THE APPLICATION OF SEMANTIC FEATURE ANALYSIS AS A STRATEGY TO ENRICH STUDENTS’ VOCABULARY

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Abstract. This research aimed at finding out whether or not significant improvement on students’ vocabulary after applying Semantic Feature Analysis. Pre-experimental design was applied in this research with one group pretest-posttest design. The population of this research was the second grade class of SMA Negeri 1 Majene, 2014/2015 academic year with 28 students as the samples. The researcher used simple random sampling technique in taking the samples. The research instrument used vocabulary test through written test using Semantic Feature Analysis Grid. The result of this research showed that the application of Semantic Feature Analysis in this research had significant influence in students’ vocabulary enrichment. It was proved by the improvement of mean score from 41.03 in pre-test to 72.71 in post-test. It was supported by the value of the t-test 18.7 which was greater than the value of t-table 1.703 the level of significance (p) = 0.05 and degree of freedom (n-1)=28.

Keywords: Semantic Feature Analysis, Vocabulary, English Learning

http://sastra.unifa.ac.id/journal/index.php/jes/index

INTRODUCTION

Foreign language teaching process has become a pivotal issue in recent era. It has been proven by many studies which conducted the topics (Romadloni et all, 2017; Yusri et all, 2018; Mantasiah ettl, 2018; Qalbi et all, 2017). One of foreign languages conducted by many researchers is English. In English learning, vocabulary is a very important language element because it helps students to express their own ideas. To express their own ideas, they have to know the meaning of the words in order to obtain comprehension. Since comprehension is the goal of language skills, we cannot deny the importance of vocabulary development. The more words we know, the more we will be able to understand what we hear and read and the better we will be able to say what we want to speak or write. Mastering vocabulary is like constructing a house. The better the construction is, the stronger the house will be. Hence, if we have a great mastery of English vocabulary, we are able to have an opportunity to be fluent in English.

Nowadays, vocabulary learning plays an essential role in language teaching especially in the context where English is taught as a foreign language. This is because the final goal of language teaching is to improve the language competence of learners. Moreover, vocabulary has been recognized as crucial to language use in which insufficient vocabulary knowledge of the learners led to difficulties in language learning (Asgari and Mustapha, 2011). Nevertheless, the students still find problems in their learning either inside or outside classroom and they generally see unknown words as the first problem to solve which means mastering vocabulary is one of the most challenging tasks that any learner faces while acquiring another language (Mitsumoto and Takeuchi, 2009).

Many ways and strategies have been implemented to improve the ability of brain in memorizing and understanding things in the case of vocabulary enrichment such as the application of Mnemonic Method (Raugh and Atkinson, 1975), Incidental Learning (Day et al., 1992), Keyword Method (Avila and Sadoski, 1996) and many more. One of the ways that is considered as
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An effective way is using Semantic Mapping. The most popular of all semantic mapping strategies is Semantic Feature Analysis (SFA). Semantic mapping strategy involves drawing a diagram/chart of the relationships between words according to their use in a particular text and it is best introduced as a collaborative effort between the teacher and the class (Stahl and Vancil, 1986). This strategy incorporates a variety of other memory strategies such as grouping, using imagery and associating and elaborating (Keshavarz et al., 2006). Semantic mapping has been used in a variety of ways, including the following: It has been used as a means of improving the teaching of study skills, as a framework for identifying the structural organization of texts, as a strategy to promote reading comprehension of learning disable students, and many more. (Keshavarz et al., 2006)

A number of previous studies have focused on the relation of semantic mapping strategy with vocabulary learning for example the research done by Keshavarz et al (2006) that studied the effect of semantic mapping strategy instruction on vocabulary learning of intermediate EFL students, Thuy (2010) that studied the effect of semantic mapping on vocabulary memorizing and many more. Although these researches found that semantic mapping strategy affected vocabulary learning, they all emphasized more on students’ perception toward the use of this strategy in vocabulary learning. Another research who has studied the use of semantic feature analysis in vocabulary learning such as the research done by Boyle and Coelho (1995) that studied the application of semantic feature analysis as a treatment for aphasic dysnomia still used the general concept of semantic feature analysis with common approach implemented to students’ learning condition. The researcher thinks that implementing semantic feature analysis for vocabulary learning in common way may help students to increase vocabulary, but still less in understanding the meaning.

