

# IMPLEMENTING CLUSTERING TECHNIQUE IN TEACHING VOCABULARY

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## Abstract

Tujuan Penelitian ini 1) menentukan adanya kenaikan signifikan pada prestasi siswa; 2) menyelidiki topik paling menarik; dan 3) menyelidiki masalah yang dihadapi siswa. Subjek penelitian adalah siswa kelas satu SMAN 1 Natar. Kelas X-2 sebagai kelas penelitian dan X-1 sebagai kelas percobaan. Penelitian ini menerapkan *one way repeated measures anova* dan t-test. Peningkatan nilai pretest dan posttest adalah 29.56. Hasil t-test menunjukkan t-ratio lebih tinggi dibandingkan t-table ( $39.134 > 2.042$ ) dengan tahap signifikan  $p < 0.05$  dan signifikan 2-tailed  $p = 0.000$ . Dapat dikatakan bahwa *clustering technique* layak untuk meningkatkan prestasi kosa kata siswa.

The objectives of this research are 1) to determine whether there is significant increase on students' vocabulary achievement; 2) to investigate the most interesting topic; and 3) to investigate the problems faced by the students. The subject of the research was the first grade students of SMAN 1 Natar. Class X-2 was chosen as the experimental and class X-1 as the try out class. T-test and One way repeated measures anova were applied in this research. The increase between pretest and posttest is 29.56. The result of t-test shows that t-ratio is higher than t-table ( $39.134 > 2.042$ ) with the level of significant is  $p < 0.05$  and significant two-tail is  $p = 0.000$ . It can be said that clustering technique is appropriate to increase students' vocabulary achievement.

**Keywords :** implementing, clustering technique, vocabulary

## **Introduction**

Vocabulary plays an important role in success or failure in learning a language because language itself consists of vocabulary to build the language. Therefore learning language cannot be separated from learning vocabulary. With a limited vocabulary anyone will also have a limited capability speaking, reading, listening, and writing. It is true that it might be impossible to learn a language without mastering vocabulary. Vocabulary is one of the problems confronted in English language learners. Because of the limited vocabulary, the learners cannot communicate to others clearly. Sometimes it is difficult to group the idea transmitted to them. In learning English as a foreign language at school, the acquisition of a large number of vocabularies can help students reading, speaking, listening, and writing. Having sufficient member of vocabulary and being able to use words correctly and effectively can help the students make school work easier and more rewarding. The more vocabularies they know in English, the better their chance to do well in an English test.

Vocabulary is complicated to be learnt. There are some aspects that should be learnt in mastering vocabulary: they are meaning of the word, form of the words and use of the words, pronunciation of the words and spelling of the words. Besides that in SMA Negeri 1 Natar, there were still many students who had poor achievement in vocabulary, which result in their poor performance in their English language skill. They did not know the meaning of many words in sentences or a text and also forms of the words. In expressing the idea both in written and oral forms, they had difficulty. It was proved when the researcher asked the students to read a text and answer the question based on the text; they

still opened dictionary to know most of the words in the text. And also when the writer asked some questions to the students they asked the writer to translate the meaning into first language. In oral form, they produced bad spelling and pronunciation. In the middle of teaching learning process, sometime the students lost concentration and became noisy. Those problems can be made as justification that the students did not master the vocabulary. One may have difficulty to master vocabulary because the learners lost interest. The learners might lose interest and feel bored when they learn vocabulary by memorizing without training in learning vocabulary.

To make the students interested in learning English vocabulary and to be able to communicate in English, it is the teacher's task to create and determine technique that can be used to teach and improve the students' vocabulary. Wilkins (1993) in Indriani (2007) states that the students' learning depends upon the effectiveness of the teacher's technique.

