USING SEMANTIC MAPPING IN TEACHING VOCABULARY THROUGH A DESCRIPTIVE TEXT

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Abstract: Semantic mapping is introduced as a vocabulary presentation technique through descriptive text. The purpose of this research is to know the effectiveness of using semantic mapping in increase the students’ vocabulary achievement to the seventh grade student of SMPN 1 Samalantan in academic year 2011/2012. The method is through pre-experimental study, using a measurement technique in form of multiple choices and matched words which consists of 20 test items with two supported descriptive text. Based on the data analysis, the mean score of pre-test 4.4, qualifying poor and post-test mean score was 7.4, qualifying average to good. The results confirmed that semantic mapping technique in teaching vocabulary through a descriptive text effectively increase the students’ achievement of vocabulary.

Keywords: Vocabulary, semantic mapping, achievement

INTRODUCTION

English teaching involves four language skills, Listening, Speaking, Reading and Writing. In teaching and learning the language, there are four linguistic aspects that support the four language skills namely, grammar, spelling, pronunciation, vocabulary that are also taught in English teaching and learning process. Vocabulary is one of the aspects in teaching language, as stated by Edward (1997) vocabulary is
one of the important factors in all language teaching, student must continually be learning words as they learn structure and as they practice sound system”

Based on the researchers’ experience when she was taught in the seventh grade of SMPN 1 Samalantan, especially in the class that the researchers’ took as the experiment, the students still suffered a lack of vocabulary. Whenever the researcher spoke in English and asked students to mentioned vocabulary, they could not understand the meaning of words that the teacher said and most of them answered in Indonesian. Hornby (1987) “vocabulary is total number of words (with rules for combining them) which make up language”. By masteries many vocabulary we can construct or express our idea easily. Moreover, Burton (1985) said that large vocabulary helps us to express our ideas precisely, vividly, and without repeating ourselves in composition. Furthermore, Zihong (2000) cited in Elyansyah (2007) said that without sufficient vocabulary one could not communicate effectively on expressing idea. It means that having limited vocabulary is a barrier that presents students in learning a foreign language. If learners do not know how to expand their vocabulary, they gradually will lose interest in learning. As stated by Zim (1984) “we are convinced that vocabulary development is a neccessary part of all language learning and particularly where academic study skills are concerned”. We have found that without an adequate core vocabulary, foreign readers have considerable difficulty in focusing on the entire message of the text, in guessing unknown lexical items and in applying other reading strategies.

There are some problems caused by the method that used in the class. The teacher did not presented the material in interesting way or used technique when teaching learning process. She was used uninterested teaching technique. She was directly explained the material, gave some examples and asked question. The researcher found that the students did not learn enthusiastic and they did not seem interested in the subject matter of the class, so that the class tended to be silent, only few of them were active in studying English.

In teaching vocabulary, various techniques need to be used in order to motivate the learners to enjoy the English class and to avoid them from getting bored in learning process. In teaching vocabulary using semantic mapping the researcher assumes that is could be productive and beneficial to increase the students’ mastery of vocabulary in easily way. The use of semantic mapping is expected to motivate the student to learn and make them not get bored in English teaching learning process. Beside that this technique is over period of time that students would be acquire not only vocabulary, but also the way in which concept of language can be expressed. Moreover semantic mapping could be beneficial for the students to learn English directly. It is considered from the point of view of comprehension and students would get constant exposure to how important concepts are expressed. This technique emphasizes comprehension by using the connections among word informs a map, the students more easily to remember word better as they see in a map, because semantic mapping is as a good vocabulary presentation technique. Morin and Goebel (2001) cited in Sasan (2011) state semantic mapping as a strategy that helps the learner recall words better. The students can understand the concepts based
on the descriptive text. In this case, semantic mapping used for teaching vocabulary through a descriptive text. The content of word in a map is make based on the descriptive text. Based on the curriculum in seventh grade at the second semester, the students need to learn descriptive text. The researcher took the descriptive text as the material for improve the students’ vocabulary and to comprehend the text.

