

THE USE OF CLUSTERING TECHNIQUE TO IMPROVE STUDENTS' SKILL IN WRITING HORTATORY EXPOSITION TEXT

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Abstract

The research was aimed to find out whether clustering technique was effective or not to improve the students' skill in writing hortatory exposition text. The design was quasi experimental research that administered pre-test and post-test. The research employed cluster sampling. The results of data analysis showed that the value of t_{counted} was 5.772 with degree of freedom $(df) = N_x + N_y - 2 = 23 + 23 - 2 = 44$, level of significance 0.05, and t_{table} was 2.017. The results showed that t_{counted} was higher than t_{table} . It means that the research finding was accepted. In other word, the use of clustering technique in teaching writing was effective to improve students' skill in writing hortatory exposition text of the eleventh grade students' at SMA NEGERI 1 PALU.

Keywords: Writing; Hortatory Exposition; Clustering Technique

INTRODUCTION

Sokolik in Linse & Nunan (2006) stated that writing is the combination between process and product. The process is when collecting the ideas that can create product which can be read by the readers. As a result, writing is not only the activity of setting down some words or sentences into the written language, but also the activity of arranging words into well-organized of writing. Writing is more complex than other language skills since it involves structure, vocabulary, coherence, and cohesion. All students can be taught to express their ideas clearly and correctly. One thing is that students can learn to write effectively when teachers give them encouragement to express their ideas, thoughts, experience, and feeling into written language. Writing actually encourages thinking and learning when students view writing as a continuous process.

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As Rinansyah (2012:2) asserts “Based on syllabus of school-based curriculum (KTSP) the students are required to learn some genre types such as Narrative, Report, Spoof, Analytical Exposition, Hortatory Exposition, etc. They must be able to express their ideas in the form of written text. It can be said that the target competence through teaching several kinds of texts that want to develop students writing ability in the form of written text.” Therefore, the researcher limited this study concerning on one type writing - Hortatory Exposition text of the second year students of SMA NEGERI 1 Palu. In order to gain the improvement of the second year students’ writing ability, the researcher applied clustering technique on hortatory exposition text. In addition, the specification of this study is to find out the score of students’ writing skill been improved by using clustering technique.

As well as analytical exposition text, hortatory exposition text appertains into the academic writing. This argumentative essay requires the students to have a critical thinking, scientific ideas, and argumentative expression. Those characteristics cause a lot of students getting frustrated in composing this text. In addition, a lot of the second grade students thought that it was a difficult writing assignment they had. They spent a lot of time focusing only on how to start writing. This factor may come from the students’ experience about hortatory exposition text which was still low in composing this text. Therefore, referring to the syllabus of school - based curriculum (KTSP) this kind of text is only taught at the second grade of senior high school on the second term. It is different from other kinds of genres such as Narrative, Report, Spoof, Description text, etc., however, they had been introduced and learned since junior high school level. Therefore, many students regard that this text is still a new thing for them. From that case, both teachers and students need a significant way of teaching and learning in order to improve student achievement in writing. It was the appropriate condition to do a research in order to solve students’ problem in writing.

The success of teaching writing needs a great effort. As an effort to improve the students’ writing skill and solve their writing problems, the researcher provided them by using clustering technique. The researcher believed that the students writing skill could be improved by using clustering techniques in hortatory exposition text. It was expected that by using this technique, the student’s problem could be solved in writing activity. In addition, it generated their vocabulary and grammar as well. The form of clustering technique was easy to understand especially by the students and it could give a new style in writing activity. In short, the

implementation of clustering technique gave a contribution for both teachers and students in improving the ability of the second year of the students, especially in SMA NEGERI 1 Palu.

The research question is *“can the use of clustering technique improve the students’ skill in writing hortatory exposition text of the eleventh grade science major students of SMA NEGERI 1 PALU?”* It was aimed to find out whether the use of clustering technique in writing hortatory exposition text of the eleventh grade science major students’ at SMA NEGERI 1 PALU can be improved or not.

METHODOLOGY

The researcher used quasi experimental design which has aimed to prove that the use of clustering technique could improve the teaching writing of hortatory exposition text. The sample of this research consists of two groups; they were experimental group and control group. The experimental class was the group that received the treatment while the control class was the one that did not get the treatment. Both groups were given pre-test and post-test. The researcher used a formula quoted from Best (1981) as follow:

$$\begin{array}{ccc} R_1 & O_1x & O_2 \\ R_2 & O_1 & O_2 \end{array}$$

Where:

R_1 = experimental group

R_2 = control group

x = treatment

O_1 = pre-test

O_2 = post-test

In the one group pre-test and post-test design a single group of subjects was given a pre-test (O_1), then the treatment (X), and then the post-test (O_2). The pre-test and post-test were the same, but both of test was given at different times. The result of test was examined that there was a score changing from pre-test to post-test.

