CHAPTER II

REVIEW OF THE RELATED LITERATURE

This chapter discusses the theories related to the use of mind mapping technique in improving students' English writing and some previous studies. It covers the concept of writing, the meaning of mind mapping, how to make mind mapping and the advantages of using mind mapping technique.

A. Mind Mapping

1. Definition of Mind Mapping

A mind map is a diagram used to represent words, ideas, tasks, or other items linked to and arranged around a central key word or idea.¹ Mind maps are used to generate, visualize, structure, and classify ideas, and as an aid to studying and organizing information, solving problems, making decisions, and writing. The elements of given mind map are arranged naturally according to the importance of the concepts, and are classified into groupings, branches, or areas, with the goal of representing semantic or other connections between portions of information. Mind maps may also aid recall of existing memories.

Mind Maps were popularized by author and consultant, Tony Buzan. He used a two-dimensional structure, instead of the list format conventionally used to take notes. As Tony Buzan stated mind mapping is a graphic

¹ Tony Buzan and Bary Buzan, The Mind Map Book, (London: BBC Worldwide Limited, 2000),

representation of ideas (usually generated via a brainstorming session). It shows the ideas which are generated around a central theme and how they are interlinked. It is a tool primarily used for stimulating thought. He realized that the education system primarily focused on the left and brain strength, which include the use of "language, logic, numbers, sequence, looks at detail, linier, symbolic representation and judgmental characteristics. Mind Mapping is a useful technique that helps you learn more effectively, improves the way that you record information, and supports and enhances creative problem solving.

Mind mapping involves writing down a central idea and thinking up new and related ideas which radiate out from the centre. By focusing on key ideas written down in your own words, and then looking for branches out and connections between the ideas, you are mapping knowledge in a manner which will help you understand and remember new information. To use Mind Maps effectively, make sure you print your words, use different colors to add visual impact, and incorporate symbols and images to further spur creative thinking. Having an organized display of information from the outset of the writing process may help some students, as it is more easily converted into a draft, whereas in brainstorming, the random recording of ideas might lead to problems with the structure of students' texts. As Alamsyah explained that Mind maps work well as their visual design enables students to see the relationship between ideas, and encourages them to group certain ideas together as they proceed.² Mind maps work especially well when created in groups, since the discussion this engenders aids the production of ideas, and makes the task livelier and more enjoyable.

Mind maps work well as visual design and enable students to see the relationship between ideas, and encourage them to group certain ideas together as they proceed. Buzan claims that a mind map is a powerful graphic technique which provides a universal key to unlock the potential of the brain. It harnesses the full range of cortical skills – word, image, number, logic, rhythm, color and spatial awareness – in a single, uniquely powerful manner.³ In so doing, it gives you the freedom to roam the infinite expanses of your brain. The Mind Map can be applied to every aspect of life where improved learning and clearer thinking will enhance human performance. The brain of human works to process information through observation, reading or hearing about something organized as functional relationship between concept and keyword. It is not partially separated from each other and is not in narrative form complete sentences.

The mind mapping strategy can be used to explore almost any topics in writing and also used in every kind of writing such as: narrative, descriptive, recount, persuasive, argumentative, essay etc. Students can improve their ideas and lend themselves to discussing ideas in groups.

² Alamsyah, Maurizal. (2009). KiatJituMeningkatkanPrestasiDengan Mind Mapping.Yogyakarta :MitraPelajar

³ Buzan, Tony. 2006. *Mind Map Untuk Meningkatkan Kreativitas*. Jakarta: Gramedia Pustaka Utama

When you use Mind Maps on a daily basis, you will find that your life becomes more productive, fulfilled, and successful on every level. There are no limits to the number of thoughts, ideas and connections that your brain can make, which means that there are no limits to the different ways you can use Mind Maps to help you.

Buzan explains that, there are some steps to make min map as follow:⁴

a) Start in the center of a blank page turned sideways.

