Improving students' writing ability through clustering strategy

Titin Rahmiatin
Universitas Muhammadiyah Kendari

Andi Rachmawati Syarif
Universitas Muhammadiyah Kendari

Corresponding e-mail: titinrahmiatin19@gmail.com

Abstract: The objective of the study was to investigate the effect of clustering strategy on students' writing ability in descriptive writing. This research employs quasy experimental design by taking two classes as the sample of the study. The first year students of English language education department of Muhammadiyah University of Kendari who enrolled in academic year 2015/2016 were chosen as the population of the study. The sample was taken through lottery system in which students in class A was as an experimental group and class C as the control group. Both the classes were given similar pre-test and post-test, yet, the classes got different treatment. The experimental class was taught under clustering strategy during 6 meetings, while the control class was taught using conventional strategy. The student's ability was measured by using writing descriptive test. The data were analyzed by using descriptive statistical analysis and inferential statistics. The result showed that t count $\geq$ t table (-27,39921 $\geq$ -27,00477) at α = 0,05 and df 29, so H_0 was rejected and Ha was accepted. From the hypothesis testing, compared to the control class, students' writing ability in experimental class got significant improvement after being taught under clustering strategy.

Keywords: clustering strategy, descriptive text, writing ability.

Introduction

Generating and organizing ideas is one of the initial capabilities that must be possessed by students in writing skills, because students will be hard to start writing when the idea cannot be reworded into a composition. Generating and organizing idea is the ability to gather ideas and put it in writing. Good writing pictured from organizing a good idea.

Some methods or approaches have been used in teaching writing for *instance think pair share technique, mind mapping* and *clustering strategies*. These techniques are used to make students capable in generating idea and clustering technique is one approach that is suggested.

Clustering technique is one of the strategies in teaching writing that is useful to establish the author's ideas. Rico (2001) stated that the clustering technique is a technique for quickly intervening making the explicit idea and associations we have about the topic. It means that through clustering technique, students are expected to gain a lot of ideas and to connect the ideas according to the topic to be written. In other words that, this technique will assist students in finding as many ideas as possible and communicate in writing quickly and explicitly.

Writing courses is one of the subjects of tiered - writing I, II, III and IV- taught in English language education courses at Muhammadiyah Kendari University. These writing courses are courses that are required for students, which mean that students are obligated to pass in order to take advanced courses. However, based on interviews with several students of English education, almost all students argued that writing skill is a skill that is difficult to do. It relates

with the lengthy process required to produce a text that was absolutely perfect.

Research Methodology

Quasy experimental design was used which employs two classes as the sample of this study, namely class A and class C of first year students of English Educational Department, who enrolled in 2015/2016 academic years. Total number of students for each class was 30 students. Class A as an experiment class and class C as a control class. Both these classes got similar pre-test and post-test but they got different treatment. The experimental class was taught using Clustering Strategy, while the control class was taught under conventional strategy. The meetings was conducted in 6 meetings.

In collecting the data, the researcher conducted several stages namely pre-test, giving treatment and post-test. In pre-test session, the researcher asked the students of both classes to write a descriptive text in 150 -250 words. This stage was aimed to see the prior achievement of the students before treatment. The next stage was giving treatment to the experiment class. It was given for 6 meetings by exposing clustering on student composition. Last stage was giving post-test to the experiment and control class. The procedure was similar with the stage in pre-test session. In assessing students composition, the researcher used the *five marking scheme* proposed by Jacobs, et.al (1981).

The data gained in pre-test and post-test were then analyzed through statistical analysis. It employed descriptive statistical analysis and inferential statistical analysis.

