The Effect of Metacognitive Strategy on The English Learners’ Vocabulary Mastery

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ABSTRACT

This study was aimed at investigating the effect of metacognitive strategy on the English Learners’ Vocabulary Mastery at FKIP Nommensen Pematangsiantar. This research was conducted by applying quantitative research design. The data were taken from English Learners in the classroom. This research is conducted by applying experimental research design. In this research, there are two procedures which is made to collect the data, there are treatment and test. For the first step the writer gave the treatment for each group. Experimental group got three times treatment by using metacognitive strategy and control group got 3 times treatment also by using conventional method. The test is a test conducted after conducting the treatment. After explaining the material and giving the exercise both of the groups are given the same test to know the result of the treatment. The scores will be analyzed to see the differences of the group.

The findings are based on the result between the learners’ ability in vocabulary mastery that were taught by using meta-cognitive strategy and conventional method, there was significance difference between them. The result shows that the ability of the students is improve in the ability vocabulary mastery. The resercher got the lowest score in experimental class is 56 and the highest score is 90. Meanwhile in control class, the lowest score is 18 and the highest score is 80. And the researcher got the students’ post-test mean of control and experimental class. The researcher got means of experimental class was 75.12 and mean of control class was 44. Mean of experimental class was higher than control class. It means that there are effects of Metacognitive Strategy on the students’ vocabulary mastery. After getting the result \( t_{obs} = 7.97 \) is higher than \( t_{table} = 1.99 \). It means that the hypothesis which the writer have researched about metacognitive strategy of the students’ is accepted. From data analysis, the researcher got t-test was 7.97 higher than t-table (1.99) at the level of significant was 0.05 with df = 62. Since t-test
is higher than t-table, it can be concluded that the alternative hypothesis (Hₐ) is accepted and the null hypothesis (H₀) is rejected. It means that Metacognitive Strategy significantly affects on the students’ vocabulary mastery, so the effect of using metacognitive strategy was more significant than the effect of using conventional method.

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1. Introduction

Vocabulary is a part of language learning that needs continuing growth and development by both native and nonnative speakers all about grammar and pronunciation. In language teaching preparation program in our country, more attention is being given to improve some techniques for teaching vocabulary. Learning vocabulary as a foreign language seems easy but some students feel fear. The teacher of English should find out solution by creating of efficient and effective technique of teaching in teaching English vocabulary, besides that, the teacher should establish condition which makes teaching vocabulary as good as possible. The learning will occur within reasonable period of time. Vocabulary is when we speak and write; the term expressive vocabulary is used to refer to both since these are the vocabulary we use to express ourselves. We “understand” vocabulary when we listen to speech and when we read (Pikulski & Templeton 2004: 1). Stahl (2005: 1) stated, “Vocabulary knowledge is the knowledge of a word not only implies a definition, but also implies how that word fits into the world.” Consequently, researchers and practitioners alike seek to identify, clarify, and understand what it means for students to know what a word means.

We realize how important the vocabulary for the students in English learning but in addition we know that how difficult the vocabulary for the students to study it. The teachers of English have been providing students with many exciting exercises which are expect in that vocabulary can help students to improve the students’ ability in English communication. Vocabulary is very important in a language, when we learn a language like English; we learn the words of language. Students must continue to learn words as they learn structure as they practice the target language. The vocabulary is much needed to master the four skills in English.

In facilitating the students in learning vocabulary, English teachers should also provide materials that are appropriate with the curriculum and find suitable methods in teaching and learning process. The cause of most problems that occur is the ability of teachers in implementing the learning approaches, methods, and strategies or techniques. So, many students are not interested in learning English. Nababan (1991: 4) says, “A qualified teacher is the teacher who is able to suit the best method or technique to teach the material.” It means that in teaching English teachers are suggested being able to master the methods of teaching.

Thus, teaching method is one of the important factors in the determining students’ achievement in vocabulary mastery. Teaching method is to solve those problems. Teaching methods were important in teaching and learning English since they helped both the teacher and the students until now.
To help students understand the learning task or learning material the researcher take the solution by using **Meta-Cognitive Strategy**. It is quite helpful teaching in introducing new vocabulary to students because generally, people will keep in their mind for a long period of time something that they have learned or experienced which is interested by them.