Because starting in the center gives your Brain freedom to spread out in all directions and to express it more freely and naturally.

b) Use an image or picture for your central idea.

Because an image is worth a thousand words and helps you use your Imagination. A central image is more interesting, keeps you focused, helps you concentrate, and gives your Brain more of a idea.

c) Use colors throughout.

Because colors are as exciting to your Brain as are images. Color adds extra vibrancy and life to your Mind Map, adds tremendous energy to your Creative Thinking, and is fun!

d) Connect your main branches to the central image and connect your second- and third-level branches to the first and second levels, etc.
Because your Brain works by association. It likes to link two (or three,

⁴ Buzan, Tony. 2006. *Mind Map Untuk Meningkatkan Kreativitas*. Jakarta: Gramedia Pustaka Utama P. 36

or four) things together. If you connect the branches, you will understand and remember a lot more easily.

- e) Make your branches curved rather than straight-lined.Because having nothing but straight lines are boring to your Brain.
- f) Use one key word per line.

Single key words give your Mind Map more power and flexibility.

g) Use images throughout.

Each image, like the central image, is also worth a thousand words.

2. Concept of Mind Mapping

The mind mapping strategy is one of the teachers' strategies in teaching. Not only Mind Maps show facts, but also show the overall structure of a subject and the relative importance of individual parts of it. It helps students to associate ideas, think creatively, and make connections that might not otherwise make.⁵ The mind map strategy can be used to explore almost any topic, though discursive essays and narrative work particularly well as they front students' ideas and lend them to discussing ideas in groups.

Mind map is one of technique in note taking method. The mind map uses the full range of left and right human cortical skills, balances the brain, taps into the alleged "99% of your unused mental potential", as well as intuition

⁵ Buzan, Tony. 2006. Mind Map Untuk Meningkatkan Kreativitas. Jakarta: Gramedia Pustaka Utama

(which he calls "superlogic").⁶ It means that mind mapping balances creativity and logic of human brain.

Based on the definition above, it can be concluded that a mind-map is a creative way to represent idea or information through diagram. Mind mapping is a method to optimize learning capacities and understanding of how the elements of complex structures are connected. There are four essential characteristics of mind mapping:⁷

- a) The subject of attention is crystallized on a central image.
- b) The main theme of the subject radiate from the central image as branches.
- c) Branches comprise a key image or key word printed on an associated line. Topic of lesser are also represented as branches attached to higher level branches.
- d) The branches form is a connected modal structure.

Mind map may be enhanced and enriched through color, pictures, codes, and dimension to add interest, beauty, and individuality. This is used to help in increasing creativity, memory and specifically the recall of information. There are several principles in making mind mapping, as states below:⁸

a) Use emphasis

⁶ Buzan, Tony and Buzan, Barry. (1994). The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential. USA: Penguin Book.

⁷ Tony Buzan and Bary Buzan, The Mind Map Book, (London: BBC Worldwide Limited, 2000), p.59. ⁸ Ibid pp. 87-88

In making mind map emphasis is important, students may use picture or certain color to make idea easier to remember, emphasis will allow mind map maker to identify which idea is should come first and which should come later. Emphasis can be done by using different color for each word, image or appropriate spacing between circles. There are no strict rules for emphasis in mind map. Mind map maker may use any method to show emphasis in their mind map.

b) Use association

The association between ideas is important in mind map. Connectivity (association) between ideas will make students easier when apply mind map in writing, reading or other skills. In mind map connectivity is usually indicated by arrows that connect circles that contain idea in it. The direction of arrows also indicated the flow of idea, so the students will know where to start to writing and where to end it.

c) Be clear

A mind map should be clear; it is to avoid confusion when mind map is done. It is important for teacher to make sure that each idea is on its place and arranged based on its position. The arrangement of word (idea) is important, miss placing word will ruin the concept of idea that has been created or stored in students' head. Put one word in one circle also help students' to maintain their trace of idea. d) Develop a personal style

In summary, mind mapping can be maximized in using through colors, pictures, and connections. These terms will be more useful when the students also use their creativity in the process. It is undeniable that creativity lets the students to think free in mapping their minds about the materials. Hence, the students can comprehend the materials much easier.