Technique is a way that is used by the teacher in teaching learning process. There are many ways that can be used to develop students' vocabulary. Vocabulary can be taught by using many different techniques, for example game, translation, text, picture, etc (Napa, 1991). That is the little sneaky tricks we all know and use to get the job done in the classroom. Teachers have systems of rewards or punishments for students who comply, exceed and left behind. If a classroom is becoming distracted a teacher may use the technique of guessing word to try to rope them in again. Then other factor is activity in the teaching learning process. Students' learning activity means any activity done by the students during the teaching learning process. By doing many activities they will gain the knowledge,

comprehensions and aspect of behavior to develop their skill that may be meaningful for their social life.

The teacher should be creative to find a good media to help the students enrich their vocabulary; so they will learn easily and actively. There are many techniques that can be used to learn vocabulary; one of them is clustering technique. Clustering technique is listing word in the form of bubble diagram and the list of word is developed from a word which is connected to the relation words. In this case, clustering technique is expected to be a way to encourage students' vocabulary and combine the new words they find and remaining words they have.

According to Sitorus (2009) teaching vocabulary through clustering technique can increase the students' vocabulary achievement. At SMP Negeri 22 Bandar Lampung, Sitorus' research shows that there is improvement from the students' average score in pre test (54.27) to the post test (76.86), that is 22.59 points or increase about 41.6 %. Moreover, this technique was able to trigger students' background knowledge to help them memorize, recall and use the new vocabulary based on the situation they face.

Considering the fact above, the researcher conducted clustering technique in teaching vocabulary. Clustering technique enable the students to make connection between new words and remaining words they have and they try to develop the core word with other related words. By looking at the vocabulary from the new viewpoint provided by the organizing nature of clustering technique, the learners can deepen their understanding and improve access to the vocabulary (Nation, 1990:100).

Through clustering technique the students are expected to be able to memorize and reproduces the words they have learnt easier than by memorizing through list of words and they will be more interested in learning vocabulary so that their vocabulary skill will increase. In clustering technique, the students hold the main role on teaching learning process, the teacher just lead the students. The students are actively involved in the teaching learning process. Clustering technique uses context clues that makes the students easier in learning vocabularies. Moreover, by using clustering technique, the student will also learn about the meaning of the words, the part of the speech of the words and try to use them in sentences orally. The researcher hopes this technique could help the students of SMA N 1 Natar that have poor achievement in vocabulary that impact to their poor performance in English language skills. Because poor mastery of English vocabulary causes them to find English learning hard and unattractive.

Macdonald and Macdonald (1996:34) say that clustering technique is a type of free associated listing. It begin with a core word, a word that acts as a materials stimulus to make the writer come up with related terms that branch out from the center term. On the term leads to another and another to create a complex network of diverse ideas, all related back in the same way to core stimulus word.

Clustering technique actually a pre-writing technique used in developing an idea in paragraph writing. Clustering is a type of free-associated listing. According to Nation (1990:97) cluster is words grouped around a central point when new words are met, they can be fitted into the most suitable place in the cluster, and this always provides good opportunity for revising related words. Therefore clustering technique is the technique that can be used to improve access to the vocabulary

which means that the aim of this technique is at increasing the association that learners make with words by being encouraged to think of words of related meaning and make it in kind of bubble diagram.

Beside that Sinaga (2007) states that in clustering technique students have chance to show their ability to develop a certain knowledge given, connect it with other connected words and put in form of cluster. By using clustering technique the students are actively involved in making a connection between context clues given and existing vocabulary they have in their mind and then they have to make the whole words in a kind of bubble diagram which showing the connection new word and remain words.

According to the explanations above it can be put forth that clustering is a technique for developing the target words into new words related to them and put them into bubble diagram. Clustering technique seems to be important to find out the new words, so that they can recall and remind the vocabulary that they have learnt. By implementing clustering technique in learning the vocabulary, students can develop their vocabulary by clustering them with the linking word.