O’Malley and Chamot (1990:10-11) have classified language learner strategies into three primary categories: Metacognitive, Cognitive, and Affective or Social strategies. Metacognitive strategies have an indispensable part to play in effective language learning. Metacognitive strategy is used by students to control and evaluate their own learning, by having an overview of the learning process in general. They emphasized the crucial role that Metacognitive plays in learning English. Students without Metacognitive approaches are essentially learners without direction or opportunity to plan their learning, monitor their progress, or review their accomplishments and future learning directions. It results in critical but healthy reflection and evaluation of thinking. They are assumed as the gate between the teacher and learners in transferring the materials are being taught more easily during teaching learning process. The objectives of this research are:

1. To find out is there any the effect of metacognitive strategy on the students’ vocabulary mastery at FKIP Nommensen Pematangsiantar.

To find out if the implementation metacognitive strategy more significantly affects than implementation of conventional method on the students’ vocabulary mastery at FKIP Nommensen Pematangsiantar. The Hypothesis of this research:

Ha: The implementation of meta-cognitive strategy (MCS) more significantly affects than the implementation of conventional method on the students’ vocabulary mastery at FKIP Nommensen Pematangsiantar.

Ho: The implementation of meta-cognitive strategy (MCS) more does not significantly affect than the implementation of conventional method on the students’ vocabulary mastery at FKIP Nommensen Pematangsiantar.

2. Literature Review

2.1 Vocabulary Mastery

Vocabulary Mastery is one of the language aspects which should be learnt. Vocabulary mastery can be defined as a number of vocabulary (words) in a language which contains information about its meaning, form, and usage in context of communication. It is the basic knowledge that students should master first before mastering English. The vocabulary mastery is not a spontaneous process which is easy to be done. It is known that English vocabulary learning cannot run successfully without English ability (English skills) because both of them are very important in English teaching and learning process. Kerr (1996:10) divides the words those are needed to be understood and applied vocabulary in the context of a phrase or larger structure. The words that need to be understood appear in brief context (a phrase, a clause or a short sentence) could be seen as follows, Read (2000:27):

a. **Diction**: choice of words to express ideas; distinct pronunciation.

b. **Synonym**: one of two or more words having essentially the same meaning.

c. **Antonym**: a word opposite in meaning to another word.

d. **Homonym**: a word pronounced like another but different in origin, meaning, and often in spelling.

e. **Derivative**: a word form obtained from another word by adding prefixes or suffixes.
f. **Lexicon:** a compiling word as in dictionary; the special vocabulary of an art or activity.

g. **Etymology:** the history of the origin or derivation and development of a word.

h. **Linguistics:** the study of human speech including the parts, structures, and changes in language.

i. **Denotation:** the lexical definition of a word.

j. **Connotation:** the suggestive, often emotional weight or significance of a word rather than its recognized denotative meaning.

k. **Affix:** any prefix or suffix added to a word, including plural, tense, and possessive endings, comparative indicators, etc.

l. **Semantics:** the science, study, and history of the changes in meanings of words; a part of linguistics.

m. **Colloquialism:** informal, conversational words and expression, primarily spoken rather writing.

n. **Dialect:** the particular language (colloquialisms, pronunciations, sayings, etc.) of an area as it differs in this aspects from some other area.

o. **Slang:** a nonstandard, frequently short-lived, but currently popular, sometimes abusive and vulgar, almost always colorful word or phrase.

2.2 Meta-Cognitive Strategy (MCS)

2.2.3 Definition of Metacognition

Metacognition literally means “big thinking” (Fountas and Pinnel, 2000). Metacognition refers to the knowledge and control people have over their thinking and learning activities, it involves “thinking about thinking.”

You are thinking about thinking Metacognition is simply thinking or learning how we learn. It is considered to be a higher level of thinking (Myers & Paris, 1978).

Chamot. et al. (1999:43) suggest that Metacognitive organize learning strategies in such a way that they become manageable and helpful to students and teachers. Anderson (2002:1) also mentions that developing meta-cognitive strategy awareness in learners may also lead to the development of stronger cognitive skills and much deeper processing. It result but healthy reflection and evaluation.