**Semantic mapping**

Semantic mapping is a term, which describes a variety of strategies designed to show how key words or concepts are related to one another through graphic representations. Semantic mapping assist the students to improve their vocabulary development. According to Zaid (1995) semantic mapping is an effective technique for teaching vocabulary and textual patterns of organization, and it is also effective for improving note taking and creative thinking skills. General definitions can be given, Semantic mapping is a visual representation of knowledge, as picture of conceptual relationship. Antonacci (1991) “stated a graphic arrangement showing the major ideas and relationships in text or among word meanings”. However, the researchers’ warn to against the danger of presenting closely related new words. Tinkham (1993),suggests that learners should start by learning semantically unrelated words and also avoid learning word with similar forms. For example, because affect and effect have similar s forms, simultaneously studying them is likely to cause confusion.

Semantic mapping can be defined as a visual representation of knowledge, as picture of conceptual relationship. Semantic mapping also as a vocabulary presentation technique in learners’ vocabulary retention in the framework of a study. Sokmen (1997) “ state semantic mapping generally refers to brainstorming association which a word has and then diagramming the result”. As Heimlich (1986),describe it as categorical structuring of information in graphic form. By using semantic mapping students may develop students’ cognition. Bacon cited in Benedictus (2002) said that schemata was already existing knowledge structures think of them as comprising a sort of organizational chart or map, to which new details are constant being added. Schema theory was identifying the important connecting new experience to prior knowledge and organizing that new information students learn when they connect what they already know with what they discover through experiences. Generally, Semantic Mapping has been used in the following ways: 1) for general vocabulary development, 2) for pre and post reading, 3) for the teaching of a study skill, 4) for a link between reading and writing instruction, and 5) for an assessment technique.

We can conclude that Semantic mapping is a visual strategy for vocabulary expansion and extension of knowledge by displaying words related to one another in categories. Semantic mapping also build on students prior knowledge while it draws a components and shows the relationship among the components. Therefore, in this case semantic map present based on the descriptive text.

Here is an example of a map from the descriptive text the topic is My Cathy, shows the results of constructing a semantic map. The words with Cathy, cat, delight, eyes, tail, and fur in the map mean that they were introduced by the teacher.

a. Example of Descriptive Text (My Cathy)
IDENTIFICATION  Cathy is my cuddly and playful white cat
This cat is very cuddly. It delights me with its grace
and beauty.

DESCRIPTIONS It is small but fat enough. It has soft fur. The
fur is very white like cotton. It has long tail. Its eyes are round. It
looks cute. It is always near me. It is part of my family. Sometimes it
is my best friend.

DESCRIPTIONS My Cathy is playful. It likes playing with
anything. It often plays with me. It likes playing with a ball very
much. It is very clever. Sometimes it is very naughty. It likes to
scratch my furniture and make a mess on the rug.

Taken from, Maryuni (2010:55)

b. Descriptions of map for My Cathy
1. The circle with black color is the topic/title, that is takes based on the
descriptive text of my cathy.
2. Then box with blue color is the word that already introduce to the student. That
is a key word that for makes students easily thinks as many words as they can
that are related to the topic based on the text of my cathy.
3. The box or symbols with purple, green, and orange color is the characteristic or
description of words that is taken from the descriptive text of my cathy. This
categories are makes by students. They are only need to read the text for
continue the map.
4. To know part of speech each word is by see the color of word. A word with red
color is noun, and the green colors are adjectives.

c. Example of semantic map for My Cathy
Descriptive Text

Based on the curriculum, junior high school students have to learn descriptive text in the seventh and eighth grade. A descriptive text is a text that describes the features of someone, something, or a certain place. Descriptive text is describe meaningful experience related to sense, such as what form, sound and taste. Most of descriptive text is about visual experience. According to Anderson (1998) cited in Yeni (2010) said that the purpose of the text is to tell about the subject by describing it features without including personal opinions. The organization of the descriptive text is as follows:

1. An opening statement (identification)
   This general statement introduces the subject of the description to the readers. This also gives the readers brief details about the when, where, who or what of the subject as this statement is started in the first paragraph.