The population of this research was the eleventh grade students of SMA NEGERI 1 PALU which has six parallel classes in natural science they are XI IPA 1, XI IPA 2, XI IPA 3, XI IPA 4, XI IPA 5, and XI IPA 6. In this research, the researcher used cluster sampling technique, because all of the populations were homogenous and had same ability in English so

it needs two equivalent classes. The samples of this research were XI IPA 4 and XI IPA 5. Each class consists of 23 students, so the total number of the sample is 46.

The variables of this research consist of independent variable and dependent variable. The independent variable was clustering technique and the dependent variable was students' skill in writing hortatory exposition text.

In this research, the researcher gave the pre-test before the treatment and gave the post-test after the treatment. Test was used as the instrument to gather the data in order to measure students' achievements in writing hortatory exposition text before and after treatment. The researcher used two kinds of tests to collect data relating the students' ability in writing skill. They are pre-test and post-test. The test that was given to the students' was written test. In scoring each item of writing hortatory exposition text, the researcher used the scoring procedures for writing assessment as Weigle (2009) asserts:

Table 1
Scoring Rubric of Writing

No	Writing Components	Score	Explanation
1.	Content	3	Relevant and adequate answer to the task set.
		2	For the most part answers the tasks set, though there may be some gaps or redundant information.
		1	Answer of limited relevance to the task set. Possibly major gaps in treatment of topic and/or pointless repetition.
		0	The answer bears almost no relation to the task set. Totally inadequate answer.
2.	Organization	3	Overall shape and internal pattern clear.
		2	Underlying structure not sufficiently controlled. Some organizational skills in evidence, but not adequately controlled.
		1	Organizational skill adequately controlled. Very little organization of content.
		0	No apparent organization of content.
3.	Vocabulary	3	Almost no inadequacies in vocabulary for the task. Only rare inappropriacies and/or circumlocution.
		2	Some inadequacies in vocabulary for the task. Perhaps some lexical inappropriacies and/or circumlocution.
		1	Frequent inadequacies in vocabulary for the task. Perhaps frequent lexical inappropriacies and/or repetition.
		0	Vocabulary inadequate even for the most basic parts of the intended communication.
4.	Grammar	3	Almost no grammatical inaccuracies.
		2	Some grammatical inaccuracies.
		1	Frequent grammatical inaccuracies.
		0	Almost all grammatical patterns inaccurate.
5	Mechanics	3	Almost no inaccuracies in punctuation and spelling.
		2	Some inaccuracies in punctuation and spelling.
		1	Low standard of accuracy in punctuation and spelling.
		0	Ignorance of conventions of punctuation and almost all spelling inaccurate.

The pre-test was given to both experimental class and control class. It was given to the students in order to know their first ability before getting the treatment. The classification test that was given to the students was hortatory exposition text. The result of these tests was

compared with the result of post test. The treatment was conducted for eight meetings. The activities spent 1 x 45 minutes for each meeting. In order to make the treatment successful, the researcher provided lesson plan. To the control group, the researcher taught them with the same material but used another technique. The researcher taught experimental class how to make hortatory exposition text through clustering technique. The tests items that were given in pre-test and post-test were the same. The aim of post-test was to measure the student's progress in comprehending writing, to know the effectiveness of the treatment and to answer the hypothesis.

A standard technique was used to show the result of research was reliable to measure the writing test. The researcher used the scoring element of writing and used more than one scoring element. For knowing the ability of students, the researcher firstly computed the individual score by using the formula by Purwanto (1992) as follows:

$$Np = \frac{R}{SM} \times 100$$

Where:

Np = nilai persen yang diharapkan (percentage value)

R = skor mentah siswa (individual score)

SM = skor maksimum dari test (maximum score of the test)

Then the researcher computed the mean score of students by used the formula purposed by Hatch & Farhady (1982:55) as follows:

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

Where:

\bar{X} = average scores

$\sum X$ = value achieved

N = total number of students

After getting the mean score of both experimental and control groups, the researcher computed the mean score and squared deviation in order to know if there was significant different between the result of pre-test and post-test of experimental and control group. The researcher used a t-test formula proposed by Arikunto (2006:312) as follows:

$$\frac{\sum X^2}{N} = \frac{\sum x^2 - \frac{(\sum x)^2}{N}}{N} \qquad \frac{\sum Y^2}{N} = \frac{\sum y^2 - \frac{(\sum y)^2}{N}}{N}$$

