

THE EFFECT OF BRAINSTORMING TEACHING TECHNIQUE ON STUDENTS' ACHIEVEMENT IN WRITING NARRATIVE PARAGRAPH

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ABSTRACT

This study aims to discover the effect of using Brainstorming Teaching Technique on students' achievement in writing narrative paragraph. It was conducted by using experimental research design. The population of this research was the second grade students of SMA Swasta Raksana Medan. The samples of the research were two classes which consisted of experimental and control group which were chosen by using random sampling technique. Twenty one students were taken as the samples in each class. The experimental group was taught by using Brainstorming Teaching Technique, while the control group was taught by using lecturing technique. The instrument was used to collect the data by asking the students to write a narrative text. After analyzing the data, it was found that the value of t-observed was 5.51 with the degree of freedom (df) = 40 at the level of significance $p(0.05) = 1.684$. It means that t-observed was higher than t-table ($5.51 > 1.684$). The result of this study showed that teaching by using Brainstorming Teaching Technique was higher than that taught by using Lecturing Technique.

Key Words : Brainstorming Teaching Technique, Writing Narrative

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INTRODUCTION

The Background of the Study

Languages in the world play an important role in human's life. Using languages, human are allowed to communicate with other people to express the idea, to facilitate the thinking process and to recall the information (Klein, 1991:224).

In accordance with the curriculum unit level language education, language learning goals at school is students are able to use language. Skills that includes four aspects: writing, reading, speaking and listening. Language skills are taught to the students to be able to listen, speak, read and write well.

Writing skills are taught in school has a goal that students are able to write well and truly of writing words, phrases, clauses, sentences, paragraphs, essays, overviews and discourse. Therefore, writing is referred to as a productive and expressive activity.

Writing is one of the language skills needed to improve the quality of learning. Students are expected to express their ideas, thoughts, and feelings that he or she had after undergoing the learning process in a variety of writing, both fiction and nonfiction. According to Tarin (1996:3), "Ability and interest in students' writing is lacking, they have not been able to state ideas in both oral and written perfectly." Writing skills, especially writing narrative paragraphs corresponding to the unit level education curriculum (KTSP) is one of the competency standards.

Everyday people use writing from simple to complex such as writing letters, notes, shopping lists, stories, etc. It means that writing holds an important role in daily communication. Through writing people can express their experiences, events, stories, and ideas. So writing is central to our personal experience and social identities which is focusing on the contents, ideas, and written products (Hyland,2002). Therefore, writing involves our actively thinking about ideas. The ideas will be developed to be a good and interesting writing. Using good and correct language is essential so that the readers can understand the writing easily. By the reason that, it shows that writing is an important skill that must be mastered.

Nowadays, the skill to write has become an indispensable skill in our global literate community. In fact, many students think that it is difficult to write a good writing, though they spend time to try. It has been known that writing is the most difficult skill in the learning process of English writing (Crimmon,1998). Sometimes, many students build anticipatory models or blueprints that are confirmed or modified by themselves to make them easy in making writing

without giving much attention whether writing is correct or not, especially in narrative writing.

Langan (2005:195) states “the main purpose of a narrative essay is to make a point by telling your audience a story. Colorful details and interesting events that built up to a point of some kind make narrative essays enjoyable for readers and writers alike.”

This is the line with the writer experience during the Field Practice Experience (PPL) in SMA Swasta Teladan Pematangsiantar, in which the students are less motivated in writing. Least of the students are able to write a text given. Moreover, when the writer did an observation by giving writing test in class XI-IPA2 of SMA Swasta Teladan Pematangsiantar most of the students still got low score. Based on the writer interview with the English Teacher there, she stated that the students got difficulties in writing the text because they still have limited on grammar. In addition, when the writer asked the students’ opinion about their difficulties, most of them said that they feel uninterested to write the text, because they suppose that writing is a bored activity. Teacher only asked them to read a text, translate the sentence and answer the question based on the text given.

It was also proven when the writer asked for the list of students’ score (DKN/Daftar Nilai Siswa) for writing tests in two semesters from the teacher. Many students did not pass KKM (Kriteria Ketuntasan Minimum) applied by the school in English subject. Their DKN in two semesters are, as follows;

Table 1 List of Students’ Score

Semester	Score	Students	Percentage	Mean
1 st Semester 2012/2013	<70	33 Students	68.8 %	64.3
	≥ 70	15 Students	31.2 %	
2 nd Semester 2012/2013	<70	28 Students	58.3 %	67.8
	≥ 70	20 Students	41.6%	

The explanation above brings the writer to realize that technique has a great role in teaching and learning process besides approaches, methods and strategy. What the teacher expected from the students also can be determined by the relevancy of using appropriate technique to reach the objective of learning. It means, the objective can be reached if the technique is appropriate.