2. A series of paragraph about the subject (description)
   Here, each paragraph usually begins with a topic sentence and describes one feature of a subject. The topic sentences preview the detail that will be contained in the remainder of the paragraph. Thus, these paragraphs build the description of the subject.

3. A concluding paragraph (Conclusion)
   As an optional part, the concluding paragraph signals the end of the text. Beside the text organization stated on descriptive text also includes the following language features:
   - Topic sentence to begin paragraph and organize the various aspect of the description.
   - Verb in present tense.
   - Adjective to describe the features of the subject.

Junior high school students especially the seventh grade learned about the description of things and animals, description of a person, and description of a particular place. The vocabulary often used in descriptive text are the words which are related to name of place (locations, destinations, the functions the appearance and the evidences if need). For animals, the words are used to describe the classification, the physical appearance, habitats and behavior. By using descriptive text we can teach vocabulary. Because in descriptive text there are many words that include kind of basic word. Here is an example of descriptive text.

**TITLE**

**The Sea Eagle**

**IDENTIFICATION**

There is an eagle nesting on the tree top near my grandparent’s house in Pangandaran. It was a sea eagle.

**DESCRIPTIONS**

The color of its feathers is light brown. It has a strong and sharp yellowish beak. Its claws are very sharp. It hunts for fish in the sea but sometimes it hunts chickens and small birds. Eagles have many sizes, shapes, and colors, but the sea eagle is easy to recognise because it has a strong a streamlined, sharp beak and a stream-line body.
CONCLUSION Its forelimbs (or arms) serve as wings. This means that they are of little use for anything except flying. It walks on two legs and has a very flexible neck and strong beak to handle foods, to care for its feathers, and for many other jobs that non-flying animals do with paws, claws, or hands on their forelimbs.

Taken from, Artono (2008:16)

Based on the explanation above, it is very important to increase the ability of vocabulary mastery as much as possible. Vocabulary is also important that teaching vocabulary must be the first priority in the English language teaching especially in junior high student. It means when teaching English in junior high school needs imagination to create a feeling interest in a learning process. Because at that time, the students easily to capture or to understand something that they are focus and see. So that the way to teaching English in junior high school is very importance.

In this sense, the junior high school students are better to learn the vocabulary with the semantic mapping technique, because that used visually presentation that is the connections among word within a text inform a map. It make students interested and easily remember word better. The use semantic mapping will replace the activity that have the some purpose, able to interpret the meaning and content of word. So, it is appropriate to use semantic mapping technique in increasing the students’ mastery vocabulary in SMPN I Samalantan.

Based on the explanation above, the researcher had investigated the effective solution to increase the vocabulary masteries of the second semester in the seventh grade students of SMPN I Samalantan by comparing between before and after using semantic mapping technique for teaching English vocabulary.

The purposes of this research are to know whether or not teaching vocabulary by Semantic Mapping is effective and to know how well teaching vocabulary using Semantic Mapping increase the students’ vocabulary achievement.

METHOD OF RESEARCH

A. Research Form

Type of research used in this research is pre-experimental design because the researcher wanted to investigate the effectiveness of using semantic mapping in teaching vocabulary with comparing before and after using treatment. The form of the pre-experimental study which the writer applies can be seen below:

<table>
<thead>
<tr>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>T</td>
<td>X2</td>
</tr>
</tbody>
</table>

Brown (1987:37)

This design writes X1 T X2 which indicates a pre-test, treatment, and post-test. The purpose of X1 or pre-test is to know the students’ knowledge before treatment. T is treatment, in this point of view, means teaching learning process that use the material that is vocabulary use descriptive text through semantic mapping. After
treatment, the researcher conducted on post-test which was indicated by $X_2$, post-test was administered to know the students’ achievement.

