

THE EFFECT OF WORD CLUSTER STRATEGY ON THE READING COMPEHENSION OF THE SECOND YEAR STUDENTS OF SMPN 1 PANGKALAN LESUNG

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Abstract: This pre-experimental study is aimed at finding out if there is a significant effect of Word Cluster teaching technique on the ability of the second students of SMPN 1 Pangkalan Lesung in comprehending descriptive texts. The design of the study is one group pre-test-treatment-posttest design. There are 3 classes in the second year. Class VIII B in the second semester of academic year 2018/2019 that consist of 30 students are chosen as the sample by using cluster random sampling technique. The instrument of the test is in the form of multiple choices which consist of 40 items about descriptive texts. To collect the needed data the treatments were conducted for six times. The students' scores were analyzed by using SPSS (Statistical Package for the Social Sciences) version 23.00 for windows. The results of the data analysis show that the mean score of the pre-test is 57.50 and the mean score of the post-test is 63.41. It means that the value of t-test is higher than t-table ($3.088 > 2.045$). The alternative hypothesis (H₁) of this study is accepted. In other words, there is a significant effect of Word Cluster teaching technique on the reading comprehension ability of the second year students of SMPN 1 Pangkalan Lesung. The implication of this finding is beneficial for the teachers in teaching and learning English especially in teaching reading.

Key Words: Effect, Word Cluster, Reading Comprehension

PENGARUH STRATEGI WORD CLUSTER TERHADAP KEMAMPUAN PEMAHAMAN MEMBACA SISWA-SISWI KELAS SEBELAS DI SMPN 1 PANGKALAN LESUNG

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Abstrak: Penelitian pre-experimental ini bertujuan untuk mengetahui apakah ada pengaruh yang signifikan dari strategi Word Cluster terhadap kemampuan siswa kelas 2 SMPN 1 Pangkalan Lesung dalam memahami teks deskriptif. Desain penelitian ini adalah satu kelompok pre-test-treatment-posttest. Ada 3 kelas di tahun ajaran kedua. Sebanyak 30 siswa kelas VIII B pada semester kedua tahun akademik 2018/2019 dipilih sebagai sampel dengan menggunakan teknik cluster random sampling. Instrumen tes ini dalam bentuk pilihan ganda yang terdiri dari 40 soal tentang teks deskriptif. Untuk mengumpulkan data yang dibutuhkan perlu dilakukan sebanyak enam kali. Skor siswa dianalisis dengan menggunakan SPSS (Paket Statistik untuk Ilmu Sosial) versi 23.00 untuk windows. Hasil analisis data menunjukkan bahwa nilai rata-rata pre-test adalah 57.50 dan nilai rata-rata post-test adalah 63.41. Itu berarti bahwa nilai t-test lebih tinggi dari t-table ($3.088 > 2.045$). Hipotesa alternatif (H₁) dari penelitian ini diterima. Dengan kata lain, ada pengaruh yang signifikan dari strategi Word Cluster pada kemampuan membaca siswa tahun ajaran kedua SMPN 1 Pangkalan Lesung. Implikasi dari temuan ini bermanfaat bagi para guru dalam pengajaran dan pembelajaran bahasa Inggris khususnya dalam pengajaran membaca.

Kata Kunci: Pengaruh, Strategi Word Cluster, Pemahaman Membaca

INTRODUCTION

English is one common of foreign language in Indonesian students that must be learned from junior high school up to university level. In learning English language, reading is one of the important skills that should be learned by students. From activity of reading, students can absorb all the information, experience and idea provide in books. According to Burn (2003), reading is an interactive process. The process means that the reader engages in an exchange of idea with an author via the text. In understanding a text, it is a complex activity that involves both perception and thought. The students reading ability is very important because by having good ability to read, they will be able to improve their knowledge. Then, they need to be exercised and trained in order to have a good ability in comprehend the text. The students also need to be taught how to read well, they are able to master and read some reading materials effectively.