According to Unit’s Curriculum of Education Level or Kurikulum Tingkat Satuan Pendidikan (KTSP) of Senior High School, there are four fundamental skills should be achieved by Indonesia students, namely : reading, listening, speaking, and writing. In this case, the writer will take up narrative as the source of data, because this kind of writing is relevant to the second year students’ syllabus as well as to the goal of writing English. The unit’s curriculum of education level of Senior High School issued that Indonesia students must be able

to express meaning in short functional written text and simple essay of recount, narrative, procedure, descriptive, news item, spoof, report, analytical exposition, hortatory exposition, explanation, discussion and review form in the context of daily use. Langan (2005:195) states “the main purpose of a narrative text is to make a point by telling audience a story. Colorful details and interesting events that built up to a point of some kind make narrative text enjoyable for readers and writers alike.”

Here, the writer focused only in Brainstorming Teaching Technique as one of the way to improve students’ writing skill. Brainstorming means the use of brain to the active problem solving and the brainstorming session aims to develop creative solutions to problems (Jarwan,2005). The writer chose this technique, because it enables the students for generating new, useful ideas and promoting creative thinking and to show their competence in writing narrative paragraph.

Furthermore, creative thinking is known as a compound mental activity aiming to direct a strong desire to look for solutions or reaching original solutions that were not known before (Jarwan,2008). Honig,(2001) defines it as the multiple thinking that includes the breaking up of old ideas, making new connections, enlarging the limits of knowledge and the onset of wonderful ideas.

Creative problem solving is based on the cognitive theory that adopts the concept of the cognitive structure. It is the mental process of creating a solution to a problem. It is a special form of problem solving in which the solution is independently created rather than learned with assistance. Creative problem solving always involves creativity (Qattami,2010). It can be defined as a frame of styles designed to help and enhance the problem understanding then generating new and different solution and assessing those solutions using the creative skills (Gardener, 1999).

Based on these statements, the writer is inspired to make a study about the effect of applying brainstorming teaching technique on students’ writing achievement

Research Question

Based on the background of the study, the problem of the study are: Is the Students’ achievement taught by using Brainstorming Teaching Technique higher than that taught without Brainstorming Teaching Technique in writing a narrative paragraph?

CONCEPTUAL FRAMEWORK

Writing Skill

Writing is one of the language skills to convey thoughts, ideas, desires, and feelings, which performed through written forms. Brereton (1982:2) asserts that writing differs from speaking. In one very important way the text have to carry all the meaning because writer is not around to explain, since in speaking, the

communication is two ways round. In writing, there is only one way. Therefore, writing should contain relatively complete information and details.

According to Byrne (1979:1), writing is one of the language skills which inform a writer's ideas on the written form. In delivering his/her ideas, a writer must produce a piece of writing which embodies correctness of form, appropriateness of style, and unity of theme and topic.

Criteria of Good Writing

A good paragraph has basic elements such as a topic sentence, supporting sentence, concluding sentences, unity and coherence and transition (Oshima 1991).

The Topic Sentence

The topic sentence is usually the first sentence of the paragraph and states the main idea of the paragraph. A good topic sentence makes a point that will be developed in the rest of the paragraph.

The Supporting Sentence

Supporting sentence which develops the topic sentences is by giving specific details about the topic. A writer needs to provide some dividedness, reasons and statements to impress the readers. There are kinds of supports which can be used in writing the supporting idea of the paragraph. They are by giving descriptive details, fact and reason to persuade. The writer needs to develop several reasons support their statements so the writing is factual reason to read.

The Concluding Sentence

A concluding sentence sums up the paragraph and appears at its end. It is used to signal that the writer has completed what he/she wanted to say.

Unity

Unity in paragraph requires consistent development of the idea that the paragraph intends to explain a paragraph is a unified by mutually supported

Coherence

Coherence means "stick together" is the verbal thread that ties each new sentence in a paragraph to the one before it. When the paragraph is coherent, the reader can see a continuous line of thought passing from one sentence to the next. Paragraph coherence begins with clear, precise, focused topic sentence because the topic sentence sets up the expectations the reader has about appropriate related facts, examples, details that the writer could use to develop central idea.