O’Malley and Chamot (1990:11) emphasized the important meta-cognitive strategy by stating “students without meta-cognitive strategy are essentially learners without direction or opportunity to review their progress, accomplishment and future direction.”

Metacognitive as the effective strategies can help the students think about planning, monitoring, and evaluating in learning. Brown, A.L. and Gonzo (1999:215) add that metacognitive strategy involve knowing about learning, such as controlling learning, monitoring and evaluating the learning activity.

Efficient learners use Meta-cognitive Strategies but students with learning disabilities tend to lack the skills to direct their own learning. However, once they learn Meta-cognitive Strategies that efficient learners use, students with learning disabilities can apply them in many situations, Lerner and Kline (2006:184).

2.2.4 Steps in Meta-Cognitive Strategies

According to Chamot. et al. (1994:43-44) in order the effectively to employ Metacognitive Strategies (MCS) to instruct the students’ mastery on the vocabulary there is the Cognitive Academic Language Learning Approach (CALLA). CALLA model proposed by Chamot. et al. (1994) proved to be the most effective strategy instruction model. In the CALLA
model, students’ prior knowledge and their habit of evaluation of their own learning seem to be the major principles. This model has five instruction phases as explained below:

1) Preparation: students prepare for strategy instruction by identifying their prior knowledge about and the use of specific strategies. For example, setting goals and objectives, identifying the purpose of a learning task, over-viewing and linking with already known materials.

2) Presentation: the teacher demonstrates the new learning strategy and explains how and when to use it. For instance, explaining the importance of the strategy and asking students when they use the strategy.

3) Practice: students practice using the strategy with regular class activities such as asking questions, cooperating with others, and seeking practice opportunities.

4) Evaluation: students self-evaluate their use of the learning strategy and how well the strategy is working for them. For example, self-monitoring, self-evaluating, and evaluating their learning.

5) Expansion: students extend the usefulness of the learning strategy by applying it to new situations or learning for them. For instance, arranging and planning their learning.

From the steps and explanation above, the students will be easier to master language learning especially in vocabulary mastery. They will be able to control their thinking by making concept of idea in learning vocabulary.

2.2.5 The Advantages of Meta-cognitive Strategy

The use of metacognitive strategies activates learners thinking and leads to improved performance in teaching in general Anderson, (2002). According to Wenden (1998), learners who have metacognitive abilities seem to have the following advantages over others who are not aware of meta-cognition role in learning another language:

1) They are more strategic learners.
2) Their rate of progress in learning as well as the quality and speed of their cognitive engagement is faster.
3) They are confident in their abilities to learn.
4) They do not hesitate to obtain help from peers, teachers, or family when needed.
5) They provide accurate assessments of why they are successful learners.
6) They think clearly about inaccuracies when failure occurs during an activity.
7) Their tactics match the learning task and adjustments are made to reflect changing circumstances.
8) They perceive themselves as continual learners.
9) Metacognition enhances and enriches the learning experience"(St. Clair, n.d.)
10) "Applying metacognitive strategies such as self-awareness and self-monitoring is to develop independent learners who can control their own learning and learn how to learn for life"(Papaleontiou-Louca, 2008).
11) Metacognition provides self-monitoring, which is a step-by-step process of evaluation during the learning process.
12) Metacognition develops higher learning and problem solving skills.

1. The Disadvantages of Meta-Cognitive Strategy

(1) Poor self-esteem
(2) Difficulty in problem solving
(3) Poor reading comprehension
(4) Poor language and communication skills
(5) Difficulty in obtaining success in society

2. The Previous Study on Meta Cognitive Strategy in Vocabulary
   (2) Kiki Tri Maulani (2007) thesis entitled “Improving Students’ Vocabulary Mastery Through English Pop Song at Eighth Grade Students of SMP Negeri 5 Cilegon”.
   (5) Heri (Vol. 1 No 1, 2015) “Improving Students Vocabulary Mastery by Using Pictures Media at the Third Grade of SDN 010 Kepenuhan”.

2.3 Hypothesis
Hypothesis is a temporary answer to the formulation of research problem, where the formulation of the problem expressed in the form of a question sentence, (Sugiyono 2013:96).