This assumption comes from the observation of the researcher in SMA Negeri 1 Majene that sometimes there are several words that are the same but have different meaning (also known as “Homograph”) appear in a text which complicate students to understand the text. This difficulty is potential to be faced by all students who study English Subject in SMA Negeri 1 Majene. The researcher sees this strategy as a potential strategy to promote vocabulary enrichment. In implementing this strategy, the researcher states two stances on how this Semantic Feature Analysis will work throughout the research. Firstly, unlike the usual pattern of Semantic Feature Analysis, the researcher will not only aim to use this SFA chart as the tool to gain as many as different types of vocabulary based on the topic given. The researcher will also tend to elaborate vocabulary such in the case that the researcher found in observation. The case as the instance of what the researcher aims is the vocabulary that are the same but those vocabulary have different meaning. At the end, the researcher will still use the concept of chart, grid, or other mappings as the instrument to implement this strategy. Secondly, the researcher will maximize the benefits of using SFA strategy in enriching student’s vocabulary. What the researcher means here is not only giving opportunity for student to learn many kinds of vocabulary, but also gaining the in-depth understanding about the meaning of the vocabulary based on the context when they are used.

PREVIOUS RELATED STUDIES

Before coming to the conclusion of choosing semantic feature analysis and vocabulary enrichment as the object of this research, the researcher has done an observation dealing with the research about semantic mapping and vocabulary learning. The result of this has influenced the researcher in composing the framework of this research whether in the background, method, or even the strategies to be implemented during the research including the model of the instrument and many more.

Wambaugh and Ferguson (2007) conducted a research on Application of Semantic Mapping.
Feature Analysis to Retrieval of Action Names in Aphasia. This investigation examined the effects of a semantic feature training procedure on retrieval of action names in a participant with anomic aphasia. Increased accuracy of naming was observed for both sets of trained action names, with increases being maintained at 6 weeks posttreatment. However, accuracy of responding did not reach preestablished criterion levels. Repeated exposure to stimulus items without training resulted in unstable and temporary increases in naming accuracy. No changes were observed in accuracy of naming of untrained actions that were measured only at pre- and posttreatment intervals. Increases in verbal productivity and informativeness in discourse production were associated with the treatment.

Thuy (2010) conducted a research on The Effects of Semantic Mapping on Vocabulary Memorizing. At Tran Quoc Toan High School, when students learn English, they usually faced with many difficulties not only in specific language skills but also in vocabulary memorizing. Because of their learning habits and learning strategies, they failed to memorize words for a long time and to recall words when necessary. Based on literature review, it is found that semantic mapping has had good effects on vocabulary learning; especially it improves the retention and retrieval of word meanings. The results indicated that the students in the experimental group outperformed those in the control condition in retaining word meanings. The results also proved that the students had positive attitudes towards semantic mapping. This leads to the implication that the semantic mapping can improve high school students’ vocabulary retention and is promising to vocabulary teaching and learning.

Those studies have been the foundation of the researcher to observe the relation between semantic feature analysis and vocabulary enrichment. What becomes different between the previous research and the research will be conducted by the researcher is in the emphasis of the technique used. The research will be conducted by the research will emphasize more on the result achieved by the students to see whether or not the enrichment gained by the students. Although there have been researches that studied the relation of SFA and vocabulary learning, it is still acceptable and necessary to conduct the research because the subject is different.

SEMANTIC MAPPING STRATEGY

Developments in “lexical semantics” have prompted the development of the “semantic field theory”, “semantic networks” or “semantic grids” strategies which organize words in terms of interrelated lexical meanings. The “semantic field” theory suggests that the lexical content of a language is best treated not as a “mere aggregation of independent words” but as a collection of interrelating networks or relations between words (Amer, 2002). It is noteworthy that words may be grouped together (related to each other) according to different criteria. Animals, for example, may be grouped in terms of physical features; they may be grouped in terms of nonphysical features such as pet, wild, food, etc. (Gairns and Redman, 1986).

Semantic elaboration consists of a series of techniques as semantic feature analysis, ordering, pictorial schemata and semantic mapping (Ellis, 1995). Semantic mapping and semantic feature analysis draw learners’ prior knowledge and use discussion to elicit information about word meanings. Semantic feature analysis is similar to semantic mapping, with the exception that it uses a grid rather than a map as graphic display.

Sokmen mentioned four techniques for semantic elaboration: semantic feature analysis, semantic mapping, ordering, and pictorial schemata. In this section, semantic mapping in vocabulary teaching and learning is concerned about. Since vocabulary consists of a series of interrelating systems and is not just a random collection of items, there seems to be a clear case for presenting items to students in a systematized manner which will both illustrate the organized
nature of vocabulary and at the same time enable students to internalize the items in the coherent way. Words are related to each other in various ways. Two examples are that (1) the meaning of a word depends to some extent on its relationship to other similar words, often through sense relations, and (2) words in a word family are related to each other through inflectional and derivational affixes (Schmitt, 2000). In semantic mapping, words are grouped in the former way.