Based on the 2013 Curriculum, the students not only can read the text books as usual but also to be able to comprehend what they read. The comprehension of reading will be shown by answering correctly question, in which the text provided such as to know main idea, factual information, vocabulary, reference, and inference as stated by King and Stanley (1989) as the five components of reading. In this research, the writer chooses descriptive text because it is included in the syllabus for the second year students of SMPN 1 Pangkalan Lesung. As one of the text types, descriptive text is compulsory to be learnt by the second year students of junior high school.

In this research, the writer use Word cluster strategy as part of Cooperative Learning to help the students in comprehend descriptive texts. The use cooperative learning in teaching can motivate students to be more active during the teaching and learning process. Panitz (1999) explained the main benefits of cooperative learning, which increased students' self-confidence, which in turn motivates students to participate in the learning process, results in higher levels achievement by all participants, students help each other, build supportive communities that increase the level of performance of each member, and raise higher self-esteem for all students. Word cluster is the referred name of word mapping, semantic mapping and concept mapping (Antonacci, and O'callaghan, 2012). This strategy is one of the most powerful approaches to teaching reading because it engages students in thinking about word relationships. Word cluster strategy can help the students to make connections between their prior knowledge and the new words. They show conceptual relationships between words. This strategy also gives positive impact in terms in which students memorize the target words and recognize those words in variety of contexts. By showing these relationships student can modify their existing framework of knowledge and more effectively construct meaning when they meet the words in the text.

Due to the statements mentioned above, the writer decides to conduct a research by applying a strategy that might be help the students ability in comprehending text especially descriptive texts entitled "The effect of Word Cluster Strategy on the Reading Comprehension of the second year students' of SMPN 1 Pangkalan Lesung".

METHODOLOGY

This research was conducted in SMPN 1 Pangkalan Lesung. The design of this research is a pre-experimental. This research was conducted by using, one group pre-test – post-test. The writer gave students pre-test before treatment, and gave post-test after treatment.

Table 1.1 Pre-test and Post-test Design

Pre-test	Treatment	Post-test
O1	X	O2

(Sugiyono, 2011)

In this study, Pre-test (O1) is aimed to find out the students' prior reading comprehension before the treatment was given. Treatment (X) is aimed teach by using word cluster strategy on descriptive texts. Post-test (O2) is aimed to see improvement of the students' reading comprehension after teaching by using word cluster strategy on reading descriptive texts.

The population of this research is the second year students of SMPN 1 Pangkalan Lesung. There are three classes of this class with the number of students is 90. The population can be seen in the following table:

Table 2. The Population of the Second Year Science Students of SMPN 1 Pangkalan Lesung

Classes	Total of Students
VII	30
VIII	30
IX	30
Total	90

There are three classes in the population of the second year students of SMPN 1 Pangkalan Lesung but the writer only took one class as the sample. To know which class was taken as the sample, the writer used cluster random sampling. The writer provided three pieces of paper into a bottle, one piece of paper was written the word "sample" and others were blank. Then, the writer asked the chairman of each class to take one paper from the bottle randomly. Finally, the one who got the paper with the word "sample" became the sample of the research. The sample of this research was VIII B whose chairman took "sample" paper consisted of 30 students.

RESULT AND DISCUSSIONS

After collecting the data, the writer analyzes the results of the research. The results of this research were presented by showing t-test table comparing the results of students reading ability in the pre-test and post-test. The data were collected by giving a reading test. The students answer 40 questions which eight components, they are: main idea, factual information, reference, inference, social function, vocabulary, generic structure, language features.

The results of this research show that the mean score of post-test (63.41) is higher than the mean score of pre-test (57.50). This result shows that the students score after receiving the treatment by using word cluster strategy are better than the score before using the treatment. The data analysis shows that the t-test is higher than t-table ($3.088 > 2.045$). It means that alternative hypothesis is accepted and null hypothesis is rejected.

The Results of the Pre-test

The pre-test was conducted to measure students' ability in reading comprehension before applying Word Cluster strategy in instructional process. The result of pre-test is show on table 1.3. It shows that the average score of the students' reading ability in the pre-test is 57.50.