Ha: The implementation of meta-cognitive strategy (MCS) more significantly affects than the implementation of conventional method on the students’ vocabulary mastery.

Ho: The implementation of meta-cognitive strategy (MCS) more does not significantly affect than the implementation of conventional method on the students’ vocabulary mastery.

3. Research Method
This research is conducted by applying quantitative experimental research design. The population was ten classes. The writer chose two classes as the sample. English Vocabulary class was chosen as the experimental class teaching vocabulary by using MCS and English Grammar class was chosen as the control class teaching vocabulary by using conventional method. Every class consisted of 32 students. So, the total of the students from two classes were 64 students.

Vocabulary size test is used as a research instrument of the present study. The students are asked to write a person’s appearance by using descriptive words. The main point of this test is the students can use the correct words to describe a person’s appearance. It will be scored by applying analytic scoring to find out the students’ vocabulary mastery in writing vocabulary.

The test’s design is Post-test design only. It is used to measure the students’ ability after receiving the treatment. The post-test contain at least 50 words above in essay test. The test is using picture to describe a person’s appearance. Then, the result of those tests will be the data of this research.

1. The writer observes first the students’ test result.
2. The writer analyzes the students’ test
3. The writer gives scores to the students’ test
4. The writer compares the scores by using formula
5. The researcher calculates the mean (M) of experimental group and control group by using the following formula:

The form: Arikunto (2010) \( M_x = \frac{\sum X}{N} \)

\( M_y = \frac{\sum Y}{N} \)

6. The researcher calculates the Standard Deviation of the class or variable by using the following formula:

\( SD_x = \sqrt{\frac{N(\sum x^2 - (\sum x)^2)}{N(N-1)}} \)

\( SD_y = \sqrt{\frac{N(\sum y^2 - (\sum y)^2)}{N(N-1)}} \)

7. After that, the two classes will be compared using t-test to know whether the effect of using Metacognitive Strategy to the students’ ability vocabulary mastery and to analyze the data, the t-test formula is used as follow:

\[ t = \frac{M_x - M_y}{\sqrt{\frac{\sum x^2 + \sum y^2}{N_x + N_y - 2} \cdot \frac{1}{N_x} + \frac{1}{N_y}}} \]

where:

- \( M_x \): Mean of experimental group
- \( M_y \): Mean of control group
- \( \sum x^2 \): Standard deviation of experimental group
- \( \sum y^2 \): Standard deviation of control group
- \( N_x \): The total sample of experimental group
- \( N_y \): The total sample of control group

The data came from the students’ scores in vocabulary test for the research. The scores were obtained simply by counting the total scores of their vocabulary test. In collecting the data, the writer gave the test in essay forms about writing in descriptive of someone’s appearance. The students were asked to found 50 words or more from the picture of someone on the paper. The students’ tasks results would be described from the test to know the effect of metacognitive strategy on the students’ vocabulary mastery.

4. Result and Discussion

4.1 Result

4.1.1 Experimental Group

The result of the students of the total score test of experimental group was 2404, and the total score quadrature of the test was 182696. The highest score of the test was 90 and the lowest was 56. The mean of test was 75.12, after the teacher applied the treatment by using meta-cognitive strategy. The result of the students’ total scores of the test of control group was 1330, and the total scores quadrature of the test was 61164. The highest score in the test was 100 and the lowest score was 32. The mean of test was 41.56.

a. The Level of the Students’ Ability

In order to find out the level of ability of the students, the writer should find out the mean and standard deviation firstly. Mean was computed by adding a list scores and giving by the number of the score. Standard deviation measured of the spread of the score. It can be seen the level of students’ ability in experimental and control group.

b. The Level of Students’ Ability of Experimental Group

- \( N = 32 \)
- \( \sum X = 2404 \)
- \( \sum X^2 = 182696 \)
- \( M = 75.12 \)

Standard Deviation:
Based on the calculation above, it could be concluded that standard deviation of experimental group in the test was 8.21.