Use mind map also need some procedure in order to make it more effective and understandable. Complete procedure of the employment of mind mapping in the classroom by Buzan is as follow⁹:

- a) Describe or demonstrate the process to the students;
- b) Divide the students into groups which consist of four students;
- c) Present the central concept/material that the students must graph;
- d) Ask the groups to brainstorm, writing a list of terms and phrases that express core concepts and supporting details;
- e) Ask the students to start sketching out the diagram;
- f) Deliver any necessary suggestions to the groups while they are working;
- g) Ask them to developed the main concept by adding some new ideas and relationships as they construct the map

⁹ Buzan, Tony. 1989. Use Both Sides of Your Brain. New York: Penguin Books.

3. The Purposes of Mind Mapping

Generally, the purpose of mind mapping is to associate between ideas, topics or things.¹⁰ Besides, there are several specific purposes of mind mapping below:¹¹

a) Mind mapping activates whole brain.

b) Mind mapping fixes the mental tangled.

- c) Mind mapping lets the students focus on main explanation.
- d) Mind mapping helps to show the relationship between the separated information parts.
- e) Mind mapping gives clear description wholly and specifically.
- f) Mind mapping lets the students to group the concept and compare it.

Based on the explanation above, mind mapping is hoped to help the students in getting better learning process. By activating the whole brain activities, it can be concluded that mind mapping is expected to make the students easier in comprehending the text or written information.

4. The kind of Mind Mapping

To apply mind mapping in writing, there are some steps. Firstly, the students have to write a key word in the center circle on paper. Then, they have to make a word or phrase which has connection with a key word in the circle

¹⁰ Martin Davies, Concept Mapping, Mind Mapping and Argument Mapping: What are The

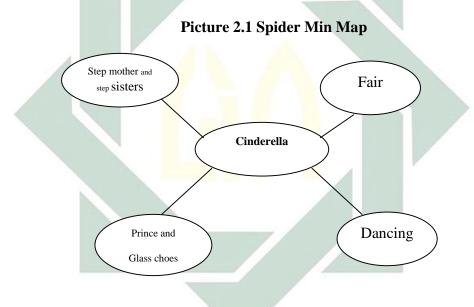
Differences and Do They Matter?(Springer Science+Business Media B.V, 2010), p.11.

¹¹ Tony Buzan, Buku Pintar Mind Map, terj. Susi Purwoko (Jakarta: Gramedia Pustaka Utama, 2013), p.6.

and puts it in the smaller circle. There are two kinds of mind mapping. They are spider word mapping and hierarchy.

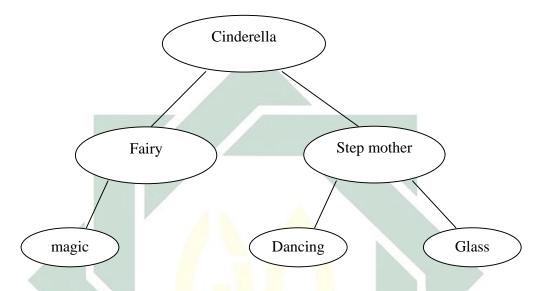
a) Spider Word Mapping

Spider maps are used to illustrate concepts that are in some way all related to one central idea. The layout follows diagonal lines, giving the overall appearance of a spider with some legs sticking out. It is useful for dissecting the elements of a major topic and listing the main details in an easy to understand format.



b) Hierarchy

A hierarchy mind map is generally used to help people deconstruct the elements of an idea. The apex of the hierarchy mind map contains the most basic idea and each subsequent level may be filled in with information about subconcepts and other aspects. Hierarchy mind map are usually most popularly used to help students analyze a story, its characters, sub-plots and symbolism. Although this method can be a bit basic, it is useful in initiating discussions and hierarchy mind map comparisons among groups of students.