Transitions

Transitions are signal that help readers follow the direction of the writer's thought.

Technique of Teaching

1. Brainstorming Teaching Technique

Technique is what actually happens in the classroom. Anthony in Brown (1995:2) states technique as a particular strict, stratagem, or contrivance used to accomplish an immediate objective. Brown (2001:16) says that technique is any of a wide variety of exercises, activities, or tasks used in the language classroom for realizing lesson objectives.

Brainstorming is a group creativity technique designed to generate a large number of ideas for the solution of problem.

Brainstorming literally means using the term *brain* to *storm* a problem. It is a technique by which a group attempts to find a solution for a specific problem by amassing all the ideas spontaneously contributed by its members. Brainstorming technique of applied imagination or creatively (Hollingsworth, 1991:109).

The procedure of using brainstorming teaching technique

According to Hollingsworth (1991:111) there are series of steps that should followed in setting up a brainstorming session:

1. Identifying the problem

In preparation for a brainstorming session you should select a specific, as opposed to a general problem. This is extremely important, because a badly designed challenge could lead to lots of ideas which fail to solve the problem. For example: the problem “How should we behave on a field trip?” is too broad. To narrow the problem, two or three sub-problems might be formulated: How should we behave on the bus? How should we behave going to and from the bus? How should we behave at the water station?

When the problem has been reduced to its lowest common denominator, the selected sub-problems are posed as concise, definite question. Question of what, why, where, when, who and how serve to stimulate the creation of ideas. For example: Why is it needed? Where should it be done? Who should do it? How should it be done?

2) Preparing the group

Give yourself a time limit. It is recommended 25minutes, but experience will show how much time is required. Large groups may need more time to get everyone’s ideas out. Alternatively, give yourself an idea limit. At minimum, he/she pushes for 50 ideas. But, 100 ideas are even better.

3) Leading the Ideation Session

Explain and write out four basic rules that must be faithfully followed:

- Criticism is ruled out: Judgment of ideas must be withheld until later.

- “Freewheeling” is welcomed. The wilder the idea the better, it is easier to tame down than to think up.
- Quantity is wanted : greater the number of ideas, the greater the likelihood that the ideas of their own, participant should suggest how ideas of others can be returned into better ideas or how two or more ideas can be combined to form still another idea.

4) Utilizing after Thought

Once the time is up, select the five ideas which you like best. Make sure everyone involved in the brainstorming session is in agreement.

5) Processing Ideas

Write down about five criteria for judging which ideas best solves the problem. Criteria should start with the word ”should”, for example, “it should be cost effective”, it should be legal”, it should be possible to finish before the end of this month”, etc.

6) Implementing Ideas

Give each idea a score of 0-5 points depending on how well it meets each criterion. Once all the ideas have been scored for each criterion, he/she adds up the scores.

7) Deriving Generalization

The idea with the highest score will be best to solve the problems. But you should keep a record of all your best ideas and their scores in case best idea turns out not to be workable.

METHODOLOGY

Research Design

The research was conducted by experimental research. For the purpose to collect data, two groups were used. They are experimental and control groups. The experiment group was the group that was received the treatment by using brainstorming teaching technique, while the control group was the group that received treatment by lecturing technique. The designed could be figured as the following:

Table 3. Research Design

Randomized Subjects, Pre-test–Post-test Control Group Design

1	Experimental Group Pre-Test	Giving Treatment Using Brainstorming technique	Post-Test
2	Control Group Pre-Test	Applying Technique	Lecturing Post-Test

A. Instrument for Collecting Data

For collecting the data, a narrative writing test was used as the instrument. The test was administered to the students, in which the teacher asks students to write a narrative writing based on the picture given. This test was given twice to both experimental and control group.

B. The procedure of Collecting Data

The data was the students' writing ability. To obtain the data, some procedures had been done as follows.

Pre-Test

The pre-test was be given to the experimental and control group before the treatment. The function of the pre-test was to know the mean of scores of the experimental and control group before receiving the treatment. The students were asked to write a narrative text.

Treatment

The experimental group and control group were taught by using the same materials but different instruments. In the experimental group, the writer was used brainstorming technique on the students' achievement in narrative writing, and control group was taught by using lecturing technique.

