Teaching Writing through Clustering Technique

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Abstract
Teaching writing is considered as the most difficult skill. However, one of the objectives of teaching English in secondary school in Indonesia, especially for writing skill is students are expected to be able to write descriptive text well and accurately. Therefore, an EFL teacher needs appropriate strategies in teaching writing to achieve this objective. One of excellent strategies which can be used is clustering technique. Clustering technique can help students in solving their problem in writing text, especially for generating and organizing ideas in planning stage. This study aims at capturing secondary students' achievement in writing descriptive text by using clustering technique as a way in generating their ideas before writing. Experimental research method with pretest-post test design is applied in a class of twenty five secondary students. The sample was taken by using purposive sampling technique. The result reveals that the mean score of pretest is 5.7 and the mean score of post test is 7.1 and the result of t-score is 4.9. The t-value at the significant level 0.05 is 2.064 and at the significant level 0.01 is 2.797 with the degree of freedom 24. Since, the result of t-test is higher than t-value, the alternate hypothesis is accepted. In other words, there is a significant difference between pretest and post test score. It proves that the use of clustering technique is effective to improve students' achievement in writing a descriptive text.

Keywords: teaching writing, clustering technique, descriptive text

Introduction

Nowadays, in Indonesia English is known as a foreign language. It means English is just for academical context and it is not used as a daily communication tool. However, English is an international language which has an important role in communication by people to interact with other people in the world. For these reasons, the government of Indonesia has decided to include English in Indonesia education curriculum with creating English language policy that English must be taught since primary school until university level.

English has four skills: speaking, listening, reading, and writing skill. Especially writing skill is considered as the most difficult skill in teaching English. However, teacher is expected to teach this skill until students able to write their ideas in English well. It is shown by one of the objectives of teaching English in secondary school particularly in basic competence of the first grade is that students are expected to be able to write a descriptive text well and accuratelly (Departemen Pendidikan Nasional [Depdiknas], 2006). This become one challange for English teacher. To answer this challange, English teacher need to teach how to write a good writing.

Wyrick (1996) states a good writing is a good idea organization. The idea has to be organized in a sistematically logical order. Therefore, students need to teach technique how to organize ideas into a good writing. In other word, the students have to know how to gather and organize their ideas well.
Nunan (2003) defines writing as the process of thinking to invent ideas, thinking about how to express into good writing, and arranging the ideas into statement and paragraph clearly. Besides, Creme and Lea (2003) states that writing is a process to find words and those words are put together in particular formations to make sentences, then grouped together into good paragraphs.

Furthermore, Trimmer (1995) explains that stage of writing process is divided into three stages (planning, drafting, and revising) and one of them is related to good idea organization, namely planning. As the first stage, planning is the most important step in writing process because it is a basic process of thinking in starting a writing product. Planning stage is a series of strategies designed to find and formulate information in writing. In other word, it is an activity to gather and organize good ideas into a good text. Styati (2010) concluded that students need to know technique in writing, especially in planning stage. Thus, students have to be taught the techniques in this planning stage.

Many techniques can be applied including clustering or mapping technique in planning stage because research results find that this technique is effective to use for generating ideas in teaching writing. One study by Styati (2010) results that clustering technique is more effective than direct instruction to teach writing descriptive text. Moreover, Henry (as cited in Ventis, 1990) concludes that clustering technique improves understanding and retention of concepts by providing students with an approach to learning facilitates thinking. Thus, the use of clustering technique in writing process is proposed to be implemented in teaching writing especially in a descriptive text to help students solve their problems in generating and organizing their ideas.

Clustering technique is chosen because it is simple and easy to be applied in teaching writing. Besides, it also gives students freedom in gathering their ideas without thinking about big and structured idea. Rawlins (1996) states that students do not need a thesis or a great idea. They can start with a word, a phrase, a visual image, a picture or a sentence. Teacher just gives one thing; a word, a phrase or a picture to students as a topic in brainstorming their idea.

Another reason is clustering technique also allows students to think creatively and specifically (Owen, 2009). Students in gathering their ideas can relate the topic they saw to their own personal experience and write freely all ideas that come to their mind. As a result, the students can collect some important and specific details about the topic (a picture, a word, a phrase, or a sentence). Then, they fill them in the cluster diagram to finally be organized according to the generic structure of a descriptive text (identification and description). Besides that, clustering technique can also make students easy to see the relation between ideas and it make students become more easily to write (Rumisek and Zemach, 2005).

For these reasons, analyzing the use of clustering technique in teaching writing was conducted. This study focuses on writing descriptive text in secondary school. The main objective of this study is to know whether clustering technique can improve students' achievement in writing descriptive text or not, particularly in generating and organizing their ideas. There are many reasons that make clustering technique appropriate for the students of secondary school, such as clustering technique is simple and relatively easy to be applied in teaching writing, clustering technique gives freedom in gathering ideas, and clustering technique also allows students to think creatively and specifically. In addition, the effect of clustering technique can make students get an easy way to write down their ideas.