## **Method**

This research was intended to find out the most interesting topic from three topics given and to know the students' problem during the teaching learning process using Clustering Technique. Therefore, Quasi Experiment was employed to answer the quantitative data and questionnaire was used to collect the qualitative one. In conducting the research, the researcher used one way repeated measures anova design . The research design is described as follows:

The design of the research is presented as follow:

T1 X T2

Where:

T1 = Pre-test

T2 = Post-test

X = Treatments

(Hatch and Farhady, 1982: 20)

The subject of the research was the first year students of SMAN 1 Natar consisting of nine classes. X-2 class was chosen as the experimental class and X-1 class as the try out class by using purposive sampling. Purposive sampling is a sampling technique on purpose. Means researchers determine their own samples to be taken because there are certain consideration. So, samples are not taken randomly, but determined by the researchers.

Pre test, post test and questionnaire were administered in order to gain accurate data. A try-out test was conducted in X-1 class before the pre test was carried out. This test was given to the students in order to know the quality of the test as the instrument of the research; they are (1) reliability, (2) level of difficulty, and (3) discrimination power of the test. The result of the try out test was analyzed aimed at knowing which items are good to be used in the pre-test.

## **Result and Discussion**

The purpose of conducting pre test was to measure the students' basic ability before given the treatments. The pre test was administered in 50 minutes. The instrument was in form of multiple choices with 30 questions, which has been revised based on the criteria of difficulty level and discrimination power. Based on the result of the pre test, the researcher found that the total of the pre test score

was 1718 . The mean was 44.05; the highest score was 76 and the lowest score was 20. The median score was 43 and the mode score was 36. From the result, it could be stated that there were some students who had low scores from the test. The post test items were the same as the pre test but with some adjustment on certain numbers and the arrangement of the numbers. The post test consisted of 30 items and was conducted within 50 minutes. From the result, the total score of the post was 2871. The higher score was 90, the lowest score was 46, and the average score was 73.61. There were 31 students who got score above 65 and the rest about 8 students still got lower than 65.

The researcher compared the students' score from Pre test (T1) to Post test (T2) to see the students' progress. It can be concluded there is progress. The lowest score has improved from 20 points (T1) into 46 points (T2), and the highest score has improved from 76 points (T1) into 90 (T2). The number of the students who got less than 65 in the pre test is 36 (92.31%) but in the post test there are only 8 students who got score less than 65 (20.51%). The improvement shows that the learning process had nearly covered the students' problem in their vocabulary achievement. It means that clustering technique can increase students' vocabulary of real object, occupation, and sport. This finding support previously research done by Sitorus (2009) that teaching vocabulary through clustering technique can increase the students' vocabulary achievement of sport significantly.

In the increase of students' ability in mastering vocabulary, The mastery of noun increased 25 to 35.8, verb increased from 11 to 23, adjective increased from 5.2 to 8.2, and adverb increased from 3.8 to 6.9. The highest increase was in verb because it has the highest percentage among three others. Furthermore, the mean



score of the pre test that was 44.05 increased to be 73.61 in the post test. In the treatments, the researcher conducted three treatments which had different topics in each treatments. The topic of the first treatment was real object. The topic of the second treatment was sport while the topic of the third treatment was occupation. In the end of each treatments, there were daily tests that aim was to know which one was the best topic through calculating the mean of the students' score in each topic. This daily test consisted of ten questions by matching the answers.

Having done the treatments and got the data from the daily tests, the researcher found out that the mean of students' score of the daily test in the topic of the first treatment, real object, was 85.89. The mean of the students' score in the second treatment which the topic was Sport was only 68.97 while the mean score of the topic of occupation was 89.23. The lowest mean is in the topic of sport whereas the highest mean is in the topic of occupation. Having done the research and got the data from the questionnaire, the researcher found out some problems derived from the students such as 1) having low score in adjective; 2) having low score in the topic of sport; 3) wrote the word incorrectly; 4) got difficulty in completing the bubble diagram with noun, verb, adjective, and adverb; and 5) unable to use the words in the sentences.