Post-test

After the teaching presentation both the experimental and control groups, the teacher gave a post test to each students in both experimental and control groups in order to know their mean score of experimental group and control group and control group after receiving treatment. The writer used post test to know the effect of Brainstorming Teaching Technique on students' achievement in writing narrative paragraph.

The Technique of Collecting Data

In order to find out the difference mean of the two groups, experimental and control groups, the writer was used t-test formula. The result of the data was used to difference which is higher between the result of t-test and t-table in order to find out if the brainstorming teaching technique gives positive or negative effect on students' achievement in writing narrative paragraph. T-test formula is as follow:

$$t = \frac{Ma - Mb}{\sqrt{\left[\frac{da^2 + db^2}{Na + Nb - 2} \right] \left[\frac{1}{Na} + \frac{1}{Nb} \right]}}$$

- t = the effect
- Ma = mean of experimental group
- Mb = mean of control group
- da = the standard deviation of experimental group

db = the standard deviation of control group
 Na = total sample of experimental group
 Nb = total sample of control group

A. The Statistical hypothesis

Based on the hypothesis on chapter two, it is transform into statistical hypothesis. This statistical hypothesis was tested as follow:

Ho: $\mu.X1 = \mu.X2$

Ha: $\mu.X1 > \mu.X2$

Where:

Ho : Null Hypothesis

Ha : Alternative Hypothesis

μ : The means of all students

X_1 : The mean of the students taught by using brainstorming teaching technique

X_2 : The mean of the students taught by using lecturing technique

DATA ANALYSIS AND DISCUSSION

A. The Data

The data were taken from the pre-test and the post-test administered in experimental and control group. The data were showed in Appendix 1. The students' score in writing was given based on the five components of writing. They were content (C), organization (O), vocabulary (V), language use (LU), and mechanics (M). (See Appendix A), in the experimental group the highest score of pre-test was 82 and the lowest score was 53, while the highest score of post-test was 86 and the lowest score was 64. The mean of the pre-test in the experimental group was 67 and the mean of post-test was 76.38. While the control group, the highest score of pre-test was 75 and the lowest score was 45. The highest score of post-test was 75 and the lowest was 45. The mean of pre-test in control group was 61.76 and the mean of post-test was 64.42

B. Data Analysis

To find out whether the use of brainstorming teaching technique significantly affected on students' achievement in writing narrative paragraph, the result of the test was calculated by using t-test formula. (See Appendix B).

The result of calculation by using t-test formula were as follows:

$$t = \frac{Ma - Mb}{\sqrt{\left[\frac{da^2 + db^2}{Na + Nb - 2} \right] \left[\frac{1}{Na} + \frac{1}{Nb} \right]}}$$

Where:

t = the effect

Ma = mean of experimental group

Mb = mean of control group

da = the standard deviation of experimental group

db = the standard deviation of control group

Na = total sample of experimental group

Nb = total sample of control group

The result of calculation by using t-test formula were as follows:

Ma	= 9.38	Mb	= 2.38
da ²	= 328.8	db ²	= 387.84
Na	= 21	Nb	= 21

Based on the calculation above, it was obtained that t_{observed} is 7.33.

C. Testing Reliability of the Test

In order to determine whether the test is reliable or not, the writer had given the same test to other class. Thus, to obtain reliability, the writer used inter-rates reliability that was computed by using Pearson's Product Moment Formula. The inter-rates reliability was given by different raters to find out the consistency of the test. The raters were the writer and the English teacher at the school and they scored the students' writing test, so there were two scores for each student. From the calculation of the data, it showed that the coefficient of reliability of the test was 0.80, it could be stated that the test was reliable and the reliability was high to very high (See Appendix B).

D. Testing Hypothesis

The formula of t-test and distribution table of the t-critical values is applied in testing the hypothesis. The basis of testing hypothesis is as follows:

The calculation of the scores by using t-test for the degree of freedom 40 ($df=N-2$) at the level significance 0.05 that t_{observed} is 5.51 and the t-table is 1.684.

The result of t-test calculation showed that t_{observed} (t_{obs}) is higher than t-table or it can be seen as follow : **$t_{\text{obs}} > t_{\text{table}} (\alpha = 0.05)$ with $df : 40$,(5.51 > 1.684 ($\alpha = 0.05$) with $df : 40$).**

So, based on the calculation, it can be concluded that there is a significant effect of using brainstorming teaching technique on students' achievement in writing narrative paragraph.