Descriptive Text
There are several kinds of text in academic writing for teaching English in secondary school. One of them is *descriptive text.* Descriptive text is a text which describes things in specific detail. According to Siswanto, Arini, and Dewanto (2005) a descriptive text is a text which describes a particular person, place, or thing. In descriptive text, the writer usually uses the simple present tense. Here is the structure of a descriptive text: identification; identifies phenomenon to be described and description: describes parts, qualities, characteristics of the person or something that is described.

Clustering Technique
Clustering technique is one of the ways of teaching language, especially in writing skill for generating ideas. Oshima and Hogue (2006) define clustering technique is another brainstorming activity that can be used to generate ideas. In addition, clustering is a simple yet powerful technique in planning stage to help the students generate some idea (Richard and Renandya, 2002). For this study, clustering technique used is focused on spider cluster diagram. Below it is an example of spider cluster diagram.
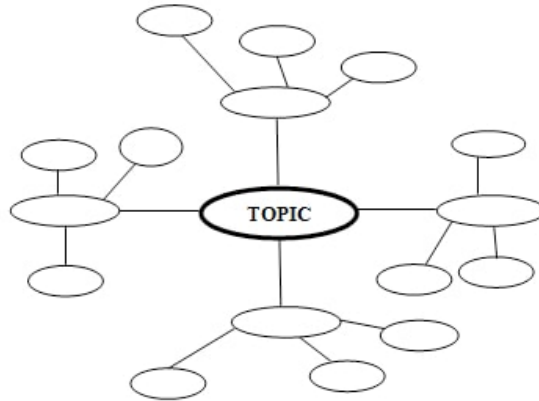
Figure 1: cluster diagram (adapted from Rumisek and Zemach, 2005).

Research Method

Methodology used in this study is *experimental quantitative research*. The experimental research is the only type of research that can test hypotheses to establish cause-effect relationships, then quantitative research is the collection and analyses of numerical data in order to explain, predict, or control phenomena of interest (Gay, Mills, and Airasian, 2006). Thus, this research uses numerical data collection to examine the hypotheses.

For research design, this study uses the one-group pre test-post test design. The one-group pre test-post test design involves a group that is pre tested (O), exposes to a treatment (X), and post tested (O) (Gay, Mills, and Airasian, 2006). In other word, this design has three steps: pre test (measuring the dependent variable), treatment (applying the independent variable), and post test (measuring the dependent variable again).

As this study uses the one-group pre test-post test design, sample of this study is chosen one class consist of twenty five students of secondary school selected by using purposive sampling technique. Purposive sampling (judgment sampling) is the process of selecting a sample that is believed to be representative of a given population (Gay, Mills, and Airasian, 2006). In other words, the researcher selects the sample using his experience and knowledge of the group to be sampled.

In order to get a reliable data and to increase the accuracy of the data, this study used inter-rater reliability. There were two raters for rating students' worksheet (pre test and post test worksheet); the first one is the researcher and the second one is the English teacher in that school. The researcher and the independent rater (the English teacher) analyzed the worksheet individually and separately. The two score is then joined together and divided by two. The data of pretest and posttest was analyzed by using SPSS version 22 with significant value 5% ($\alpha=0.05$) and/or 1% ($\alpha=0.01$).

Conclusion

The result of statistical analysis data reveals that there is a positive improvement in all aspects of writing score (content, organization, vocabulary, grammar, and mechanics). It can be seen on students' scores between pre test and post test which have statistical difference. However, only on two aspects, namely content and organization there is a statictically significant improvement. This result is relevant with the function of

clustering technique to generate and organize ideas well in planning stage (Oshima and Hogue, 2006). That is why the other three aspects of writing score, namely vocabulary, grammar, and mechanics do not increase statistically. The description of data is showed below.

Pre and Post Test
The pre test was conducted in order to find out the students' ability in writing descriptive text before the treatment. This score is used to compare with the post test score in order to see whether the students have the improvement in writing a descriptive text or not. The length of the text is 50-80 words and the time for the test is 80 minutes. The data of the pre test showed that the mean of pre test is 5.7. While, the post test is conducted to know the increase of students' ability in writing descriptive text after the three time treatments. In the post test, the text should consist of 50-80 words in 80 minutes. The statistical analyisis of post test score showed that the mean of post test is 7.1. For mean of each writing aspects in pre test and post test could be seen in the table below.