Based on the post test result, it was known that verb has the highest increase from the pre test result, with the increase 12 %, followed by noun 10.8 %, adverb 3.1 %, and adjective 3 %. From this number, adjective has the lowest score. Adjective is not the word that people learn first. That's why they don't really have more adjective vocabularies. As stated before, on the daily test result, it was found that occupation has the highest score, whereas Sport has the lowest score. The score of

occupation was 89.23 while sport was only 68.97. It happen because in the topic of sport, many words that related to the sport were unfamiliar for them. They got difficulty in finding the name of the things that was used in the sport, and also the verb. Unlike real object, though it was placed in the first treatment, but it has better score than sport. It's because many words that related to real object were familiar for the students, and they can see it in their daily activity, so it made them easier to learn and understand.

During the treatment, many of them asked the researcher to translate the cluster words they found that they did not understand from Indonesia into English. They were not given a chance to ask the teacher about the meaning of the words they did not understand in English. They said they had been accustomed to consult their dictionaries and forget the words soon. Some students found difficulty to write the words since English has different form between how to write and how to say the words. They tend to write the words that are familiar with them.

Moreover, they also said that they were not given any exercises that can train them to write words, for example, they wrote 'galerry' and not 'gallery', 'suporter' and not 'supporter'.

When the students were asked to make a bubble diagram from the core words given, the researcher asked them to make the cluster with four kinds of vocabulary in order to enrich their vocabulary skill. In a bubble diagram, they had to cluster/develop minimum eight words. Those eight words should consist of noun, verb, adjective, and adverb. Most of them got difficulty in finding the verb, adjective, or adverb. The bubble diagram they made was mostly noun. Even though the students got some difficulties during the learning activities, based on

the questionnaire they showed their interest in following the lessons. They were interested in this technique and enthusiastic on the process of teaching learning English vocabulary through clustering technique. They also got higher score at the end of the last meeting.

From the data above, clustering technique can contribute a positive effect on students' participation in class and can raise their curiosity to study, it can be seen from the ability of the students in making cluster of the words, the ability to mention the part of the speech of every word they found, the ability in making the sentences orally which impacted to their higher score.

### **Conclusions and Suggestions**

Based on the result and discussions of this research, the researcher has concluded several points as follow:

1. There is a significant increase on students' vocabulary achievement of real object, sport, and occupation after being taught through Clustering Technique. It can be seen from the result of pre test and post test that there is an improvement from the students' average score in pre test (44.05) to the post test (73.61). It means that the improvement is 29.56. The result of t-test shows that t-ratio is higher than t-table ( $39.134 > 2.042$ ) with the level of significant is  $p < 0.05$  and significant two tail is  $p=0.000$ . In the mastery of noun, the students's score increased 10.8 %, verb's score increased 12 %, adjective 3 %, and adverb 3.1 %. It can be said that clustering technique can increase students' achievement of vocabulary of

Real Object, Sport, and Occupation after being taught through Clustering Technique.

2. Based on the students' achievement in every topic, it is found that the mean score of the students' achievement in the topic of Real Object was 84.61. In the topic of Sport, the mean score was 68.97 while in the topic of Occupation, the mean score was 89.23.
3. The students still faced some difficulties in learning process of vocabulary through clustering technique such as in understanding the meaning of the words, comprehending the material, and finding the certain part of speech, such as noun, verb, adjective, and adverb. They also could not differ among the noun, verb, adjective and its spelling.

In accordance with the findings and conclusions presented before, the researcher proposes some suggestions as follows:

1. The teacher is suggested to improve the implementation of his/her techniques in teaching vocabulary and be able to motivate the students in order to be excited in learning English. For example, teacher should create the material as interesting as possible by using kind of media, or she/he may give reward to students for their participation.
2. Particularly in terms of increasing the students' vocabulary achievement, other researchers should be more creative in implementing clustering technique. For example dealing with daily activity, since clustering technique can help the students to develop their vocabulary knowledge due to its rule to make branches from the core word.

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