CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter dealt with the result and discussion of data that had been compiled which the method has been described in chapter III. The researcher would like to describe and to answer the research questions which have been maintained in the first chapter. It was focused on the result of the data that could classified into three categories, those are; (1) the result of teachers' understanding about the concept of mind mapping, (2) the result of teachers' perception about the use of mind mapping in teaching learning process, (3) Discussion

A. Research Finding

1. The Result of Teachers' Understanding about the Concept of Mind Mapping

The researcher conducted the observation in two meetings. The researcher did the observation in SMAN 2 Sidoarjo on August 14th and 21th 2014. While in SMA Islam Sidoarjo from 15th and 22th 2014. The allocated time for each meeting was 2 x 45 minutes or set up 90 minutes. The topic was different in each meeting. The teacher prepared the materials which were used in learning process. The researcher used the observation sheet and took a note the activities happened in each meeting to make the data analyzed easier. To give easier explanation the researcher will use term teacher A for teacher from SMAN 2 Sidoarjo and teacher B for teacher from SMA Islam Sidoarjo.

a. The Observation on Teacher A

The observation on teacher A in SMAN 2 Sidoarjo was accomplished on Friday, August 14th and 21th 2014. The class began at 06.45 am to 08.15 am.

On that day, teacher A use mind map for teaching writing narrative. In the first step, the teacher checked the student's knowledge about narrative text by asking some question. The teacher then asked the students to brain storm the topic to write narrative text based on the topic that had introduced by the teacher, the teacher gave very clear instruction to the students so they know what to do. Teacher A then drew one big circle on the blackboard and she explained what she will do with those big circles and explained the function of it. After explained the mind map she wrote "tangkuban perahu" in the big circle. Teacher A asked students what they know about this topic. One by one students said their idea, they looked very active. Each student's idea was written by teacher A in the blackboard around the big circle and connected with arrows. While writing, teacher A explain what are the function of each part of mind map. That interactive mind mapping brain storm allowed the teacher control the class easily. After the picture of mind map finished, then teacher A asked the students to confirm students' understanding, teacher A ask students about what they do not understand about mind map. The teacher then created paragraphs about topic that previously introduced and when she finished she asked the students to read it. When the students have finished read the paragraphs she ordered all of the students to create paragraphs based on their own topic. The students should develop their idea by using mind mapping. During the process of student activity teacher gift some suggestion to help student get easier to apply mind mapping.

From the observation, the understanding about concept mind mapping can be seen from teacher A. From the explanation of mind map, she explain clearly and follow procedure of making mind map that proposed by Buzan,¹ teacher A describe and demonstrate the process of making mind map to the students, teacher A also present the central concept/material that the students must graph, for confirmation about students' understanding teacher A ask the students to brainstorm, writing a list of terms and phrases that express core concepts and supporting details, and teacher A also ask the students to start sketching out the mind map, and the last for reinforcement, teacher A gift necessary suggestions to the students while they are working. But teacher A is missing one procedure that should be done which is creating group. In making mind map, teacher A also gift attention to principle that proposed by Tony Buzan and Bary Buzan. She emphasize the main idea by write it in capital letter and underline it, to show association (connectivity) between ideas in the mind map, she used arrow. So the students can now the connectivity between idea and it will help them to arrange the idea into paragraphs easily. By asking to students to share their idea about the topic, teacher A wanted to arrange each idea into sequence or suitable position to make the mind map clear, clear means

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

that each idea is placed in the right position, so which idea act as main idea, which idea act as supporting detail will be known. But teacher A did not ask the students to develop their own style in making mind map. So, all students use the same style with teacher A in making mind map.

b. The Observation on Teacher B

The observation on teacher B in SMA Islam Sidoarjo was accomplished on August 15th and 22th 2014. The class began at 06.45 am to 08.15 am.

Same as teacher A, teacher B also use mind map for teaching writing narrative text. After gift brief explanation about the material that will be learned. Teacher B drew big circle on the blackboard without explaining the function of those circles. The teacher did not give clear instruction to the students so they did not know what to do, because the teacher did not explain the function of mind map and only asked the students shared their idea (brain storm) about the topic that was presented by the teacher. Only view students shared their idea, they looked very confuse and most of the students were so noisy because they asked their friends what should they do instead of asked the teacher. That crowded situation made the teacher difficult to control the class. It took more time to finish the whole picture of mind map. After the picture of mind map finished, she asked the students' if there are things that they do not understand. Teacher B then created paragraphs about topic that previously introduced and when she finished she asked the students to read it. When the students have finished read the paragraphs she ordered all of the

students to create paragraphs based on their own topic. The students should develop their idea by using mind mapping. In this process, teacher B moves around the students and gifts some suggestions to the students and answers some students' questions about mind mapping.

