. Then the treatment was given to the students four times by using Mind Mapping technique. In those treatments there were some steps done by the teacher. First, the students speak in front of the class and describe about something (animals, people, things). Second, the students make mind mapping before describe about something (animals, people, things) and speak in front of the class. Third, students should by now have begun to get the idea (even if they have not done a word mind mapping before this), but just to be sure, they selected words for one of the things, such as the animals. After that, the teacher made a conclusion about the lesson. After applying four treatments, post-test was given to the students to measure their speaking knowledge.

The writer took the data from the pre-test and post-test score. The data were calculated and focused on students' speaking ability in describing something (animals, things, people). After the data were collected, the writer calculated the data by using t-test formula. Firstly, the writer calculated the difference of pre-test and post-test score. Then, she counted the mean and the deviation of difference. After finding the mean and deviation of difference, he calculated t-test to find out t-test value. In addition, he also calculated the degree of freedom to find out t-table value and stated the hypothesis.

From the calculation, it was found that the mean of difference is 15,42. Then, the t-test value the writer got is 7,33. The value of t-table on df 20 with the level of significance 5% is 2,09. The result of the test can be described as $7.33 > 2.09$ (H_a) is accepted and null hypothesis (H_o) is rejected. It means that there is an effect of Mind Mapping on students' speaking ability. It can be seen from the result of post-test score which is higher than pre-test score. All in all, it can be concluded that the use of Mind Mapping technique affects on students' speaking ability.

The result of the research has a similiary with the research from Mirza (2016) entitled "The use of mind mpping strategy to improve students' speaking ability". The research was conducted at MAS Darul Ihsan, the sample of this study was class IA and IB. To obtain the data, the research applied quasi experimental research. The research gave pre-test and post-test, based on the obtained data by using T-test nad degree of freedom 48 at significant level of $\alpha=0.05$ showed that the gained score was 6.23. As T-test was higher that T-table $6.23 > 1.68$. H_a of this reseacrh was accepted. The result of the students has shown that Mind Mapping technique effective in order to improve students' speaking ability.

The second the research has a similiary from Riska Susilawati (2017) entitled, "The Effect of Using Mind Mapping Technique Tow Ards Students' Speaking Skill at the Second Grades of SMPN 30 Muaro Jambi". experimental class and control class in second graders of SMPN 30 Muaro Jambi. The result of the data was analysis showed that the mean score of pretest in experimental and

control class were 9.30 and 7.47 while the mean score of posttest in experimental and control class were 13.65 and 10.05. Moreover, the result of independent sample test of posttest score in experimental and control class showed that the result of Sig.(2-tailed) was $0.00 < 0.05$. It means that alternative hypothesis (H_a) was accepted.

Mind mapping is one of good techniques that can be implemented in the teaching learning process for speaking class. Since the key words were important in making a mind map, the students were trained to find some words which represented an idea and then put in each branch of the mind map. It was stated in one of the steps in making a mind map proposed by DePotter and Hernacki (2004). They stated “write the keywords or phrases in every branch and then develop them with details”. It is also supported in one of Buzan’s steps in Davies (2010) which said “select key words and print using upper or lower case letters”. The reseacher also invited the students to understand how to understand the meaning in a word by teaching the morphological formof the word in a charts/map.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

After conducting the research and calculating the data, the writer concludes that Mind Mapping as guidance affects students' speaking ability. The research is conducted with 21 participants. After giving the treatments, the data shows that the highest score of student's speaking test is 90 and the lowest score is 55. Meanwhile, before giving the treatments the highest score is 80 and the lowest score is 48. After calculating the data, it is found that the t-test value is higher than t-table value. The t-test value is 7.33 with the freedom of degree is 20. The t-table at significant level 0.05 is 2.09. Referring the data, the value of t-calculated hypothesis (*Ha*) is accepted, while the null hypothesis (*Ho*) is rejected. The result of the research shows that there is an effect of Mind Mapping on students' speaking ability.

The use of Mind Mapping as a guidance in speaking class creates the atmosphere in the classroom more enjoyable and fun, so the students were interested in speaking. Moreover, this strategy is quite good to make them more innovative. Besides, this strategy can help students to generate ideas in speaking. All in all, Mind Mapping affects students' speaking ability.

B. Suggestion

Based on the research finding, the use of Mind Mapping as a guidance gives positive effects on students' speaking ability. Therefore, the writer would like to provide some suggestions for English teacher and the next researcher. First, it is suggested for English teacher who wants to apply procedures in applying this strategy. The teacher also need to choose the interesting topic in order to make students interested to speak. The main part of this strategy is to make learning process interesting.

Other suggestion is also offered to the next researcher who wants to conduct the same topic. It is important to prepare mental, knowledge, and material. In conclusion, Mind Mapping can be applied well to give a positive effect on students' speaking ability, because it is a great and interesting strategy where the students can be easier to develop the idea of the topic for speaking.

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