Picture 2.2 Hierarchy Mind Map

a. How to Make Mind Mapping With The Students

- 1) Choosing a topic, traditionally, the students are given a topic by teacher. However, with certain classes, students may prefer to nominate the topic themselves. This can lead to greater interest in the task on the part of the student, as well as, perhaps, greater knowledge of the topic under study. The mind map strategy can be used to explore almost any topic, through discursive essay and narrative work. It gives chances for students to share their ideas and let themselves to discuss ideas in groups.
- 2) Note making, Once the topic has been introduced, encourage the students to close their eyes and think about it for a minute or two, in

silence. They then have two minutes in which to note down their ideas. If they do not know a word in English, they can write it in native language at this stage, as dictionaries or too much teacher intervention tend to halt and inhibit the creative flow. Then, working in groups, they can compare and discuss their ideas, perhaps adding to their mind maps as they go. This stage also provides the opportunity for peer teaching, as other students may be available to provide the English word for the idea that was noted down in native language.

- **3)** Feedback, the next stage, in which the teacher makes a collective mind map on the board, is optional, but is useful for students who are new to the idea of mind maps, or of weak classes. It is also in this feedback stage that any outstanding language problems can be reduced. As the teacher elicits students' ideas, and reformulates expressions or corrects, students will learn how to express their ideas in English. Such personalization is said to aid vocabulary learning. The map is fluid and changeable, and new connections or subgroups can be made, or branches added, as the students make suggestions. The end result should be an organized display of information, showing the central topic, and a number of subtopics and further points that stem from it.
- 4) Organizing mind maps, in the next stage the students organize their mind map into a linier format to decide the best way in which to present their points. They should first think about the overall structure,

i.e. the order in which to convey the information, and then focus on the precise function each paragraph will have in their final text, as this helps to clarify their writing. This can be done in groups or as a class with the teacher leading the discussion. However it is carried out, it is important to provide a context and audience.

- 5) Writing, students should then begin to write their compositions, working in pairs if they wish. After two paragraphs, they should exchange their compositions, so they become readers of each other's work. This allows for feedback, and possible re writing. Once they have finished, they should again exchange their texts. This gives their texts a communicative purpose, as well as developing an awareness of the fact that a writer is always producing something to be read by someone else, rather than for display of writing alone.
- 6) Continuation, Once students are familiar with the idea of making mind maps, they can be encouraged to use this for further writing activities. It is a useful technique and often improves the clarity and organization of student texts.

5. Advantages of Mind Mapping

Mind mapping helps students and teachers in the learning process, because it can stimulate Left Brain and Right Brain synergistically. We need to know the benefit of using mind mapping likes an interesting shape, enhance creativity, imagination, etc. Furthermore, Olivia (2008:8) describes the advantages of mid mapping for students as follows:

- a) Helps students to concentrate in memorizing information.
- b) Improve students' visual intelligence and observation ability.
- c) Accustoms students to get critical review and good communication ability.
- d) Improve students' creativity.
- e) Summarizes the lesson briefly.
- f) Limits the time in making note appropriately.
- g) Guides the students to arrange their thought, hobbies and schedules.
- h) Makes students enjoy in learning process.
- i)Guides the rights and left brain work synergistically.

The benefits of mind mapping are flexible, it means that brain be able to move fluently to all of direction.¹² The students can focus on learning. They also can understand the material and min mapping attract to learn. There are more advantages of mind map:

a) Generate more ideas: mind mapping allows you to start quickly and generate more ideas in less time. You don't have to edit order your thoughts; just start a creative sketch in the center of your page and begin and begin printing words on lines emanating from the center as you think of them. The free-ranging format- adding words to one branch one moment, then skipping over to another branch the next-increases your chances of generating new ideas.