From the observation, researcher has insight about the understanding of teacher B in concept of mind mapping. From the explanation during make mind map, teacher B do not explain clearly and she missed some procedure of making mind map, teacher B only demonstrate the process of making mind map to the students but not describe and explain it. Teacher B present the central concept/material that the students must graph, for confirmation about students' understanding teacher B ask the students to brainstorm, writing a list of terms and phrases that express core concepts and supporting details, even though during that process there are students who do not understand what to do because lack of explanation from teacher B. Teacher B also ask the students to start make the mind map as she has made in the blackboard, and for reinforcement, teacher B gift necessary suggestions to the students while they are making mind map. Teacher B missed another procedure that should be done which is create group, crate group is needed to facilitate students share idea with more friends. In making mind map, teacher B apply principle that proposed by Tony Buzan and Bary Buzan. She emphasize the main idea by write it in capital letter, to show association between ideas in the mind map, she used arrow. By asking to students to brain storm about the topic, teacher B wanted to arrange students' idea into suitable position so the mind map will be easier to be understood. Teacher B did not ask the students to develop their own style in making mind map but she ordered the students to copy mind map like what she has made. So, in the end all students use the same style with teacher A in making mind map.

2. The Result of Teachers' Perception about the Use of Mind Mapping in Teaching Learning Process

The researcher used interview to know the result of teachers' perception about the concept of mind mapping. The interview was done twice for an English teacher in each school. The first interview of English teacher in SMA Islam Sidoarjo and after that the researcher interview English teacher from SMAN 2 Sidoarjo.

a. Interview of teacher A

When asked about mind map in general, teacher A answered that mind map is creative technique that can be use in many English teaching and learning activity and very useful.

In respond to question about the most suitable application of mind map, teacher A answer that mind map is the most suitable when applied for teaching writing, because mind map enhance students creativity in generating and structuring idea with simple technique.

About the benefit of using mind map, teacher A found the mind map technique is a useful and flexible, mind map also benefited students' learning in a variety of ways. Students also can categorize idea based on connectivity between ideas.

When asked about the weakness of mind mapping technique, teacher A believe that sometimes it is difficult for students to develop their idea, because even though mind mapping is very useful, it cannot be completed unless students have knowledge about topic that become the main idea.

In increasing students creativity, teacher A said that mind mapping will make students look for possible idea that have connection with the main idea, this condition will encourage them to think creatively, even though sometimes view students getting difficulties in finding idea.

b. Interview of teacher B

For the first question about mind map in general, teacher B said that mind is useful and enjoyable technique. It can increase students' ability to summarize and classifying idea.

Teacher B said that mind mapping is the best technique for teaching writing, because in generating idea, mind map is very useful. Through mind mapping sequence of idea can be made, so when idea on the mind map are applied, the students do not need arrange the idea again, they just need to follow what they have written in mind map.

About the benefit of mind map, teacher B said that the ability to use mind map can lead to a more relaxed and less stressful learning experience for students. As a reason for these improvements, they pinpointed the fact that mind mapping is a great release for learners from the missing idea.

According to teacher B the weakness of mind map is some students are not suitable with this technique. A small number of students still did not feel

comfortable with mapping, but that these tended to be students who prefer other approaches.

In increasing students' creativity, teacher B highlighted that mind mapping enhance students' creative thinking, since mind mapping make students to use his brain look for idea or information related to the topic, if mind map used continuously, it will make students get used to think creatively.

B. Discussion

Based on the findings above, there were several things that must be noted down. It will be arranged based on the findings on each problem.

1. The Discussion of Teachers' Understanding about the Concept of Mind Mapping.

Understanding concepts of mind mapping is very important for teachers. Because as a tools or media in teaching and learning process mind mapping can be very effective if the teachers understand the concepts of mind map. Based on the finding, researcher wanted to analyze the teachers' understanding about concepts of mind mapping. Both teachers use mind map to teach writing narrative mainly in generating idea (brain storming), both teachers believe that mind map can bridge students lack of idea in starting writing narrative. It has stated in previous chapter (chapter 2) that mind map can give assistance for students to start writing assignments. In fact, many students in both schools

(SMAN 2 Sidoarjo and SMA Islam Sidoarjo) find writing is difficult, and most of them find getting started to write is the most difficult part of writing. Hayes stated that mind mapping can reduce difficulty in starting writing assignments by giving students an organizing strategy to get them started. He explains that ideas are freely associated and written out without pressure, thereby reducing tension and resistance often associated with writing². The product of the prewriting activity is an organized cluster of thoughts, which helps students stay on task when they write.