E. Discussion

In the theory, Brainstorming Teaching Technique was explained as a technique which show how active the students when they work as a group. Brainstorming means the use of brain to the active problem solving and the brainstorming session aims to develop creative solutions to problems (Jarwan,2005). This technique can help to build positive relationships among students and give students the experiences. Lecturing technique was stated that the material was complete will be given to students and anyone may write in class without any restrictions is actually happening in learning teaching process in which students focus on taking note that given by the teacher. A study conducted by Steinert et al (1991) provides evidence that interactive lecturing allow teachers to receive feedback at a number of levels on student needs (at the beginning, middle or end of a lecture), on how the information has been assimilated and on future learning directions. But in the reality, when the teacher asks, only a few students who active in the learning process while others just shut up and listen. Based on the explanation above, the theory of lecturing technique was aligned with the fact during the learning process.

In the chapter 2, it has been claimed that the application of the brainstorming teaching technique higher than lecturing technique on students' achievement in writing narrative, to compare the advantages and disadvantages of each technique.

Table 7 The Result of Pre-Test and Post-Test in Experimental Group

No	Students' Initial	Pre-test (T₁)	Post-Test (T₂)
1	TVP	75	85
2	IS	64	74
3	NP	78	85
4	SR	64	75
5	MJ	74	85
6	SA	64	74
7	PHP	82	86
8	HS	63	70

9	RA	64	74
10	AA	67	74
11	IP	64	74
12	RA	55	78
13	AM	66	76
14	YSM	76	83
15	SFK	74	78
16	CF	72	79
17	AIS	70	80
18	PCR	70	74
19	HR	58	69
20	JS	53	64
21	MR	54	67
		1407	1604

Table 8 The Result of Pre-Test and Post-Test in Control Group

No	Students' Initial	Pre-test (T ₁)	Post-Test (T ₂)
1	NP	63	66
2	VS	63	66
3	NH	66	72
4	RS	45	45
5	SG	57	50
6	LYT	57	60
7	RL	66	72
8	AK	63	66
9	UH	57	75

10	JL	75	72
11	ER	57	60
12	SBR	72	63
13	AR	66	66
14	LYT	63	66
15	RH	72	75
16	MI	66	72
17	PH	45	45
18	ND	57	60
19	AAR	75	75
20	PS	63	66
21	PW	57	63
		1297	1357

Table 9 The percentage of pre-test and post-test

	Pre-Test		Post-Test	
	Experimental Group	Control group	Experimental Group	Control Group
≥70	9(42.85%)	4(19.04%)	18(85.71%)	7(33.33%)
<70	12(57.14%)	17(80.95%)	2(9.52%)	14(66.66%)

The score of the pre-test from the students in experimental and control group was far from the KKM (70). The percentage of the score in pre-test was about 19.04%-42.85% passed the KKM. After pre-test, the Brainstorming Teaching Technique was given to experimental group and Lecturing Technique to control group. After conducting the treatment, the researcher was given a post-test. It can be seen in the post test of experimental group, the score was increased until 85.71 percent of students passed the KKM (70), while in the control group, the scores increase until only 33.33 percent of students passed the KKM.

From the explanation above, it can be concluded that the differences in the use of Brainstorming Teaching Technique was influenced to the Lecturing Technique in improving students' writing achievement.

CONCLUSION AND SUGGESTION

A. Conclusion

Based on the result of the data analysis, it shows that use brainstorming teaching technique affects on students' achievement in writing narrative paragraph. It is found that students' achievement in writing a narrative paragraph taught by using brainstorming teaching technique is higher than those taught by using lecturing technique. There are different means between the groups, experimental and control group in post-test. They are 76.38 and 64.42. It means that the mean of experimental group is higher than the mean of control group. Besides, the calculation of t-test shows that t-observed is higher than t-table. It means that the null hypothesis is rejected and the alternative hypothesis is accepted.

B. Suggestion

In line with the conclusion of the study, some suggestions are offered to the English teachers that it is wiser to apply Brainstorming Teaching Technique because it helps the teacher to be more creative in teaching writing narrative text. And also it is suggested to the students to apply Brainstorming Teaching Technique in order to improve their creativity in writing a text especially in writing narrative text. In addition, it is expected to the readers who are interested in dealing with this study so that they have a good understanding to support this study.

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