B. Population and Sample

In this research, the population is the seventh grade student of SMPN 1 Samalantan in academic year 2011/2012. There are four classes of the first grade students that consist of 140 students.

In selecting the sample, the writer took class VII A with 20 students as sample of the research and class VII B selected as a try out class with 20 students.

C. Technique and Tool of Data Collecting

Since the form of this research is pre-experimental study, the writer employed measurement technique to measure the students’ ability by using semantic mapping. The measurement techniques, the first is pre-test to collect the data before the treatment. The second one is post-test, that is to collect the data after the treatment is given. The result of both pre-test and post-test are measured by using t-test in order to figure out significance of interval score of pre-test and post-test.

The tool of data collecting in this research is written test. In this case the writer constructed 20 items. The test divided into two parts. The test that has been used in this research is multiple choices with 10 questions based on the descriptive text and by matched words with descriptions, synonym and antonym with 10 questions. The answer choices for the matched test is available in a box. The student had chosen which one the correct answer based on the text that they already read. It is technique to test students’ ability in understanding vocabulary.

D. Technique of Data Analysis

a. The students’ individual score of pre-test and post-test

To analyze of the students’ individual score, the writer uses the formula follow:

$$S = \frac{R}{K} \times 100$$

$S$ = The students’ individual score

$R$ = The number of right students’ answer

$K$ = The total number of test item

The follow criteria to be used in the students’ individual score:

<table>
<thead>
<tr>
<th>Test score</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 – 100</td>
<td>Good to excellent</td>
</tr>
<tr>
<td>60 – 79</td>
<td>Average to good</td>
</tr>
<tr>
<td>50 – 69</td>
<td>Poor to average</td>
</tr>
<tr>
<td>00 – 49</td>
<td>Poor</td>
</tr>
</tbody>
</table>

(Harris, 1969:134)

b. The students mean score of pre-test and post-test

The students’ mean score of pre-test and post-test was calculated by using these formula:

$$M = \frac{X}{N}$$

$M$ = The mean score
X = The sum of individual score of students pre-test and post-test
N = The total number of individuals
c. The students’ interval of score of pretest and posttest
\[ D = \bar{X}_2 - \bar{X}_1 \]
(Arikunto, 2006:28)
\[ D = \text{The interval of score of pretest and posttest} \]
\[ \bar{X}_2 = \text{The students’ mean score of posttest} \]
\[ \bar{X}_1 = \text{The students’ mean score of pretest} \]
d. The analysis on the students’ significance of the students’ score pretest and posttest
The significance of score of pre-test and post-test was calculate by using t-test formula:
\[ t = \frac{D}{\sqrt{\frac{\sum D^2}{N} \cdot \frac{(\sum D)^2}{N(N-1)}}} \]
\[ t = \text{Analysis on the students’ significance score} \]
\[ D = \text{The interval of pre-test and post-test} \]
\[ \sum D = \text{The sum of students’ interval score of pre-test and post-test} \]
\[ \sum D^2 = \text{The sum of the students’ squared interval score of pre-test and post-test} \]
\[ N = \text{Number of students} \]
e. The analysis of the effect of the treatment.
The writer used the effective size as the formula. The formula as follow:
\[ E_s = t \sqrt{\frac{1}{N}} \]
Interpretation: ES = Effect size
\[ T = \text{The result of t-test} \]
\[ N = \text{Number of students} \]
The criteria of the effect size can be classified as follow:

<table>
<thead>
<tr>
<th>Effect size</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES ≤ 0,2</td>
<td>Low</td>
</tr>
<tr>
<td>0,2 &lt; ES ≤ 0,8</td>
<td>Moderate</td>
</tr>
<tr>
<td>ES &gt; 0,8</td>
<td>High</td>
</tr>
</tbody>
</table>
FINDINGS AND DISCUSSION

