Mind Mapping Technique in Developing Students' Speaking Skill

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Abstract

The purpose of this research is to investigate how significant the students' speaking development through Mind Mapping Technique is. This study was conducted to 36 students of the first semester of Public Sector Accounting of Politeknik Negeri Pontianak in academic year of 2017/2018. The pre-experimental research was used for the purpose of this study; therefore, both pre test and post test were conducted for data collection. The finding of this study shows that there is significant development on students' speaking skill through Mind Mapping Technique.

Keywords: *mind mapping technique, students' speaking development, teaching speaking*

Abstrak

Tujuan dari penelitian ini adalah untuk menginvestigasi seberapa signifikan perkembangan berbicara mahasiswa melaluin teknik Mind Mapping. Penelitian ini dilakukan oleh 37 mahasiswa semester satu Akuntansi Sektor Publik Politeknik Negeri Pontianak tahun akademik 2017/2018. Pre-eksperimental studi digunakan untuk tujuan penelitian ini; oleh Karena itu, pre test dan pos test dilakukan untuk pengumpulan data. Hasil dari penelitian ini adalah ada perkembangan signifikan pada keahlian berbiara mahasiswa melalui teknik Mind Mapping.

Kata Kunci: *teknik mind mapping, keahlian berbicara mahasiswa, pengajaran berbicara*

1. INTRODUCTION

Politeknik Negeri Pontianak, as a vocational higher education, holds a vision to become one of the best and trusted vocational higher education institutions in the domestic level as well as international level. This school puts a commitment that its graduates have to be able to compete in both national and international job market. Therefore, one of the main skills its students have to acquire is communication skill in international language, English, especially the skill to communicate in English orally. Thus, the ability to speak needs to be improved and become more attentions by this school.

Unfortunately, the English proficiency of students of Politeknik Negeri Pontianak does not seem to indicate that the students will get the benefits of English speaking skill. The students still encounter many problems in speaking English so that they are unable to effectively convey information in English. The students seem

to have difficulty in putting words together. They seem to be frustrated in finding ideas and connecting their ideas with the topic of speaking. When they are frustrated for losing ideas, they will pause and stop speaking and they give up expressing their ideas and thoughts. That is the reason why the students only speak with very short duration and the information they deliver is not sufficient. The problem seems to have potential impacts for Politeknik Negeri Pontianak in gaining its vision to be one of the best in international level. It also influences the students' opportunities to compete to reach their careers in multinational companies.

Therefore, it is very necessary to have alternatives to solve the problems. One of the problem solving alternatives that can be possible to implement is Mind Mapping Technique. This technique is believed to be effective to help students' speaking for its benefits in organizing students' ideas and thoughts and connect them with the main topic of speaking. This technique is potential to facilitate the students to make plans idea framework for their speaking.

2. LITERATURE REVIEW

a. Speaking

Speaking is considered the most important skill. The ability is needed by students to become effective communicators. The ability to speak competently – to put words together into meaningful way – will benefit the students in many aspects. The ability is beneficial to effectively convey their ideas, thoughts, and opinions and feeling that they will get benefits as important additional values.

A good teaching speaking is expected to provide opportunities of training to all students including tasks and other activities. The opportunities help the students to participate and involve in speaking session, thus the opportunities make the students actively participate in speaking class without having significant barriers or problems of speaking (Harmer, 2007). Ur (1996) states that an ideal teaching speaking takes place if the speaking class provide stimuli and enough time for the students to express their ideas or opinion in English orally. Hence, teachers and minority active students are not allowed to take dominant position in speaking class. The speaking opportunities have to be distributed evenly to all students in classroom discussion or speaking session. By doing this, speaking activities will assist the student to develop their confidence in speaking and motivate them into further effort to develop their speaking skill (Harmer, 1998). Therefore, good speaking class should be highly motivating and enjoyable for the students.

The ideal teaching speaking concept is in line with Brown (2001). Brown states that a successful speaking class will involve the students to actively participate in speaking that they have to talk a lot. Therefore, they have to be highly motivated in take part in the speaking activity by giving the same chances to participate and contribute their ideas evenly. To make the speaking activity meaningful for the students, they students should be assisted to speak comprehensibly that they can be understood by other students.

b. Mind Mapping

A mind mapping is a solving problem technique using brainstorming. It is used to manage ideas and connect the ideas with other related ideas. This technique is worth using as a teaching technique such as English teaching especially teaching writing and speaking. For teaching speaking, mind mapping is potential to help students who frequently lost their ideas or those who encounter problems in exploring their ideas. This is a simple technique that students can make their own mind mapping based on their imagination.

A mind mapping is a kind of a diagram which is usually used to organize information visually. A mind mapping is hierarchically shows relationships among pieces of the whole (Hopper, 2015). Mind mapping is usually made around a single concept. It is drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those. Muller (2008) states that a mind mapping is a tool of recording information by using a diagram that the diagram can be easily used to use, adapt and recall information. Meanwhile, Buzan (2005) also states that a mind mapping technique which use graphic general key to open the potential of the brain. The mind mapping may comprise words, images, numbers, and rhythm. Hedge (1998) states that mind mapping is note-making strategy which used to collect ideas and developing the ideas to be associated with the related words.