Semantic Feature Analysis (SFA) is a treatment technique designed to improve the naming abilities by increasing the level of activation within a semantic network and subsequently enable the individual to have easier lexical retrieval. This technique was first described by Boyle and Coelho in 1995 (Boyle and Coelho, 1995), where it was applied in a case with mild non-fluent aphasia, resulting in improved confrontation naming of trained and untrained items but not generalization to connected speech. In reduplication study by Coelho et al (2000), SFA was used in a case with moderate fluent aphasia. They reported gains in both trained and untrained items during a confrontation naming task, as well as in connected speech. The authors suggested that the improvement in the connected speech it might be influenced by not only the differences in severity but also type of aphasia. Furthermore, they suggest that the effect of SFA intervention is reflected in an increase in communicative efficiency.

Semantic Feature Analysis has been revered as a powerful strategy that "mimics the way the brain organizes information" (Frey and Fisher, 2004). The context in which students learn new words is extremely important and must be considered in instruction. Because it is important for students to be actively involved in constructing meaning, it is much less effective for teachers to organize the words for students and offer up how the words are related. Although, within the modeling stage this is acceptable, students who can begin to create their own list of features will begin to make connections and internalize the information in a more effective manner (Anders and Bos, 1986).

Semantic Feature Analysis helps students grasp the "uniqueness" of individual words and aids students in their reading development by increasing their personal and academic vocabulary (Johnson and Pearson, 1978). By following particular steps you will also be able to create and use SFA, you will be able to help students gain insight about the concepts and vocabulary needed in order to comprehend the given text or topic.

a. Words and Features

List phrases or individual words that are represented in the text or related to the key concepts of the text. Next, consider each word and determine if it represents large ideas or concept (feature) or if it is more of a detail relating to the primary concept (important vocabulary). (Anders and Bos, 1986). It is important to note that while giving students the "features" during the initial teaching of the strategy is useful, students will benefit far more when creating their own features for the given vocabulary words, as they become even more active in their learning. This is a modification that will consider as the students become more experienced with the procedures.

b. Create the Matrix

Inside the matrix, add the words that are considered a feature, or superordinate idea across the top and add the important vocabulary, or subordinate concepts, down the left hand column.

c. Code the Matrix

After creating the matrix, it will need to make copies for students or complete it as whole group via a projector. While this strategy can be used before reading a piece of text, it can also be useful after or during reading as a way to help students reflect on what they read or connect to what they are reading. Coding the matrix can be accomplished in many ways. The first suggestion, made by Johnson and Pearson, was to use "+" and "-" to equate to a positive or negative response if the given word had or did not have a particular feature. Others, Anders and Bos (1986), suggested using the "+" and "-" along with a "0", for no
relationship, and a "?" if more information is needed or if there is confusion. Although many teachers find "+" and ",-" useful, other may be receptive to using more of a Lichert scale, where numbers are used instead of symbols. A rating of "0" would mean there is no relationship found between the vocabulary word and the feature, while a "5" would reflect a high degree on how the vocabulary word is related to a feature.

d. Before Reading
If used before reading, discuss with students the upcoming text topic and point out to them the vocabulary and features listed in the chart. Create conversation focusing on each word and provide insight on the words. Encourage students to express their own knowledge about the vocabulary words and features. Guide students, through the use of modeling and scaffolding, on how to explain their rationale for their choices as they code the matrix together.

e. During Reading
If students are familiar with SFA, it may want to consider using it as a "during reading" activity. After creating the grid, provide students with their own copy to use while they read. Discuss with them the vocabulary words and features before reading of the text and remind them to think critically as they read and code the matrix themselves.

f. After Reading
Students can benefit from using the SFA even after they have finished reading the text. After reading, if SFA was completed during or prior to reading, they will want to review their choices and make modifications. Students may also be able to complete an SFA after reading a piece of text and use it for a study guide or review sheet of key concepts in a lesson.

g. Discuss
During the review of the matrix, students should become involved in explaining the rationale for the choices they made. It is important for teachers to help students to think critically about their choices, why they chose them, and what they now understand about the connections between the words and concepts. This is vital to the success of SFA. Teachers may want to ask some of the following questions to precipitate discussion.

- Why did you choose ("+", ",-", or "?") for that vocabulary and feature combination?
- What similarities do you see among these words? What are the differences?
- How do these relate to our topic?
- Are there any words or features that do not belong? Which ones? Why?
- Can any of these words and features get a "maybe" answer instead of just "yes" or "no"? Which ones? Why?
- What generalizations can we make about our subject/topic from analyzing our matrix?

h. Extension: Writing a Summary
Upon completion of a matrix, and after discussion, an assignment that would be beneficial for students is to write a summary about their findings. The SFA matrix provides an organized display of details and information that can be helpful to students who struggle with summarizing or writing.