1. Research Findings
   A. The Analysis students’ individual score of pre-test and post-test
      The Students’ Achievement In Pre-test and Post-test

<table>
<thead>
<tr>
<th>NO</th>
<th>Students’ Code</th>
<th>Pre-test (X₁)</th>
<th>Post-test (X₂)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total Right</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Answer</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>ST20</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>ST19</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>ST18</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>ST17</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>ST16</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>ST15</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>7</td>
<td>ST14</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>8</td>
<td>ST13</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>ST12</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>ST11</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>11</td>
<td>ST10</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>12</td>
<td>ST9</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>13</td>
<td>ST8</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>14</td>
<td>ST7</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>15</td>
<td>ST6</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>16</td>
<td>ST5</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>17</td>
<td>ST4</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>18</td>
<td>ST3</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>19</td>
<td>ST2</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>20</td>
<td>ST1</td>
<td>6</td>
<td>30</td>
</tr>
</tbody>
</table>

   \[ \sum X₁ = 88.0 \]
   \[ \sum X₂ = 148.0 \]

B. The Analysis of students mean score of pre-test and post-test
   The students’ mean score of pre-test and post-test was calculated by using this formula:
   1. The students mean score of pre-test
      \[ X = \frac{88.0}{20} = 4.4 \] (Based on Harris’ criteria, it is qualified as “Poor”)
   2. The students mean score of post-test
      \[ X = \frac{148.0}{20} \]
M = \frac{\bar{X}}{S} = 7.4 \quad \text{(Based on Harris' criteria, it is qualified as “Average to good”)}

C. The Analysis of students’ interval of score of pretest and posttest

\[ D = X_2 - X_1 \]

\[ D = 7.4 - 4.4 \]

\[ D = 3.0 \]

This kind of score was crucial to calculate the significance of the students’ interval score of pre-test and post-test.

E. The analysis on the students’ significance of the students’ score of pretest and posttest

\[ t = \frac{D}{\sqrt{\frac{\sum D^2}{N(N-1)}}} \]

\[ t = \sqrt{\frac{3.0}{\sqrt{\frac{200 - (30)^2}{20(20-1)}}}} \]

\[ t = \sqrt{\frac{3.0}{\sqrt{\frac{200 - 60}{380}}}} \]

\[ t = \sqrt{0.51} \]

\[ t = 0.7 \]

\[ t = 4.28 \]

C. The analysis of the effect of the treatment.

\[ Es = t \sqrt{\frac{1}{N}} \]

\[ 4.28 \sqrt{\frac{1}{20}} = 0.95 \]

Based on the Smiths’ criteria, it is qualified as the higher (0.95>0.8) of the effect size value, it means that the treatment was successful and the effectiveness of used the semantic mapping in teaching vocabulary mastery is higher.

The result showed that t-test is 4.28 then calculate to the effect size the result (0.95) it means that in the ES criteria the result is high qualification (0.95>0.8). Therefore, the Null hypothesis (Ho) is rejected and alternative hypothesis (Ha) is accepted. It means that using semantic mapping in teaching vocabulary through descriptive text to the seventh grade students of SMPN 1 Samalantan is effective. This technique was able to increase the students’ achievement.
2. Discussion

From the data analysis above, it is found that using semantic mapping in teaching vocabulary through descriptive text increase the students’ vocabulary achievement especially to the seventh grade students of SMPN I Samalantan. The researcher believes that it happens because this technique had stimulated students in learning appreciation. The researcher can see that the student was entusiastic, because they are learned by using unusual way when teaching learning process. When the researcher taught the students and showed a schema or map that used to represent words that has relationship among a word and arranged radially around central key topic or title. It also used of colours, symbols, pictures, and spatial skills. So that make student feel interested and really want to know about what would be discussed.