**The Criteria of Students’ Ability of Experimental Group**

<table>
<thead>
<tr>
<th>Level Ability</th>
<th>The Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>$X + SD$</td>
</tr>
<tr>
<td></td>
<td>75.12+8.21</td>
</tr>
<tr>
<td></td>
<td>83.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium</th>
<th>$\bar{X} - SD \leftrightarrow \bar{X} + SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75.12-8.21↔75.12+8.21</td>
</tr>
<tr>
<td></td>
<td>66.91↔83.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low</th>
<th>$X - SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75.12-8.21</td>
</tr>
<tr>
<td></td>
<td>66.91</td>
</tr>
</tbody>
</table>

4.1.2 Control Group

**a. The Level of Students’ Ability of Control Group**

\[ N = 32 \quad \Sigma Y = 1408 \]
\[ \Sigma Y^2 = 70624 \quad M = 44 \]

**Standard Deviation**:

\[ SD(Y) = \sqrt{\frac{(N\Sigma Y^2) - (\Sigma Y)^2}{N(N-1)}} \]
\[ = \sqrt{\frac{(32 \times 70624) - (1408)^2}{32(32-1)}} \]
\[ = \sqrt{\frac{2259968 - 1982464}{32 \times 31}} \]
\[ = \sqrt{\frac{277504}{992}} \]
\[ = \sqrt{279.74} \]
\[ SD(Y) = 16.72 \]
Based on the calculation above, it can be concluded that standard deviation of control group is 16.72.

**The Criteria of Students’ Ability of Control Group**

<table>
<thead>
<tr>
<th>Mean (X) = 44</th>
<th>Standard Deviation (SD) = 16.72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level Ability</td>
<td>The Criteria</td>
</tr>
<tr>
<td>High</td>
<td>X + SD</td>
</tr>
<tr>
<td></td>
<td>44 + 16.72</td>
</tr>
<tr>
<td></td>
<td>60.72</td>
</tr>
<tr>
<td>Medium</td>
<td>X – SD ↔ X + SD</td>
</tr>
<tr>
<td></td>
<td>44 - 16.72 ↔ 44 + 16.72</td>
</tr>
<tr>
<td></td>
<td>27.28 ↔ 60.72</td>
</tr>
<tr>
<td>Low</td>
<td>X – SD</td>
</tr>
<tr>
<td></td>
<td>44 - 16.72</td>
</tr>
<tr>
<td></td>
<td>27.78</td>
</tr>
</tbody>
</table>

**Significance Difference between Students’ Ability on Vocabulary Mastery by Using Metacognitive Strategy and Conventional Method**

Based on the result between the students’ ability in vocabulary mastery that were taught by using meta-cognitive strategy and conventional method, there was significance difference between them. It could be seen from the result of the final score that they use to measure the improvement of the ability in vocabulary mastery. Mean score of experimental class after they were taught vocabulary by giving the treatment was 75.12 and in the control class after they were taught vocabulary without treatment was 44. So the effect of using metacognitive strategy was more significant than the effect of using conventional method.

**4.2 Discussion**

Teaching activities are something to bring the students into rational thinking. It means that the teacher should bring the good effect to the students. Teaching requires a large repertoire of skills and the ability to put these skills in different situation. The writer used teaching strategy in learning process to get the goal of teaching. Besed on research, the writer found that vocabulary mastery in the students increased when did the teaching by using metacognitive strategy. It proved by the score that they got in experimental group was far higher than control group.

In other hand, the researcher found discussion that influenced English learning, especially vocabulary mastery in the students as follow:

When the writer did the research, the students were noisy. The condition made the writer wasted much time to make them focus and be serious. The students have the knowledge and ability to solve the learning problems but most of them don’t have the attitude especially to talk with others and they are not able to make the condition based on the situation. The writer saw contrast this problem on the students now.

**5. Conclusions**

According to result of the data analysis, the researcher concluded:

1. There is effect of Metacognitive Strategy on the English learners’ vocabulary mastery at FKIP Nommensen Pematangsianatar. It can be seen from the learners’ score in post-test of
control and experimental class. The lowest score in experimental class is 56 and the highest score is 90. Meanwhile in control class, the lowest score is 18 and the highest score is 80. It means English learners taught by using Metacognitive Strategy was higher than in control class taught by using Conventional Method.

2. The result of t-test had proved that significance difference means of experimental and control class. The mean of English learner which is taught by using Metacognitive Strategy is higher than without using Metacognitive Strategy.

References