¹² Buzan, T. & Buzan, B. 2006, The Mind Map Book, BBC Worldwide Limited, London. P. 36

- b) Make new connections: Mind mapping allows you to represent a wonderful amount of information in a relatively small space. You can have all your notes for a topic on one piece of paper, with your ideas arranged in way that encourages you to see relations between them. Mind mapping helps you see connections among things that may be separate.
- c) Improve your memory: Remembering your material becomes much easier, colors, images and key words – three central ingredients of mind maps – are much more engaging to the brain than sentences. A well-made mind map is almost impossible to forget.
- d) Use your whole brain: half a mind is a terrible thing to waste. Mind mapping helps you strengthen your analytical left brain by training you to look for the most essential key words. At the same time, it stimulates the right brain by encouraging you to use colors and images.¹³

6. Criteria of Good Mind Mapping Technique

Practically, teachers should understand the concept of mind map to make their mind mapping easly understood by their students. Good criteria of mind mapping technique can be seen from Buzan's principle and procedure of mind mapping technique. As mentioned in the previous part of this chapter,

¹³ Buzan, Tony and Buzan, Barry. (1994). The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential. USA: Penguin Book.

there are some principles and procedures that must be followed by the teachers in order to make their mind mapping technique become successful. The principles are, teachers should use emphasize and use assosiation, teachers also should be clear in ordering idea and teachers also need to developing personal style. Meanwhile, there are some procedure that must be followed by the teachers to make their mind mapping technique become good, the procedure are, teacher should describe or demonstrate the process of making mind map to the students, teacher also need to divide the students into groups which consist of three or more students, teacher must resent the central concept/material that the students must graph, to start makeing mind map teacher may ask the groups to brainstorm, writing a list of terms and phrases that express core concepts and supporting details, then teacher ask the students to start sketching out the diagram, as feedback and reinforcement teacher have to deliver any necessary suggestions to the groups while they are working and the last teacher can ask students to developed the main concept by adding some new ideas and relationships as they construct the map.

B. Perception and Understanding

1. Definition of Perception

Perception has very various definitions since there are many ideas come from experts. Perception is the interpretation of focusing on particular objects.¹⁴ Perception is the interpretation of stimulus accepted by organisms or individuals' sensory devices, so it becomes a meaning that creates some

¹⁴ Sarwono, S. 2010. Pengantar Psikologi Umum, Jakarta: PT Grafindo Persada. P. 86

integrated activity among them. The respondent as the impact from perception can be taken by individual in various ways and it depends on the individual itself.

There are three elements which give the important role in perception, and the elements itself are divided into 3 elements.¹⁵

a) Object that is perceived

An object will cause stimulus and it will be received by human's sensory device.

- b) Receptor/Human sense/Sensory Device Receptor is tool to receive the stimulus.
- c) Attention

To do every kinds of perception, it must be needed an attention. Because of the first step to do perception, an individual has to focus or concentrate on that particular object which may be different with other individual's concentration.

Those three things are the elements which take important role in perception.

The coming of perception does not happen directly without any process, but it has very unique process. The first process called physical process where the stimuli are received by receptors. The second process physiology process where the receptors continue the stimulus to brain. And

¹⁵ Walgito, B. 2010. Pengantar Psikologi Umum, Jakarta: Penerbit Andi. P. 101

the last one is psychological process where the brain as the core of consciousness interprets what the individual sees, hears, feel, etc.¹⁶

2. Teachers' Perception

Teachers' perception is defined by Fisbein and Ajzen as a learned predisposition to respond to an object or class of objects in a consistently favorable or unfavorable way.¹⁷ Teachers' perception is influenced by culture, personal beliefs and experience.¹⁸ Numerous researchers point out that teachers' attitudes or beliefs is one of the several important human factors which have significant contribution for choosing certain teaching media.¹⁹ Teachers' perception is considered important variables in this research and it forms part of teachers' presage variables. Klazky's opinion on teachers' perception, as cited in Woolfolk, he defined teachers' perception as the processes of determining the meaning of what are sensed.²⁰ Perception occurs when teachers interpret a given meaning to stimuli in their classroom environment or in the students' classroom behavior. Perception is important in a teaching and learning situation as it reinforces teachers' decision- making on how to handle classroom situations. Several past research have shown that thinking (perception) plays an important part in teaching.