The researcher has conducted a treatment to 20 students as the sample of research. In order made the treatment run systematically and smoothly, the researcher has prepared some lesson plans as the framework. The researcher has planned and used two lesson plans for treatment with the allocated time (2x40 minutes) each meeting as state in the basic frame of the curriculum that a period is forty minutes for the junior high school students.

In the treatment, the researcher used semantic mapping as technique of teaching English integratedly to enrich the students’ vocabulary. The researcher expected that by using semantic mapping through descriptive text in treatment, the students’ could master vocabulary more easily.

The first treatment, the researcher had found the problem that happened in the class. There were some students did not follow the activities. They were talked with their friends without paying attention to the researchers’ explanation. They were passive when the researcher ask about the lesson. Some students did not understand semantic mapping technique. Because the students did not read the text material which was connected with semantic mapping. The second treatment, the researcher attract students’ attention by put the descriptive text in the blackboard with colour paper and gave each piece of paper of descriptive text to the students. It was made students easy to read the text material. So the researcher be more easy to explained the lesson with semantic mapping technique. The researcher showed the example of descriptive text informs of semantic mapping. Each words in map wrote by different colour and symbols. It made students feel interested. They was active and entusiastic to know more about what would be discussed. And of course, it made the researcher easy to guide the students to learn the lesson.

Although it was found difficult for the researcher to explain the use of semantic mapping in presenting vocabulary based on text and the student feel confused. As the result, it can create good situation in classroom. It could be interesting and the students’ has high interest to learn. They were active and enthusiastic followed the learning activities and easily understand the word and recalls words better. It also made their achievement is good.

Based on the data analysis, the researcher found out mean score of pre-test was 4.4. The mean score of post test was 7.4. Based on the results, the students’ mean score of pre-test is classified into “poor” category and their mean score of post-test is classified into “Average to Good” category. As calculated before, the students’
interval score of pre-test and post-test was 3.0. This point showed that the treatment of using semantic mapping in teaching vocabulary through descriptive text was effective, categorized into high (0.95>0.8). It means the students’ score of pretest and posttest was significantly different. In summary, the alternative hypothesis said that “teaching vocabulary using semantic mapping to the seventh grade students of SMPN 1 Samalantan is effective is accepted”.

In conclusion, this research proved that using semantic mapping as the teaching technique can improve the ability in mastering the vocabulary especially to the seventh grade students of SMPN I Samalantan. Furthermore, this kind of technique had been created a good atmosphere or good situation in teaching learning process.

CONCLUSIONS AND SUGGESTIONS

Refering to the research findings and the analysis of the students’ test result, the researcher draws the conclusion as three parts. The first, using semantic mapping in teaching vocabulary to the seventh grade students of SMPN 1 Samalantan is effective, it can increase their score of test. With result the t-test (4.28) then calculate to the effect size (0.9) it means effect of treatment is “High” based on the criterion (0.9>0.8). Second, the use of Semantic Mapping contributed significant change of their achievement score to the seventh grade students. This fact could be seen through the mean score of students’ Post-test result (7.4) which was higher than the result of students’ pre-test (4.4). As a result, the classification of the students mean score turned up from poor to average to good criterion. The last, the significant difference of this achievement could also be proved by the t-test (4.28) is bigger than t-critical value. It means that semantic mapping increase the students vocabulary achievement.

After finding the fact that using semantic mapping in teaching vocabulary through descriptive text has changed students’ achievement, some suggestions need to be given, first the English teachers of junior high school are recommended to use semantic map as a teaching technique that can attract and motivate the students in learning English. It is interesting and students will get information, enjoyment motivation in memorizing the vocabulary in descriptive text. Second, semantic mapping used to illustrate the teaching material, in order to facilitate the students to understand a passage or the meaning of words phrases or structures. The students can see the connection among word inform of map that already given by the teacher. Third, the teacher should use this technique in order to help the students improve their vocabulary. The last suggestions the teacher should use this technique to attract the students’ attentions and avoid the students to get bored.

REFERENCES