Buzan (2005) states that there are some ideas steps in making mind map, the steps are:

Figure 1. Sample of mind mapping for teaching speaking

1. Start in the center with a word or image of the topic. Take a blank paper and start to draw from the center of the paper. Draw from the center of the paper will give the brain freedom to express and explore anything naturally.
2. Use words (or images, symbols, codes, and dimensions) throughout the mind map. If possible, a picture or photograph can help to improve the imagination and keep focus on the main topic.
3. For a better map, use colors (but not have to) because colors are interesting. Coloring pencil will make Mind Mapping more alive and bring new energy and creativity.
4. Connect the main idea to some branch details. Brain can connect three or four points in one time, and it is easier to be remembered and understood.
5. Connect the branches with line. It is suggested to use bowline for a straight line can bore the brain.
6. Use one keyword in every branch. Every single word will encourage the brain to develop it to be a new thought.

3. METHOD

This study was conducted at the first semester students of Public Sector Accounting of Politeknik Negeri Pontianak in academic year of 2017-2018 in which a group of students with 36 students as the sample. In this study the pre-experimental research was used. Pre-experimental design is a design which a single group is often studied but no comparison between an equivalent non-treatment group is made (Heffner, 2004). The procedure of conducting this research is clearly described on a design below:

Pretest (T1)→ Treatment(X)→Posttest(T2)

The design is illustrated as follow:

1. Doing pretest (T1). It is to measure the students' mean score before giving the treatment.
2. Giving treatment (X). It is teaching speaking by using Mind Mapping technique.
3. Doing posttest (T2). It is to measure the students' mean score after the application of experiment X by using Mind Mapping technique.
4. Comparing the T1 and T2 to determine how far the students' interval score of pretest and posttest.
5. Applying appropriate statistical test to determine whether the interval score is significant or not.

There were two kinds of techniques used to collect the research data. They are speaking test and teacher's note. Speaking test was used to collect the data of students' speaking skill and the teacher's note was used to certify teacher's activities, including the obstacles that teacher found while applying Mind Mapping technique.

The tests themselves were divided into two; pretest and posttest. The pretest was done before giving the treatment to the students through Mind Mapping technique. The treatment was given to the students several times. In every treatment, the teacher gave speaking test to observe the students' development in speaking. The posttest was done after the students had been treated by using Mind Mapping technique. The posttest used the same materials with pretest. The comparing of the result of pretest and posttest was analyzed to find the information whether or not the students' speaking ability through Mind Mapping technique improved.

4. RESEARCH FINDING

After having conducted the research, two kinds of data – the scores of pretest and the scores of posttest – were obtained. The pretest was given before giving the treatment to know the students' mastery in speaking before being taught through Mind Mapping Technique. The posttest was given after giving the treatment to know the students' development in speaking after taught by Mind Mapping Technique.

From the pretest, it can be seen that the students' score ranges from the highest score 90 to the lowest 58. The total score of the students' achievement is 2,665. So, the mean score of the students' achievement is 74.03.
Meanwhile, from the posttest it can be seen that the students' score ranges from the highest score 93 to the lowest 63. The total score of the students' achievement is 2,799. So, the mean score of the students' achievement is 77.08.

The detailed computation is below. The analysis shows that the treatment

changes the students' achievement. The students' score is better at the post-test.

Table 1. The Interval Score of Pre-test and Post-test

		PRE TEST (X₁)	POST TEST (X₂)	Difference (D)	Squared Difference (D²)
				$D = X_1 - X_2$	$D^2 = (X_1 - X_2)^2$
1	Student 1	87	90	3	9
2	Student 2	82	90	8	64
3	Student 3	65	66	1	1
4	Student 4	58	63	5	25
5	Student 5	65	78	13	169
6	Student 6	82	83	1	1
7	Student 7	67	69	2	4
8	Student 8	75	79	4	16
9	Student 9	67	78	11	121
10	Student 10	80	90	10	100
11	Student 11	66	70	4	16
12	Student 12	70	79	9	81
13	Student 13	68	73	5	25
14	Student 14	75	80	5	25
15	Student 15	90	93	3	9
16	Student 16	70	72	2	4
17	Student 17	76	78	2	4
18	Student 18	69	70	1	1
19	Student 19	77	79	2	4
20	Student 20	63	70	7	49
21	Student 21	80	81	1	1
22	Student 22	60	65	5	25
23	Student 23	80	82	2	4
24	Student 24	88	88	0	0
25	Student 25	77	77	0	0
26	Student 26	78	78	0	0
27	Student 27	67	69	2	4
28	Student 28	75	78	3	9
29	Student 29	69	72	3	9
30	Student 30	80	83	3	9
31	Student 31	80	82	2	4
32	Student 32	81	82	1	1
33	Student 33	70	75	5	25
34	Student 34	80	81	1	1
35	Student 35	80	81	1	1
36	Student 36	68	75	7	49
		2665	**2799**	**134**	**870**