¹⁶ Walgito, B. 2010. Pengantar Psikologi Umum, Jakarta: Penerbit Andi. P 102

¹⁷ Ajzen, I., & Fishbein, M. (1975). *A Bayesian analysis of attribution processes*. Psychological Bulletin, 82(2), 261.

¹⁸ Miller, E. (2009). The effect of training in gifted education on elementary classroom teachers' theory-based reasoning about the concept of giftedness. Journal for the Education of the Gifted, 33(1), 65-105.

¹⁹ Arkin, E.E. (2003). *Teachers' attitudes towards computer technology use in vocabulary instruction*. Retrieved from http://www.thesis.bilkent.edu.tr/0002298.pdf

²⁰ Woolfolk, A. E. 1998. *Educational psychology*. 7th ed. Massachusetts: Allyn and Bacon.

3. Teachers' undertsanding

Understanding (also called intellection) is a psychological process related to an abstract or physical object, such as a person, situation, or message whereby one is able to think about it and use concepts to deal adequately with that object. Understanding is a relation between the knower and an object of understanding. Understanding implies abilities and dispositions with respect to an object of knowledge sufficient to support intelligent behavior.²¹ Teachers' undertsanding in concept of mind map means that teachers' ability in applying concept of mind map (both principle and procedure of teaching by using mind map) during teaching and learning process. Teachers' understanding of mind mapping can be measured by the extend of their ability to utilize the principke and procedure of teaching by using mind map.

F. Review of the Previous Studies

The first thesis belongs to Muzdalifah, entitled *The Use of Mind Mapping to Improve the Abilities in Writing Descriptive Texts of the 10th Grade Students.*²² The research problem is "Does the use of mind mapping improve the students' ability to write a descriptive text?". She used experimental research and used mind mapping as an alternative technique to write descriptive text. In her study, she explained how to use mind mapping to teach writing.

The second thesis belongs to Novi, entitled Using Mind Mapping in Teaching Speaking Skills at RSBI Class SMA Negeri 1 Sidoarjo. In her thesis to

²¹ Bereiter, Carl. (2002). Education and mind in the Knowledge Age. Erlbaum

²² Muzdalifah. The Use of Mind Mapping to Improve The Abilities in Writing Descriptive Texts of The 10th Grade Students.

gain an effective teaching speaking using mind mapping, student may get certain references or handout from the teacher related to the material, try to more pro active in getting chances to have a consultation with the teacher related to material discussed, more frequent in grammar acquisition, may suggest to more pro active in taking notes to the thing which is necessary considered and also may have each of way to implement mind mapping in teaching speaking in turn; using whole class – whiteboard as the media and using group work presentation – power point as the media; in order to avoid boredom in learning. Those are intended to enrich their knowledge and linguistic view.

The third thesis belongs to Gabriskha, entitled *The use of Mind Mapping as* A Pre-writing Technique in Teaching English Recount Text at the First Year Students of SMA Negeri 1 Gedangan, Sidoarjo. She formulated the research problems; whether the group taught writing English recount text using mind mapping as a pre-writing technique will gain better score than the group taught using traditional technique and students' motivation towards the implementation of mind mapping as a pre-writing technique. The result of this research is the group taught writing English recount text using mind mapping as a pre-writing technique gained better score than the group taught using traditional technique. Whereas, the result of the questionnaire showed that students in experimental group motivate (based on Sardiman's theory) learning english by using mind mapping as a pre-writing technique.