Where:

Σx^2 = deviation score of experimental group

Σy^2 = deviation score of control group

N = number of students

Then the researcher analyzed the data in order to know the significant difference or testing hypothesis by using t-count formula as proposed by Arikunto (2006:311) as follows:

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\Sigma x^2 + \Sigma y^2}{nx + ny - 2} \right] \left[\frac{1}{nx} + \frac{1}{ny} \right]}}$$

Where:

M_x = mean of experimental group

M_y = mean of control group

Σx = sum of squares deviation of experimental group

Σy = sum of squares deviation of control group

N_x = number of experimental group

N_y = number of control group

FINDINGS

After obtained the data of both experimental and control group in pre-test and post-test, the researcher calculated the data by using statistical analysis. The experimental group's deviation on pre-test and post-test was presented in table 2 and the control group's deviation on pre-test and post-test was presented in table 3:

Table 2
The Square Deviation (x²) of the Experimental Class of Pre-test and Post-test

No.	Initial	Students' Score		Deviation	X ²
		Pre-Test	Post-Test		
1.	MD	55.55	88.88	33.33	1110.88
2.	RA	55.55	88.88	33.33	1110.88
3.	PL	55.55	88.88	33.33	1110.88
4.	PS	55.55	88.88	33.33	1110.88
5.	NH	55.55	88.88	33.33	1110.88
6.	MA	77.77	88.88	11.11	123.43
7.	NC	66.66	88.88	22.22	493.72
8.	MR	55.55	88.88	33.33	1110.88
9.	SR	55.55	88.88	33.33	1110.88
10.	HS	88.88	100.00	11.12	123.65
11.	GH	77.77	100.00	22.23	494.17
12.	LI	55.55	88.88	33.33	1110.88
13.	NI	100.00	100.00	0	0
14.	SP	77.77	100.00	22.23	494.17
15.	IP	77.77	88.88	11.11	123.43
16.	IT	66.66	100.00	33.34	1111.55
17.	RM	77.77	100.00	22.23	494.17
18.	DT	77.77	100.00	22.23	494.17
19.	SU	55.55	88.88	33.33	1110.88
20.	NR	77.77	100.00	22.23	494.17
21.	DR	77.77	100.00	22.23	494.17
22.	FP	55.55	100.00	44.45	1975.80
23.	DA	66.66	100.00	33.34	1111.55
Total		1566.52	2166.56	600.04	18026.07

Based on the table above, the researcher then computed the means score of the deviation of the test. The researcher applied the formula proposed by Hatch & Farhady (1982:55) as follows:

$$M_x = \frac{\sum X}{N} = \frac{600.04}{23} = 26.08$$

Thus, the mean deviation of experimental group was **26.08**.

Table 3
The Square Deviation (x²) of the Control Class of Pre-test and Post-test

No.	Initial	Students' Score		Deviation	X ²
		Pre-Test	Post-Test		
1.	SB	55.55	77.77	22.22	493.72
2.	AA	55.55	77.77	22.22	493.72
3.	MD	66.66	77.77	11.11	123.43
4.	JC	66.66	77.77	11.11	123.43
5.	DP	66.66	77.77	11.11	123.43
6.	YK	66.66	66.66	0	0
7.	LH	66.66	77.77	11.11	123.43
8.	FD	66.66	77.77	11.11	123.43
9.	SR	66.66	77.77	11.11	123.43
10.	DA	66.66	66.66	0	0
11.	AI	66.66	77.77	11.11	123.43
12.	AR	55.55	66.66	11.11	123.43
13.	AD	55.55	66.66	11.11	123.43
14.	AS	55.55	66.66	11.11	123.43
15.	IC	55.55	66.66	11.11	123.43
16.	KI	55.55	77.77	22.22	493.72
17.	RA	66.66	66.66	0	0
18.	RR	55.55	77.77	22.22	493.72
19.	AS	55.55	77.77	22.22	493.72
20.	IA	66.66	77.77	11.11	123.43
21.	WP	55.55	66.66	11.11	123.43
22.	AK	66.66	66.66	0	0
23.	IM	66.66	77.77	11.11	123.43
Total		1422.08	1688.72	266.64	4196.62

Based on the table, the researcher then computed the means score of the deviation of the test. The researcher applied the formula proposed by Hatch & Farhady (1982:55) as follows:

$$M_y = \frac{\sum y}{N} = \frac{266.64}{23} = 11.59$$

Therefore, the mean deviation of control group was **11.59**.