After finding the pre-test – post-test mean score, the interval of pre-test – post-test mean score was calculated. The computation is as follows

$M_{tot} = X_2 - X_1 = 77.75 - 74.03 = 3.72$

In addition, T value can be obtained from the table above using the computation below

$$T = \frac{\overline{D}}{\sqrt{(\Sigma D^2 - [(\Sigma D)^2 / N)] / N(N-1)}}$$

$$T = \frac{(134/36)}{\sqrt{(870 - [(134)^2 / 36)] / 36(36-1)}}$$

$$T = \frac{3.72}{\sqrt{(870 - 498.77)/1224}}$$

$$T = \frac{3.72}{0.03}$$

$$T = 6.76$$

From the result of data computation, it is obtained that t-obtained is 6.76. The level of significance (α) 0.05 with the degree of freedom (df) =N-1 = 36-1= 35, it is obtained t-table is 2.042. The result indicated that t-obtained (6.76) is higher than t-table (2.042). Then, because t-obtained is higher than t-table (6.76> 2.042), the result is in the null hypothesis (Ho) rejection area.

It means the null hypothesis (Ho) which says "There is no significant development on students' speaking skill through Mind Mapping Technique" is rejected, and the Alternative hypothesis (Ha) which says "There is significant development on students' speaking skill through Mind Mapping Technique" is accepted. It can be said that the development of students' speaking skill through Mind Mapping Technique is significant.

5. DISCUSSION

A mind mapping is used to manage ideas and connect the ideas with other related ideas. This technique is worth using as a teaching technique for teaching writing and speaking. For teaching speaking, mind mapping is potential to help students who frequently lost their ideas or those who encounter problems in exploring their ideas.

Before the students were given a treatment, the students' mean score is 74.03. Then, the scores increase to 77.75 after given a treatment by using Mind Mapping Technique. Therefore, the interval score of pre-test and post-test is 3.72. The result of the data analysis of pre-test and posttest mean score shows that post-test is higher than pre-test. This finding shows there is an improvement in students' score of post-test after receiving the treatments. The whole data which students got, are put in t-test in order to prove whether the difference score is significant or not. Based on the result of t-test, it proves that the value of t-obtained is higher than t-table (6.76> 2.042). It means that the difference between pre-test and post-test is significant.

Even though the students scores show some improvement after the treatment of mind mapping technique, the students still showed some grammar mistakes. There were some frequent errors showing some major patterns uncontrolled and causing occasional irritation and misunderstanding, for example *I very like to listen music* instead of *I like listening music very much*. Besides, the students still got problem in accent and pronunciation. There were still mispronunciations found in the students' speaking. This is due to lack time on this research on improving the students' pronunciations. As a result, many Indonesian-like pronunciations found in their speaking.

In terms of comprehension aspect, the students showed a little improvement. They began to comprehend what to speak especially for simple topic of conversations such as self-introduction and hobby. The students still found it hard to talk about more complicated topic for their conversation and presentation. Therefore, the aspect of fluency became inadequate. The students' speech is sometimes hesitant and jerky and many sentences became uncompleted.

The significant improvement is more contributed by students' score on vocabulary aspect. Since the mind mapping technique provides more ideas for the students to speak, they produce more vocabularies compared to their speaking before the treatment. In other words, they spoke with fewer vocabularies before the treatment. For example, they only said "*my hobby is listening to music*" when they had to mention about their hobby. Their expression on hobby became more and more after the treatment such as *My hobby is listening to music. I like many kinds of music. I like pop especially Korean Pop music. I like music because music can make me relax and music can help me get ideas when I am doing my homework. I also like dangdut beside pop Korean pop music. I like dangdut because dangdut is the music of our country. I usually listen to music when I am doing my homework and when I am going to bed. I love listening music very much.*

Although their choice of words sometimes inaccurate and limited, the students began to use some more professional vocabulary adequate to discuss special interest such as hobby and music.

In conclusion, the mind mapping technique has potential to develop students' speaking ability especially in helping students to speak more sentences, helping them find more ideas in speaking, and helping them in practicing in using more vocabularies.

6. CONCLUSION AND SUGGESTION
Conclusion
Based on the result of the data analysis, it can be concluded that:

1. Pre-test and post-test mean scores show that post-test is higher than pre-test. Before the students were given a treatment the students' mean score is 74.03 to 77.75 after given a treatment. The result of post-test is higher than pre-test, the interval score of pre-test and post-test is 3.72.
2. T-obtained is higher than t-table (6.76> 2.042). It indicates the Alternative hypothesis (Ha) which says "There is significant development on students' speaking skill through Mind Mapping Technique." is accepted. It means the students' development in speaking skill through Mind Mapping Technique is significant.

Suggestion
It is suggested that:

1. It is recommended for teachers to apply mind mapping technique as an alternative teaching speaking technique for improving students' speaking skill.
2. Although mind mapping technique improve the quantity of students' sentences in speaking, paying attention to speaking fluency, grammar

improvement, and accent and pronunciation is still necessary.

7. REFERENCES

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