The fourth thesis belongs to Sumartini, State University of Surabaya entitled Clustering as Prewriting Technique in Teaching Descriptive Text. The research problems are: (1) how does clustering technique use as prewriting technique in teaching writing descriptive text? (2) how is the result of writing descriptive text after using clustering? This study was conducted using descriptive qualitative method at the seventh grade of Junior High School. The data was taken from observing and describing the classroom. The findings of the study revealed that in the 2nd and 3rd observation, students had high improvement of using clustering technique in content, language use, vocabulary, and mechanic. In a short, after using clustering as pre-writing technique, most of the students was motivated and interested to learn writing especially in English. Therefore, the use of clustering can minimize students' difficulties, faced in English writing

The fifth thesis belongs to Sari, State University of Surabaya entitled *Clustering Technique in Teaching Writing at Junior High School*. There are two research questions, (1) how is clustering technique used as prewriting activity to teach narrative text? (2) What is the result of students' composition by using clustering technique? The research focused on clustering used in narrative text to the second grade of junior high school. This research is also descriptive qualitative research. The data was taken from observing and describing the classroom that include teachers' activity, students' composition, and students' activities during the observation. On the 2nd observation it was found out that most students got either good or very good scores in content, organization, and vocabulary. Meanwhile, the result of students got either good or very good scores contents, organization, and also vocabulary. By looking at the result of the students'

composition especially in contents and vocabulary, it shows that the clustering could help them to gather the ideas for writing their composition. Besides, based on results of students' composition in organization, it shows that clustering technique could help students organize their thoughts to write an English narrative composition. The study concluded that the use of clustering could help the students to gather and organize ideas in composing English narrative text.

The sixth thesis belongs to Marliasari, State University of Malang. The title of the study is *Using Clustering Technique to Improve the Senior High School Students' Abilities in Generating Ideas for Writing Analytical Exposition*. This study was aimed at determining the senior high school students' difficulties at SMA Negeri 8 Malang especially on confusion on how to start writing. The research problems were (1) "how can clustering technique improve the students' ability in generating ideas for writing analytical exposition (2) how are the students' responses to the implementation of clustering technique? This study was a classroom action research. The findings of this study show that students' participation was increased, and it was followed by the improvement of the students' performance in English writing. The improvement can be seen in the mean scores of content and organization. In the implementation of the action, the students' mean score on content was 2.27 and increased from 2.20 to 2.63.

The seventh thesis belongs to Pratiwi, State University of Malang, entitled The Implementation of Webbing Concept to Improve Seventh Graders' Performance in Writing Descriptive Text at SMPN 13 Malang. The research problem was how do the students generate and develop their ideas. This research used collaborative action research (CAR) which was conducted into 18 cycles consisting of two meetings in each cycle. The findings of the research show that webbing concept successfully improved the seventh grades' performance in English writing descriptive text especially in terms of content, organization, and language use.

The eighth thesis belongs to Aquariza, entitled Using Mind Mapping In Teaching Speaking Skills at RSBI Class SMA Negeri I Sidoarjo. The subject of the study was the first grade students of RSBI class at SMA Negeri 1 Sidoarjo in 2009. There were three research problems of this study: (1) What are the materials used in the teaching speaking skills using mind mapping at RSBI class, SMA Negeri 1 Sidoarjo? (2) How did the teacher implement mind mapping in teaching speaking skills at RSBI class, SMA Negeri 1 Sidoarjo? And (3) what are the problems of using mind mapping in teaching speaking skills at RSBI class, SMA Negeri 1 Sidoarjo? The research used descriptive qualitative design. The result of the research shows that using mind mapping in teaching speaking was so helpful to regulate students' ideas and stimulates the group presenter to extend the statement using their own words, while praise and congratulation as their materials. It was interesting for the students, because of its simple form and it is relatively easy to be understood. To gain an effective teaching speaking using mind mapping, students got reference or hand out from the teacher related to the material praise and congratulation. While to avoid boredom in learning, teacher has way to implement mind mapping in teaching speaking in turn: using whole class-whiteboard as the media and using group 19 work presentation-power point as media. Those are intended to enrich their knowledge and linguistic view.