Table 1: Descriptive Statistics of the Data

	Pretes dan posttest	Mean	Std. Deviation	N
Content Score	Pretest	1.840	.4500	25
	Posttest	2.400	.5401	25
	Total	2.120	.5675	50
Organization Score	Pretest	.940	.5268	25
	Posttest	1.600	.5401	25
	Total	1.270	.6244	50
Vocabulary Score	Pretest	1.320	.4052	25
	Posttest	1.420	.4491	25
	Total	1.370	.4263	50
Grammar Score	Pretest	1.080	.4717	25
	Posttest	1.160	.3742	25
	Total	1.120	.4233	50
Mechanics Score	Pretest	.940	.6007	25
	Posttest	1.080	.4491	25
	Total	1.010	.5296	50

Based on the table above, it could be seen that the highest mean is content (1.84) and the lowest is organization and mechanics (0.94) in pre test. If it makes in line, there are content (1.84), vocabulary (1.32), grammar (1.08), organization and mechanics (0.94). While, in the post test, it happens the same pattern again which the highest mean is content (2.4) and the lowest is mechanics (1.08), but there is a difference here in posttes which organization has improved (1.6). As a result, there are content (2.4), organization (1.6), vocabulary (1.3), grammar (1.16), and mechanics (1.08) in line.

From the data above, it can be formulated some conclusions. First, students made many errors when they were writing in pre test. The most error made by student is in mechanics. Second, students make an improvement in post test, but mechanics still became the lowest aspect which student got. Third, students made a good

improvement in content and organization aspect in post test. It is different with pre test which organization is one of aspects that the mean is low. In brief, it can said that there is a quite good increased achievement on students' writing score in all writing aspects.

The Improvement of Students' Score

Based on the mean of pre test and post test results, it could be concluded that students' achievement in writing descriptive text increased after the treatments. The following table showed the increase of the mean between pre test and post test.

Table 2: Paired Samples Statistics of the Data

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest Score	5.700	25	1.8257	.3651
	Posttest Score	7.100	25	1.7619	.3524

Based on the table, it could be concluded that there is a good increase of students' score in the term of mean score in all wriring aspect, icluding content, organization, vocabulary, grammar and mechanics with the gain of mean at 4.1. Then, to see the significant differences of mean from each aspect of writing score between pre test and post test, it could be seen in the table below.

Table 3: Tests of Between-Subjects Effects of the Data

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Correct ed Model	Content Score	3.920[a]	1	3.920	15.865	.000	.248
	Organization Score	5.445[b]	1	5.445	19.133	.000	.285
	Vocabulary Score	.125[c]	1	.125	.683	.413	.014
	Grammar Score	.080[d]	1	.080	.441	.510	.009
	Mechanics Score	.245[e]	1	.245	.871	.355	.018

Based on the table, it could be concluded that students got a good improvement in writing after giving treatment (clustering technique) in all aspect of writing. However, only in two aspects got the statisticallly significant improvement. The two aspects are content and organization. The content score with *p=0.01* has significant level at 0.000230 and the organization score with *p=0.01* has significant level at 0.000065. Since those significant levels are lower than *p-value* 0.05 and 0.01, it indicates that there is a statistically significant improvement in content and organization aspect.

While, the vocabulary score with p=0.01 has significant level at 0.412519, the grammar score with *p=0.01* has significant level at 0.509637, and the mechanics score with *p=0.01* has significant level at 0.355319. Since those significant levels are higher than *p-value* 0.01, thus, it can conclude that there is no statistically significant improvement in vocabulary, grammar, and mechanics aspect.

In brief, these data show that cluster diagram could help students in their writing, especially in generating and organizing their idea. This finding is relevant to some ideas proposed by Ventis (1990), Wrick (1996), Richard, and Renandya (2002), Oshima and Hogue (2006). This finding also completely supports Styati's research finding (2010) that shows clustering technique is effective to teach writing descriptive text. Thus, cluster diagram appears to be a very effective tool for improving students' writing skill. Not only cluster diagram makes learning writing more interesting, but also cluster diagram makes students' ability in writing increase.

Hypothesis Testing

The hypotheses were tested by t-test formula. The t-test is the primary statistic used to determine whether or not means from two different scores are significantly different. The t-test was tested by using SPSS version 22. Two hypotheses were applied in this study: alternate hypothesis (H_a) and null hypothesis (H_0), where H_a shows if there is significance difference between the two scores while H_0 denotes that there is no significance difference of two scores.

Table 4: Paired Samples Test of the Data

| | | Paired Differences | | | | | | |
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Sig. (2-tailed) |
				Lower	Upper			
Pair 1 Pretest Score - Posttest Score	-1.4000	1.4142	.2828	-1.9838	-.8162	-4.950	24	.000

From the statistical analysis of the t-test in the table above, it can be seen that t-test result with *p=0.01* has significant level at 0.000047 for two-tailed test. The significant level is lower than *p-value* 0.01. In other word, it shows that the t-test of two scores between post test and pre test is 4.95. It is higher than *t-value* at the level of significance 5% *t-value*=2.064 and the level of significance 1 % *t-value*=2.797 for two-tailed test with the critical value for degree of freedom, *df* 24. Therefore, the null hypothesis *(H₀)* is rejected and the alternate hypothesis *(Hₐ)* is accepted. It means that there is a significant difference between the two scores of the post test and pre test. In other words, there is a statistically significant difference on student's writing achievement between pre test and post test scores when they were taught by using clustering technique.