After calculating the mean deviation of the both groups, the researcher calculated the sum of the square deviation by using the formula below:

$$\Sigma X^2 = \frac{\Sigma x^2}{N} - \frac{(\Sigma x)^2}{N}$$

$$\Sigma X^2 = \frac{18026.07}{23} - \frac{(600.04)^2}{23}$$

$$\Sigma X^2 = \frac{18026.07}{23} - \frac{360048}{23}$$

$$\Sigma Y^2 = \frac{\Sigma y^2}{N} - \frac{(\Sigma y)^2}{N}$$

$$\Sigma Y^2 = \frac{4196.62}{23} - \frac{(266.64)^2}{23}$$

$$\Sigma Y^2 = \frac{4196.62}{23} - \frac{71096.88}{23}$$

$$\Sigma X^2 = 18026.07 - 15654.26$$

$$\Sigma Y^2 = 4196.62 - 3091.16$$

$$\Sigma X^2 = 2371.81$$

$$\Sigma Y^2 = 1105.46$$

Therefore, the sum of square deviation of experimental group was **2371.81** and the sum of score deviation of control group was **1105.46**. Next, the researcher continued to find out the score of the two groups using t_{table} to see whether there was significant difference between the means of the two classes or not. The scores of two groups were presented as follows:

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\Sigma x^2 + \Sigma y^2}{nx + ny - 2} \right] \left[\frac{1}{nx} + \frac{1}{ny} \right]}}$$

$$t = \frac{26.08 - 11.59}{\sqrt{\left[\frac{2371.81 + 1105.46}{23 + 23 - 2} \right] \left[\frac{1}{23} + \frac{1}{23} \right]}}$$

$$t = \frac{14.49}{\sqrt{\left[\frac{3477.27}{44} \right] \left[\frac{2}{23} \right]}}$$

$$t = \frac{14.49}{\sqrt{[79.02][0.08]}}$$

$$t = \frac{14.49}{\sqrt{[6.32]}}$$

$$t = \frac{14.49}{2.51}$$

$$t = 5.772$$

After giving the treatment and analyzing the data, the researcher found that the $t_{counted}$ was 5.772. To know the significant difference of the test, the researcher compared the value of $t_{counted}$ (5.772) with the value of t_{table} (2.017), the researcher obtained that $t_{counted}$ was higher than t_{table} . It means that the research hypothesis was accepted. In the other word, the use of clustering technique was effective in improving students' skill in writing hortatory exposition text of the eleventh grade students at SMA NEGERI 1 PALU.

DISCUSSION

The scope of research focused on teaching writing on how students make hortatory exposition text based on the generic structures by using clustering technique. The generic structures are thesis statement, argumentation, and recommendation by looking at the writing scoring system which is organization, vocabulary, and mechanics.

The researcher used two kinds of test to know the improvement of students' writing skill clearly. They were pre-test and post-test. The pre-test was given to both experimental class and control class. It was given to the students in order to know their first ability before getting the treatment. The test that was given to the students was hortatory exposition text. There were three elements that the researcher used in scoring the students' scores; they were organization, vocabulary, and mechanics. Referring to the obtained score, it could be seen that most of the students got low score in mechanics element. The pre-test result was that they found difficulties in punctuation, spelling, and capitalization. Based upon the result of the test, it can be known by using of the percentage of the students' score. The students who ignore conventions of punctuation and almost all spelling inaccurate were 65.21 %. Furthermore, the students who had the vocabulary inadequate even for the most basic parts of the intended communication were 21.73 %. For the last one, there were only 4.34 % students who had no apparent organization of content. Incidentally, the researcher compared the result of pre-test with the standard score of the school which was 76 %. Indeed, it can be said that the students' skill in writing hortatory exposition text was very poor.

After knowing the result of the pre-test, consequently, the researcher conducted the teaching writing which focused on hortatory exposition text. Based on the result of the pre-test, the students expected that the mechanics were the difficult element. The problem occurred because they could not master the punctuation, spelling, and capitalization. They did not put the punctuation in the right place and did not follow the capitalization rules. Besides, their writing was still ungrammatical correct in spelling. To solve the students' problem in writing, the researcher applied clustering as her technique. It was used to make the students know easier composing hortatory exposition text. In this technique, she provided an example of this text with the organizing structures. Therefore, the researcher explained the generic structures, the definition, the social function, and the language features. Then, the researcher asked the students to make a text by using their own word. Next, the students used clustering technique as

their technique in writing activity. In the teaching learning process during the treatment, the researcher taught them how to make a hortatory exposition text through clustering technique. Meanwhile in control group, the researcher did the treatment also, but conventional teaching was applied in this class. The researcher did not use any specific techniques which could support the teaching learning process in control group.