Sufficient preparation must be made before teacher asks the students to apply the mind mapping. Buzan stated that teacher must do specific preparation including try to map the material. This step is used to uncover any potential problems. The teacher's diagram can also serve as a model against which to assess group work. Complete procedure should be applied by teacher of the employment of mind mapping in the classroom by Buzan is as follow³: 1) Describe or demonstrate the process to the students; 2) Divide the students into groups which consist of four students; 3) Present the central concept/material that the students must graph; 4) Ask the groups to brainstorm, writing a list of terms and phrases that express core concepts and supporting details; 5) Ask the students to start sketching out the diagram; 6) Deliver any necessary suggestions to the groups while they are working; 7) Ask them to developed the main concept

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² Hayes, David A. 1992. A Sourcebook of interactive Methods for teaching with text. United States of America.

³ Buzan, Tony. 1989. Use Both Sides of Your Brain. New York: Penguin Books.

by adding some new ideas and relationships as they construct the map. Teacher also need to apply principle that stated by Buzan,⁴ which are: use emphasize, use assosiation, be clear and use personal stye. On this stage of using mind map, both teacher employ procedure that mentioned by Buzan, even though teacher A was more complete than teacher B. Teacher B was missing some important procedure when use mind map. She missed the first step of the procedure when she making mind map, she forgot to explain the function of mind map and give incomplete explanation of process making mind map. It looks like teacher B drawing circle and word on it.

The observation showed different result when the researcher observed teacher A, researcher found that teacher A can implemented mind mapping in complete procedure. When the mind mapping and writing narrative text was implemented, the students could do well in every stage of mind mapping technique because they could understand the teacher's instructions.

The teacher A allocated 25 minutes in the brain storming stage. From the result of observations on the implementation of brain storm, it can be stated that the students looked enthusiastic because they could collect ideas by observing the topic given. But, in the first time, there were some students who still got difficulties in finding their ideas into mind map. Teacher A gave more explanation, so most of the students did not get further difficulties in developing

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⁴ Buzan, Tony. 1989. Use Both Sides of Your Brain. New York: Penguin Books.

their ideas into mind map because they had known how to generate idea and put it in mind map.

Teacher A explanations about the concept of mind map allowed the students to understood that mind maps begin with a main concept or idea, and the rest of the map revolves around is supporting detail or supporting information, so choosing that idea or topic is the first step, it can be done by writing a word that represents that first main idea.

Teacher A emphasized that mind maps should be linked with branches (as many as needed), that each represent a single word that relates to the main topic. Then, create sub-branches that stem from the main branches to further expand on ideas and concepts. These sub-branches will also contain words that elaborate on the topic of the branch it stems from. This helps develop and elaborate on the overall theme of the mind map. Including images and sketches can also be helpful in brainstorming and creating the sub-branch topics. The importance of position of mind map branches also stated by Buzan, a mind map should have a definite structure: a central idea, with the relative importance of each other idea clearly shown. The more important ideas are nearer the center and those of lesser importance are nearer the edges⁵. On the other hand, the relationship among ideas that explained by teacher A was in line with Buzan. Buzan states that relationship between idea described as a hierarchy among these ideas: 'second, third and fourth branch levels'. Links between concepts are also immediately

⁵ Buzan, T. 1993. The mind map book. London: BBC Books.

recognizable 'because of their proximity and connection'⁶. Teacher A also let the students choose freely the model of their mind map, the students did not have to copy teacher A's mind map. It is as stated by Buzan and Buzan about the principle of making mind map, 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.⁷

Meanwhile teacher B did not do what teacher A did. She just show the mind map picture without further information and explanation, in the process of making mind map clear instruction was needed to make students understand teacher intentions.

When created mind map teacher B merely drew the circle and fill it with words and asked the students to give more words on to the braches without explain the functions of those main circles and the branches. Teacher B missed some of the procedure also some of the principle such as missed to explain process, not used arrow to emphasize connection between circle and not let students to create their own style of mind map that make students' creativity restricted. The understanding of teacher B on mind map was showed on how well students have been taught to use them. As mentioned, the amount of exposure that they have had to mind maps, the amount of explanation that they have had, and the amount of guidance that they have received in response to their initial

⁶ Buzan, T. 1995. *Use your head*. London: BBC Books.