Discussion

Based on the analysis of the students' composition in the pre test, it can be found that students got several problems related to content, organization, vocabulary, grammar, and mechanics. First of all, it is about describing another idea (topic), for example: there is a student that took 'my idol' as a topic. She started writing *'I have an Idola. His name Taylor alison swiff or taylor swiff. His is born in Pennysylvania, 21 years ago,'* but in the next sentence, she wrote another idea: *'His son are Andrea and Scoot Swiff',* then wrote about Andrea and Scoot Swiff until the end. *Second* point is about unclear idea, for example: *'Blood flows from her grandmaother's art than an opera*

singe.' Besides, there were some redundant sentences, for example: in identification, she wrote *'I have one idol. Her name is Katheryn Elizabeth'* and in description, she wrote again the same thing, *'My idol is Katheryn Elizabeth.'*

The next problem, there is other student who lack of competence in organizing logical order of ideas. First, in identification she explained about her house's measurement and location. After that, she continued by describing her house's condition. Then, in description she moved backward and explained again the measurement of her house. The students also could not decide where to put the identification of the text, and how to describe the topic in chronological order. From the explanation above, the writer summarized that they still did not understand the order of their composition, especially about the structure of descriptive text.

Furthermore, there are some points in grammar which can be headlined. The first point is *tobe*, for example: *'His name Taylor alison'*, *'Taylor very beautiful'*, *'That house very comfortable'* and *'my house in Banda Aceh.'* The second one is about final *'s'*, for example: *'four bed room.'* The third one is about *pronoun,* for example: *'His is born.'* The fourth point is about subject-verb agreement, for example: *'Taylor Swiff have blue eyes'* and *'my house it is not so big'.* The last is about words order, for example: *'my story house'* and *'tree two manggoe'.* In mechanics, there are about capital and full stop, for example: *'I have an Idola, His name Taylor alison'* and *'my house is not big. but it comfortable.'*

All of the problem in the pretest above had good improvement gradually. Based on the observation and analysis of their composition at the first day of treatment, it is still hard for them to use the correct grammar for their sentences. They still did not use the correct verb or the correct subject for the sentences and also they did not use *'to be'* for the sentences without verb. Besides, there were still some errors in mechanics, but there is a good improvement; they could organize their composition better than when they were pre tested. They knew what they were going to write and they would not lose the ideas because they had the cluster diagram to guide their ideas.

For the second day of treatment, the improvement in their writing is quite good. Their mistakes in grammar and mechanics seemed minor. However, some students did the same error in grammar and mechanics. Some of them still forgot to put *'tobe'* after the subject without verb and to put full stop at the end of the sentences. For example, *'He his very funny'* and *'She has fair SkiN.'* The most important part here, now they exactly had the ideas for constructing their writing. In other words, they knew what they wanted to write.

In last treatment, the students' compositions seemed better than at the first and the second treatment. There were few students that did many mistakes in their writing, but most of students made a good improvement in their writing. Besides, some students still did minor mistake in their writing. But all of them got a good improvement in their writing and also the important thing is the students did not feel that writing is a difficult thing anymore.

Then, at final test (post test), students made some quite big improvements. They made a good improvement, especially in content and organization. Besides that, after they were taught by using clustering technique, they began to understand how to generate

their ideas for a writing text. They started to focus their writing in one topic only. They also limited the content of their writing by only describing one particular object.

Implication and Limitation
There are some implication of this study. First of all, English teacher, specially English teacher in secondary school can apply clustering technique in order to improve students' achievement in writing activities because this is a good way to help students generate and organize their ideas. Besides, students especially secondary school students can create cluster diagram before they start writing something. However there are some weaknesses of this technique, such as students were confused in translating the word from students' L1 (Indonesia) into English and students made cluster diagram that is out of the topic. For the first problem, the student can consult to dictionary and then memorize the words. While, for the second one, the teacher can give a limited sub-topic list of cluster diagram to help the students.

There are some limitations for this study. The limited sample is main point. The sample are only twenty five students from one class. Then, the number of treatments are also limited, only three times meetings. Besides, the method used is not true experimental research, but it is pre experimental study. Therefore, the future researchers who intend to conduct the study more detail about the effect of using clustering technique for teaching writing, can make this study as a starting point. In addition, the future researcher can also conduct the study in the different level of students by using different kind of text.

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