To know the improvement of the students' writing skill after giving the treatment, the researcher conducted the post-test in experimental and control group. Based on the result of the post-test, it showed that both groups had progress, but the progress itself was different. The total score of the students in experimental group was higher than the total score in control group because the teaching learning process conducted in the class by using clustering technique could influence it. The result of the post-test was different from the result of the pre-test. It can be described by using the percentage. The students who had low standard of accuracy in punctuation and spelling were 21.73 %. Furthermore, there were no students who had frequent inadequacies in vocabulary and very little organization of content for the task. Therefore, the result verified that applying clustering technique could improve the students' skill in writing hortatory exposition text.

Regarding to the findings, the researcher found that the previous studies written by Rinansyah (2012) used clustering as the technique in teaching writing. Writing among students takes less attention to the process of its activities. They tend to be desperation, taking a long process and unorganized result. Clustering technique was designed to overcome students' difficulties in writing. Based on the two studies above, the researcher might conclude that clustering technique was not only used to teach the students' in writing, but also applied to solve the students' problem in making hortatory exposition text. DePorter & Hemacki in Hermansyah (2012:2) assert "Clustering is the way to classify the ideas and share into a piece of paper by making the connection with the core of the idea." Referring to the statement, it could be said that clustering is powerful tool in free writing to generate the ideas from mind. It is a good way to develop idea before starting the writing activity.

By looking at the result of testing hypothesis, the students' writing skill of the eleventh grade science major students of SMA NEGERI 1 PALU can be improved by using clustering technique. The researcher found that the t_{counted} was higher than the t_{table} . It means that the research hypothesis is accepted.

CONCLUSION AND SUGGESTIONS

After collecting and analyzing the data, the researcher concluded that the use of clustering technique was effective in improving students' skill in writing hortatory exposition text of the eleventh grade students' at SMA NEGERI 1 PALU. It can be drawn from the result of mean deviation between the pre-test and the post-test in the experimental group and the control group. Then, because t_{counted} was higher than t_{table} so there is a significant difference between students who have been taught using clustering technique and the ones using another technique. Since t_{counted} is higher than t_{table} it means that clustering technique was effective to improve students' skill in writing hortatory exposition text at the eleventh grade science major students of SMA NEGERI 1 PALU.

Having conducted the research, the researcher has proved that clustering technique is very effective in teaching hortatory exposition text. The researcher provides some suggestions because writing should be taught based on the interest of the students. For the students, they should improve their skill in writing because they have to understand the topics that have been introduced by the teacher. Students have to learn and practice writing using clustering technique in order to help them easier to get idea. Therefore, teachers should be creative to make the class alive, so the students do not get bored in teaching learning process. Teacher should motivate the students also to learn English creatively. Before asking the students to make a text, the teacher should explain the definition, the generic structures, the social function and the language features of hortatory exposition text. Teacher had to control the teaching learning process while the students apply clustering technique unless the circumstances in the classroom become uncontrolled because the students sometimes get confused in composing hortatory exposition text.

REFERENCES

- Arikunto, S. (2006). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Jakarta: PT. Bina Aksara.
- Best, J.W. (1981). *Research in Education*. Fourth Research. Prentice Hall Inc: New Jersey.
- Hatch, E & Farhady, H. (1982). *Research Design and Statistics for Applied Linguistics*. Rowley Mt: Newbury House.
- Hermansyah. (2012). *Teaching Descriptive Writing Using Clustering Technique at the Second Grade Students of MAN Cimahi*. Bandung: STKIP. Unpublished Skripsi.

- Linse, C. & Nunan, D. (2006). *Practical English language Teaching*. Singapore: McGraw Hill Companies Inc.
- Martin, J.R. & J. Rothery. (1986). *What a Functional Approach to the Writing Task Can Show Teachers about Good Writing*. London: France Pinter 241-245.
- Purwanto, N. (1992). *Prinsip-Prinsip dan Teknik Evaluasi Pengajaran*. Bandung: PT. Remaja Pesdakarya.
- Rinansyah, H. (2012). *Using Clustering Technique To Improve the Ability of the Second Year Students of SMAN 4 PEKANBARU in Composing Hortatory Exposition Text*. Pekanbaru: Unpublished Skripsi.
- Weigle C. S. (2009). *Assessing Writing*. Cambridge: Cambridge University Press.