Table 3. The Result of Pre-test

Mean	N	Median	Mode	Std. Deviation
57,50	30	52,50	45,00	16,894

Table 1.3 shows that the mean score of 30 students is 57, 50. According to the table criteria students' score, the mean is *mediocre* qualification. Meanwhile, the median score is 52,50 and the most frequent score is 45,00 as the mode. The percentage of the students' scores can be seen in the following table:

Table 4. The Classification of the Students' Ability in the Pre-test

No	Range Score	Frequency	Percentage	Category
1	81 – 100	5	16, 7	Excellent
2	61 – 80	6	20, 0	Good
3	41 – 60	15	50, 0	Mediocre
4	21 – 40	4	13, 3	Poor
5	0 – 20	0	0, 0	Very Poor
Total		30	100%	

(Adapted from: Harris, 1974)

The table 1.4 reveals that most students have medium level of reading comprehension. Based on the table, 5 students (16,7%) are in *excellent* level, 6 students (20,0%) are in *good* level, 15 students (50,0%) are in *mediocre* level, and 4 students (13,3%) are in *poor* level. There is no student in *very poor* levels. Further, the data of students average achievement for each component reading comprehension can be seen on table 1.5:

Table 5. The Students' Ability of Each Component of Reading Comprehension in the Pre-Test

No	Aspect of Reading	Average
1	Main Idea	57,33
2	Factual Information	59,33
3	Vocabulary	58,67
4	Reference	56,00
5	Inference	60,00
6	Social Function	58,00
7	Generic Structure	58,00
8	Language Features	51,33

Table 1.5 shows that the higher score of reading for students in pre-test is in the inference (60,00). The second higher is in factual information (59,33). The third higher score is in vocabulary (58,67). The fourth higher score is in social function (58,00) and generic structure (58,00). Next the higher score is in main idea (57,33), reference (56,00). And the lowest score of reading for the students in the pre-test is in language feature (51,33).

The Results of Post-test

The post-test was given after treatment to know students' reading comprehension after being taught by applying Word Cluster strategy. The result is shown on table 1.6. It shows that the average score of the students' reading ability in the post-test is 63.42.

Table 6. The Result of Post-Test

Mean	N	Median	Mode	Std. Deviation
63.42	30	61,25	52,50	14,498

Table 1.6 shows that the mean is 63.42 in *good* level. Meanwhile the median score is 61,25 and the median most frequent score is 60 and the most frequent score is 52,50 as the mode.

The percentage of the students' score in the post-test can be seen in the following table:

Table 7. The Classification of the Students' Ability in the Post-test

No	Range Score	Frequency	Percentage	Category
1	81 – 100	4	13,3	Excellent
2	61 – 80	11	36,7	Good
3	41 – 60	13	43,3	Mediocre
4	21 – 40	2	6,7	Poor
5	0 – 20	0	0,0	Very Poor
Total		30	100%	

(Adapted from: Harris, 1974)

Table 1.7 This table shows that 4 students (13,3%) are in *excellent* level, 11 students (36,7%) are in *good* level, 13 students (43,3%) in *mediocre* level, and 2 students (6,7%) are in *poor* level. While, there is no students that achieve *very poor* level. In addition, there are differences in data presentation between before and after the treatment of word cluster technique. The data show that the scores after being taught by using word cluster technique are better and higher than before the treatment. Further, the data of student average achievement for each component of reading is shown in Table 1.8:

Table 8. The Students' Ability for Each Component of Reading Comprehension in the Post-Test

No	Aspect of Reading	Average
1	Main Idea	61,60
2	Factual Information	66,40
3	Vocabulary	66,40
4	Reference	62,40
5	Inference	59,20
6	Social Function	64,80
7	Generic Structure	60,80
8	Language Features	58,40

Table 1.8 shows that the highest score of reading for the students in post-test is in comprehending the vocabulary (66,40) and factual information (66,40). The second score is in social function (64, 80) and followed by reference (62,40), main idea (61,60), generic structure (60,80), inference (59,20), and the last language features (58,40).