The ninth thesis belongs to Khoiriyah, entitled The Effect of Semantic Mapping On students' Reading Comprehension Achievement at MTs KH. M. NOER Kedung Mangu. The research was conducted to investigate the effect of semantic mapping on students' reading comprehension achievement. The writer used experimental method in this study. The result of this study showed that the semantic mapping has a significant effect on the students' reading comprehension achievement. In this study, the experimental group (a group that is given the treatment by using semantic mapping) has a better ability in comprehending the text than the control group (a group that is not given the treatment by using semantic mapping). It can be seen from the mean score and the result of t-test. The result showed that the mean score of experimental group was higher than control group (58.6250 > 42.1250) and their difference was 16.5000. It means that the students in experimental group or students who were taught by using semantic mapping have better score on reading comprehension test than the students in control group or students who were not taught using semantic mapping. So It can be concluded that semantic mapping is effective to be used as a means of increasing reading comprehension for junior high school. In this research, the writer only observed teachers' perception of mind mapping in teaching writing.

Other study was done by Panatda Sirriphanich's study about the improvement of reading comprehension by using mind-mapping as written on his article "Using Mind Mapping Technique to Improve Reading Comprehension Ability of Thai EFL University Students".²³ He conducted the research by using one group pre-post test experimental research design to 35 first year students at Songkhla Rajabhat University, Muang Songkhla who were learning "English for communication and reading skills" as a compulsory subject. He found that mind mapping improved students English reading comprehension as in the post test mean score of students was higher than the pretest mean score at the 0.05 level of significance. Moreover, most students were satisfied with their own reading comprehension ability, and the last, they enjoyed working in group and agreed that mind mapping technique was a useful technique and can be applied to non-English subjects. Findings and implications for further research are discussion. To support his research, there are fifteen students (5 highly successful, 5 who did not show any improvement, and 5 unsuccessful) were selected for retrospective interviews after getting the score in post test.

The same topic about mind map also held by Ika Yuli Astuti entitled "The second related study is The Effectiveness of Mind Map Technique in Learning Reading Comprehension of Narrative Text (A Quasi-Experimental Study at The Second Year Students of SMPN 13 Kota Tangerang Selatan)".²⁴ The objective of this study is to find out the effectiveness of using mind mapping in improving students reading comprehension achievement. It is a pre-experimental study

²³ Panatda Siriphanich, Using Mind Mapping Technique to Improve Reading Comprehension Ability of Thai EFL University Students (The 2nd International Conference on Humanities and Social Sciences April 10th, 2010 Faculty of Liberal Arts, Prince of Songkla University).

²⁴ Ika Yuli Astuti, *The Effectiveness in Learning Reading Comprehension of Narrative Text* (A Quasi-Experimental Study at The Second Year of SMPN 13 Kota Tangerang Selatan), (Skripsi, Faculty of Tarbiya and Teachers Training, Syarif Hidayatullah State Islamic University, Jakarta, 2012).

which uses random sampling in getting the sample. The collecting data is only through the test. The result indicates that using mind mapping in teaching reading comprehension is effective to improve student's reading comprehension achievement. It can be seen from the result of pre-test and post-test; the average score of pre-test = 12,6 and the standard deviation = 8,88. Meanwhile, the average score of post-test = 21,7 and the standard deviation = 9.

Another research that has been done by Ozgul Keles, Turkey "Elementary Teachers' Views on Mind mapping"²⁵ and Brett D. Jones, Georgia "the effects of Mind Mapping Activities on Student's Motivation"²⁶ was showed significant result of the students' achievement through using Mind Mapping Technique. Because this technique is useful, interest, easier to understand and success full to increase scores of the students.

The study above has both the similarities and differences with the writer's study. Mind mapping as the technique studied and test as the instrument are the similarities in this case, while the differences are on the place, sampling technique, and the research design.

 ²⁵ Keles, O. 2012. Elementary Teachers' Views on Mind Mapping. Journal of Education. Vol 4, No. 1
²⁶ Brett, D. 2012. The effects of Mind Mapping Activities on Student's Motivation. Journal of Education. Vol 6, No. 1