⁷ Tony Buzan, Buku Pintar Mind Map, terj. Susi Purwoko (Jakarta: Gramedia Pustaka Utama, 2013), p.6.

efforts are significant factors. Perhaps it would be beneficial if students was gifted more explanation to assess their own mind maps. So the students have more understanding what should they do with the mind map and how use it in writing.

2. The Discussion of Teachers' Perception about the Use of Mind Mapping in Teaching Learning Process

Teachers' perception on mind map come from their own experience in using teaching media, from their experience, they convey their opinion about the use of mind map in teaching learning process. It is as pointed out by several researchers, teachers' attitudes or beliefs, is one of the several important human factors which have significant contribution for choosing certain teaching media.⁸

According to the teachers, the advantages of the mind mapping technique are its providing permanence, being enjoyable, visualizing, and organizing systematic learning. The main reason of the teachers' holding these opinions might be the colors, visuals, and key words used in the mind mapping technique rather than the classical texts and also might be that students enjoy learning environments based on such techniques. Accordingly, mind-maps which will be used by teachers at the beginning and the end of the course can help students see what they create in their minds. According to teacher A, the most difficult problem is that sometimes students get difficulties in finding idea. Meanwhile teacher B said that some students are not suitable with this technique. This

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⁸ Arkin, E.E. (2003). Teachers' attitudes towards computer technology use in vocabulary instruction.

problem, which is assumed to have been caused by the usage of the technique for the first time, is believed to be minimized in the next applications depending on the experience that students will gain. When the students cannot explain the situations with visuals, the choosing the best key words that explain the topic and its connotation with various colors can be options to try. Besides, in relation to the inability of mind mapping, it is possible for the students to compensate for this lack by asking to their teacher or friends or looking the words from dictionary.

Teachers think Mind Mapping guidelines should be used mostly in writing classes as they make abstract expressions concrete. In the formation of these views, it can be said that this technique is effective in terms of its efficiency in explaining how the abstract concepts (idea) forms in the minds of the students. However, mind mapping guideline is an entertaining technique that can easily be applied to all classes. Applying different techniques for each topic prevents monotonous in classes and makes students more active by appealing to their different aspects.

Teachers think that the mind mapping technique will generally develop creativity. Moreover, it has been observed that they think students with this technique will discover their potentials better, understand themselves (qualifications, intelligence) and will develop their imagination and thinking differently. It is assumed that formation of this view has been affected by the assumption that the mind mapping technique activates the imagination by

operating the both hemispheres of the brain. the mind mapping technique help two hemispheres of the brain communicate each other so that the students can express the concept, topic or material with the visual, so the students can imagine the figure or word which associates with that concept and these all help the students develop his/her imagination and creative thinking. The student thinks in mind in order to find the visuals related to given concepts, topic or material and try to imagine the best visual or word that represent it. While doing this, he/she can develop his/her creativity by coming up with hundreds of different concepts, visuals or idea.

Mapping was valued as a pedagogical strategy by all of the teachers who participated in this study. Additionally, many shared the view that this perception extends to their pupils. Teachers were similarly enthusiastic about the new possibilities that min mapping brings to the classroom. Beyond their efficacy in categorizing information, teachers noted that pupils can literally see or predict what is going on within their own thought processes as they complete a map. Teachers A highlighted that mind mapping provides opportunities for them to model their effective thinking for pupils, rather than students simply receiving the linear products that result from teachers' effective thinking.

The point of view of the teacher A about the contribution of mind map to the students in SMAN 2 Sidoarjo and teacher B in SMA Islam Sidoarjo can be evaluated positively as in general order; providing continuance in knowledge and skills obtained, developing interpretation skill, providing opportunity to visualize and generate idea. The opinion that the mind map is effective in terms of learning by fun, and that the visuals, colors and key words will increase the permanence of the knowledge and the consistent functioning of the brain will develop the interpretation skill can be said to be effective in the formation of this positive point of view. Based on the opinions of the teachers, the usage of the mind mapping technique in writing at SMAN 2 Sidoarjo and SMA Islam Sidoarjo can be said to bring to a successful conclusion in creating active and creative individuals.

Discussion on teachers' perception about mind map showed that teachers think positively about mind map. Teachers' positive perception on mind map appear because the environmental inputs they receive through experience when using mind map in teaching learning process. In other words, that positive perception is the result of process where teacher becoming aware of mind map positive impact to students through teaching and learning process.