The Comparison between the Results of the Pre-test and the Post-test

After calculating the results of both tests, the differences can be presented. The result can be seen in the following table:

Table 9. Paired Sample Statistics

Group Statistics

Test		N	Mean	Std. Deviation	Std. Error Mean
Score	Post-test	30	63.4167	14.74618	2.6922
	Pre-test	30	57.5000	17.18309	3.1371

Table 1.9 presents the mean score of the post-test (63.41) is higher than pre-test (57.50). It shows that there is an improvement in the post-test, because the mean score of post-test 63.41 and the gap of the mean score between pre-test and post-test is 5,91. The spread of values in the sample of pre-test is 17.183 while standard error of mean was 3.1371 and then standard deviation of post-test was and standard error of mean is 2.6922. The comparison level scores can be seen in the following table:

Table 10. The Classification of the Students' Ability in the Pre-test and the Post-test

Test score	Level of Comprehension	Pre-test Frequency	Pre-test Percentage	Post-test Frequency	Post-test Percentage
81-100	Excellent	5	16, 7	4	13,3
61-80	Good	6	20, 0	11	36,7
41-60	Mediocre	15	50, 0	13	43,3
21-40	Poor	4	13, 3	2	6,7
0-20	Very Poor	0	0, 0	0	0,0

Table 1.10 shows that there is an improvement in term of the level score of students' reading comprehension from the pre-test to the post-test after applying the

treatment. In the pre-test, 13,3% of students' are in *poor* level; while in the post-test , 2% students' are in *poor* level. In pre-test, 50,0% of students' are in *mediocre* level; while in the post-test 43,3% in *mediocre* level. In pre-test 20,0% of students are in *good* level, in the post-test 36,7% are students' in *good* level. And for the last, 16,7% of students' in the pre-test are in *excellent* level; while 13,3% are students in *excellent* level in the post-test. The comparison of the students' average achievement for each component of reading comprehension can be seen in the following table 1.11:

Table 11. Comparison between the Result of the Pre-test and the Post-test for Each Component of the Reading Comprehension

No	Components of Reading	Average score	
		Pre-test	Post-test
1	Main Idea	57,33	61,60
2	Factual Information	59,33	66,40
3	Vocabulary	58,67	66,40
4	Reference	56,00	62,40
5	Inference	60,00	59,20
6	Social Function	58,00	64,80
7	Generic Structure	58,00	60,80
8	Language features	51,33	58,40

The data description above shows that the students' average score of the each component of reading increased.

The Result of T-test

In this research, t-test formula was used to compare the pre-test and the post-test results to determine whether the hypothesis is accepted and measuring whether the treatment could give an effect in the students reading comprehension or not.

Table 12. The Paired Samples Test

Paired Samples Test

	Paired Differences				T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		

Pair 1	Post Test - Pre Test	5.91667	10.4939 1	1.91592	1.99818	9.8351 6	3.088	29	.004
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$$\begin{aligned}
 \mathbf{t\text{-}table} &= n-1; \alpha/2 \\
 &= 30 - 1 ; 0,05/2 \\
 &= 29 ; 0,025 \\
 &= 2,045
 \end{aligned}$$

Finally, to prove the hypothesis, the data are calculated by using t-test formula with assumption as follows:

1. If $t\text{-test} > t\text{-table}$, the Null Hypothesis (H_0) is rejected and alternative hypothesis (H_a) is accepted.
2. If $t\text{-test} < t\text{-table}$, the Null Hypothesis (H_0) is accepted and alternative hypothesis (H_a) is rejected.

The result of t-test is 3.088. The t-table from 30 students was 2,045. The comparison between t-test and t-table is $3.088 > 2,045$. It means that t-test is higher than t-table. In other words, the alternative hypothesis of this research “there is a significant effect of Word Cluster Strategy on the reading comprehension of the second year students of SMPN 1 Pangkalan Lesung” was accepted and the null hypothesis was rejected.