1. Descriptive statistical analysis

Descriptive statistical analysis used to determine the frequency distribution of the values of the mean, standard deviation, minimum and maximum values and range score. The following formula is used;

a.   To obtain the mean value of the formula used is:

$$\bar{X} = \frac{\sum X_i}{N}$$

Where :

$\bar{X}$ = mean score

$\sum X_i$ = the total score of X

N   = total sample

b.   standard deviation

The formula of standard deviation:

$$= \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

where :

S   = standard deviation

N   = total sample

$\sum X_i$ = the sum of scores

$\bar{X_i}$ = the sum square of the scores

Inferential statistic

a.   The normality testing

In order to know whether the collect data had normal distribution, the researcher use Kolmogorov-Smirnov. This is done in the following steps:

1. Data is arrange from smallest to highest one

2. Determine the cumulative proportion (Kp)

3. Data then is transform in row value:

4. Determine zi (Z-table)

5. Determine broad curve of zi (z-table)

6. Determine a1 and a 2

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- a_2 = the difference between Z-table and kp on upper limit (a_2 = absolute(kp-Z-table))

- a_1 = the difference between Z-table and kp on lower limit (a_1 = absolute a_2-f$_i$/n)

7. Max absolute value of a_1 and a_2 annotated with Do

8. Determine D-table

Homogeneity testing

To know the homogeneity class, the researcher used following formula:

F= the biggest variant
the lowest variant

Criteria of homogeneity testing:

1. If $F_{count} \leq F_{table}$, means the variant is homogeny with level of significant 0,05.
2. If $F_{count} \geq F_{table}$, means the variant is not homogeny with level of significant 0,05. (Sugiyono, 2009)

Hypothesis testing:

To test the hypothesis, the researcher used t-test formula:

$$t = \frac{\overline{X_1} - \overline{X_2}}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$s^2 \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

Where:

$\overline{X_1}$= mean score of post-test of experiment class

$\overline{X_2}$ = mean score of post-test of control class

S_1^2 = Variance score of post-test of experiment class

S_2^2 = Variance score of post-test of control class

n_1= total sample of experiment class

n_2= total sample of control class

t = the value count of t-test

(Sudjana, 2005)

The criteria of hypothesis testing:

1. If $t_{count} \geq t_{table}$: H0 is rejected, Ha is accepted. This means that there is a significant improvement of students writing ability under clustering strategy.

2. if $t_{count} < t_{table}$: H0 is accepted, Ha is rejected. This means that there is no significant improvement of students writing ability under clustering strategy.

Findings

Based on statistical count, it can be drawn that there are some differences in classification among the frequency numbers of students who are in the category fair to Excellent. In the pre-test session there were two students, or about 7% were categorized as poor, 18 students or 60% was still considered fair and 10 students (33%) in the category of good to average. In contrast to the post-test session achievement of the students were in good and excellent categories. The table above also revealed that the session post-test students' ability in writing increased significantly, it can be seen the lack of students who are in poor to fair category but are in good to excellent classification. There are 26 students or about 87% are in the category of good to average and 4 students or 13% in the category Excellent.

While in experiment class, it can be drawn that there are some differences in classification among the frequency numbers of students who are in the category fair to Excellent. In the pre-test session there were two students, or about 7% were categorized as poor, 18 students or 60% was still considered fair and 10 students (33%) in the category of good to average. In contrast to the post-test session achievement of the students were in good and excellent categories. The table above also revealed that the session post-test students' ability in writing increased significantly, it can be seen the lack of students who are in poor to fair category but are in good to excellent classification. There are 26 students or about 87% are in the category of good to

average and 4 students or 13% in the category Excellent.

Table 1   Mean, standard deviation, maximum and minimum score on pre-test and post-test sessionboth of control and experiment class

class	Control class		Experiment class	
	Pre test	Post Test	Pre test	Post test
Mean	67.2	74.5	70.6	8.6
Standar deviation	7.84	7.20	5.72	4.77
Maximum score	80	85	85	90
Minimum Score	55	60	60	75

Normality test on the class treatment

Based on the existing normality test, the normality test results in the pre-test are:

$Lv \leq Lt = 0.178443257 \leq 0242$

Meanwhile, to test for normality in post-test (experiment class) is as follows:

$Lv \leq Lt = 0.132174374$

From normality test results, we can conclude that the data obtained in class treatment has normal distribution.

Normality test on control class

Based on the normality testing of control class, it is known that normality test of pretest and post-test on the control class are:

$Lv \leq Lt = 0.1922986 \leq 0.242$

$Lv \leq Lt = 0.168720649 \leq 0242$

The normality of the test results can be concluded that the data on control class lies in normal distribution.

Homogenity test

Based on test of homogeneity it is known that value $Fh \leq Ft$ where $Fh = 1.441093 \leq. 1.860811$

The homogeneity of the test results can be concluded that the data were analyzed had the same variant or homogeneous.

Hypothesis Testing

Based on the analysis table it is known that

$t \text{ count} = -27.39921$

$t \text{ table} = 2.0452296$

if $t \text{ count} \geq t \text{ table-} (\alpha + df)$, then Ho is rejected.

From the computation using SPSS, it was found that

$-27.39921 \geq 2.0452296 - (0.05 + 29) = -27.00477$

$-2739921 \geq 27.00477$

Conclusion:

$-2739921 \geq -27.00477$, then Ho is rejected. This means that there is a significant increasing of the use clustering strategies to student writing ability.

Discussion

This study aims to determine whether there was a significant influence on the use of clustering strategy in the first year student writing skills in English Education. Hypothesis tests found that

the use clustering strategy has a significant effect on the ability of students writing. It is in line with a research result, who was conducted by Hopkins (2010) entitled *"Improving Tenth-Grade Students' Five-Paragraph Essay Writing Skills Using Various Writing Strategies, Guided Assignments, and Portfolios for Growth"*, confirmed that the use of strategies that one strategy of clustering the ability to write essays have managed to improve students' skills in writing the main essay. Another study by Fowler (2012), entitled *"The Effects of Four Writing Strategies on Fifth Graders' Production of Written Ideas across Three Aims of Discourse"* also supports previous research that students who use the strategy of clustering produce writing is better than other strategies. The improvement of students writing ability by using a clustering strategy can be caused by several factors:

The first factor is through clustering strategy, the vocabulary of students is increasing. This provides a positive impact on student writing, in which the number of words written by the students is increasing and varied. This is in line with the goal of clustering strategy itself put forward by Wiesen danger (2001) that this clustering strategy aims to build and develop the students' vocabulary as well as their organizing skills that are based on interaction with other learners or other students as a source of vocabulary.

The second factor, namely the establishment of a pleasant situation in writing through this clustering strategy. As it is known that the writing skills sometimes being a skill that is considered difficult because Rico (2001) stated that the most difficult part is the difficulty to write ideas into writing, not knowing what to write, what the theme is and how to start writing. Through this strategy of clustering these obstacles can be overcome since it can stimulate student to feel enjoy in learning. This is in accordance with the opinion of De Porter and Hernacki (2011) which states that this clustering strategy helps students to develop imagination and creativityin written language. As it is known that this clustering strategy is a strategy undertaken in the early stages of the writing process (pre-writing stages) so it is important to start early stages of writing with favorable conditions so that the ideas can be better developed. Research conducted by Shafiee,

Koosha and Afghari (2015) through research entitled "CALL, Prewriting staegies and EFL writing Quantity" found that the use of pre-writing strategies, one of which is the clustering strategies have a positive effect on student writing.

The third factor that is capable of clustering strategies to make students more creative in developing ideas in their writing systematically. This is consistent with the definition put forward by Langan (2002) that clustering strategy or commonly known as a strategy mapping and diagramming is a technique that can be used to develop ideas in writing. Pharr and Santi (2005) also stated that the clustering strategy, students write a topic in the midst of the paper and then write down ideas related to the topic and connecting those ideas with stripe. How this course helps students in stimulating ideas they have and organize these ideas before expanding it into a paragraph.

Conclusion

Based on the results and the discussion on this research, it can be concluded that the first semester of students' writing ability of English education increased significantly through the treatment during 6x meetings using clustering strategy. The improving students writing ability through clustering strategyis due to clustering strategy helps students to produce more vocabulary and varied, students are able to develop ideas systematically and stimulate writing learning more fun for students.

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