DISCUSSIONS

The data analysis shows that the result of the application of Word Cluster strategy on the students’ reading comprehension. The average score of the students’ reading comprehension in the pre-test is 57.50. It is categorized as *mediocre* level. Some students got low scores. The students got low scores in terms of language feature. The average score of the students’ reading comprehension in the post-test is 63.42 which is categorized as *good* level. It shows that the post-test was better than the pre-test which indicated that there was an improvement in the students’ reading comprehension ability.

Based on the procedure in the data collection technique, the teaching and learning process was divided into four steps. The first was providing students with try out before doing pre-test, treatment, and post-test. Before the pre-test was given to the students the try out was carried out. It was aimed to measure the validity and reliability of the test.

The second step was giving pre-test to the students in order to know students’ ability in comprehending descriptive texts. Based on the findings, the mean score of the pre-test is (57.50). The lowest mean score of reading comprehension for the students is in the language features (51.33) and the highest mean score of reading comprehension for the students is in the inference (60.00).

The next step was applying the treatment which is Word Cluster strategy. The writer taught the students by implementing Word Cluster strategy to help the students’

ability in comprehending descriptive text. In this treatment, the students were divided into groups that consist of 5 persons, in each group there is one student as the leader to represent in other group and the teacher distributed the material. The teacher gives key word about the material and draw blank map on the whiteboard. Next step, the writer give key word on the word map, and ask students to relate relationship between words. Students use the word map during and after reading descriptive text to get information about the key word. The teacher asks students to discuss with their groups, and teacher asks the leader to present about result of discussion. Then, students share their maps to other group.

The last step was a post-test. The aim of post-test was given to know the result of treatment that had been done by using Word Cluster strategy whether there is any improve or not. The mean score of the post-test is (63.41). The lowest score of reading comprehension for the students is in the inference language features (58.00). The highest score of reading comprehension for the students' is in the Factual Information (66.00) and vocabulary (66.00).

All components of reading comprehension tested indicate that students' ability, namely: identifying main ideas, factual information, reference, inference, social function, vocabulary, generic structure, language features. Therefore, applying Word cluster strategy made the students' ability in reading comprehension increased, especially in descriptive text. This strategy can make the situation of the learning process more interesting and students' also have to be active from the beginning to the end step to reach a good comprehension. By having interesting classroom situation the students will be motivated of taking part in the learning process.

According to description of the data of pre-test and post-test, it was found that the mean score of post-test was higher than the score of pre-test ($63.41 > 57.50$). It means that the students' post-test score was better than their pre-test score which indicated the improvement of students' reading comprehension in descriptive text. Then, the data analysis showed that t-test is higher than t-table ($3.088 > 2.045$). In other words, the Alternative Hypothesis (H_a) was accepted and the Null Hypothesis (H_o) was rejected. It can be conclude that Word Cluster strategy could improve the students' reading ability especially in descriptive text.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on the research findings, the writer makes some conclusion as follows:

After analyzing the data of this research, it can be stated that there is an improvement of the students' ability in comprehending descriptive texts after being taught by using Word Cluster strategy.

The students' mean score in the pre-test is (57.50). After conducting Word Cluster strategy, the researcher analyzed the result of the post-test, and compared it to the result of the pre-test. The mean score is higher than the mean score of the pre-test.

It was found out that the t-test is higher than t-table ($3.088 > 2.045$). Therefore, the alternative hypothesis was accepted and the null hypothesis is rejected. There is significant effect of Word Cluster strategy on the reading comprehension ability of the

second year students' of SMPN 1 Pangkalan Lesung in comprehending descriptive texts.

Recommendation

After getting the result of the study in this research, the writer would like to give some recommendation as follows:

1. The students
The students are suggested to be more interesting in reading activity. The students also suggested to learn a lot of material, and to share the information with their friend in order to get more knowledge and be more focus on increasing their vocabulary.
2. The teachers
The teachers should use interacting strategy to make the students can get better understanding of the reading text. The teachers suggested try apply word cluster strategy as an alternative technique to improve students reading comprehension especially in teaching descriptive text.
3. Other researchers
Other researchers are suggested to conduct a research by using word cluster strategy with different population, text, and in more meetings. In addition, they should organize the time as good as possible in conducting the research effectively in order to get satisfied results.

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