RESEARCH METHOD

In language study, there are some methods which can be implemented. In this study, the researcher applied pre-experimental design (Jufri, 2007; Jufri, 2017). The researcher used one group pretest - posttest design. The group got pretest, treatment, and post test. Before giving treatment, the researcher gave pretest. Post test were given after the treatment. The result of the pretest and post test were compared to find out whether Semantic Feature Analysis can increase students’ vocabulary significantly. In this research, there are two kinds of variables. They are dependent variable and independent variable. The dependent variable of this research is students’ adjective vocabulary enrichment and the independent variable of this research is the application of Semantic Feature Analysis.

The population of this research was the second year students of SMA Negeri 1 Majene. The second year students of SMA Negeri 1
Majene consists of 8 parallel classes, each class consists of 30 - 35 students. The sample of this research was the second grade class of SMA Negeri 1Majene, 2014/2015 academic year. The researcher used simple random sampling technique, and the researcher will take Kelas Lintas Minat Bahasa Inggris. It basically consists of 30 students. The research instrument uses vocabulary test through written test. The students were given a worksheet to be filled in which the total questions are 20 questions as the indicator to measure. Each question is in the form of a sentence consisting word to be classified and matched using Semantic Feature Analysis Grid. The Semantic Feature Analysis Grid used is adapted from Semantic Feature Analysis Grid of Boyle’s research in 1995. There are six features to be matched with the words by considering the position of the words in the sentences and also the natures of the words. The vocabulary used was the words based on topic will be given in the treatment. The test is used to find out the students’ understanding about the vocabulary. The pretest is used to see the students’ vocabulary understanding before the treatment while the posttest is administered to know the students’ vocabulary enrichment after giving treatment using semantic feature analysis.

RESULT AND DISCUSSION

The major purpose of this study was to find out whether or not the application of Semantic Feature Analysis can enrich students’ vocabulary. The results of this research showed that the use of Semantic Feature Analysis could enrich students’ vocabulary. There are possible explanations for the result found in this research. Firstly, the researcher gave pretest to the students to measure their understanding about certain vocabulary. The result showed that the understanding of the vocabulary was very low. The researcher found some errors in pretest. Most students’ failures were integrated from the first question to the third question. In the first question, the students failed to distinguish what parts of speech were suitable with the words that were classified into homograph. They failed to distinguish which one was noun, verb, adjective, or adverb. It resulted on their failure to classify the words into the right column. In the second question, the students were failed to guess the meaning of the words given. This was because at the beginning, they failed to determine the parts of speech of the homograph words correctly so they could not correspond the words to the meaning correctly as well. In the third question, the students failed to determine the correct transcription for the words. This was also because the students could not match the words to the parts of speech and the meaning. They generally failed to identify the punctuation existed in each word, so that they chose wrong transcription for the pronunciation of the words. In fact, the existence of punctuation such as “,” was important to mark the stress of the syllables in the words which resulted on the difference types of parts of speech of the words that were classified into homograph.

Another problem found by students in pre-test was they could not understand the meaning of the whole sentence. They generally needed to understand the meaning of overall sentence in order to correlate the meaning of the sentence per unit. In another words, they needed to build up the general concept of what they read before understanding the concept in small unit. Students were also lack of background knowledge about certain concept. This caused they were difficult to identify and understand the meaning of certain words correlated to the specific concept. In this case, they saw the words that they never found before as the words that were difficult where they could not guess the meaning correctly although they have tried to understand the meaning of the sentence correctly although they have tried to understand the meaning of the sentence. In fact, the words that they considered as difficult words are common words that should have been found in conversation even in their daily conversation.

This condition might be because the student lacks reading. Reading is actually the most important way to enrich vocabulary. It is because by reading as much as they can, the vocabulary will be automatically enriched. Reading is not
only one activity. In reading, there is a knowledge transfer activity from what we read to our mind till we try to understand the content of what we read. After that, we are trying to recognize each unit of what we read. Sometimes there are words that we do not understand. It requires us to make additional activity such as opening dictionary or thesaurus, asking for the meaning to someone who knows the meaning better, and many more. This results on the enrichment of vocabulary that at first we do not know. Students who like to read more will have better vocabulary rather than those who read less. From the activity of reading, students will also build the general knowledge. At last, students still need to practice using the words through conversation to make sure that the words is useful for them in everyday conversation.

After giving pretest, the researcher gave them treatment. In this case, the researcher tried to teach the students how to use Semantic Feature Analysis to facilitate them in enriching vocabulary. The treatment was conducted in six meetings to measure the improvement of the students after the implementation of Semantic Feature Analysis. The researcher did not forget to explain the general concept of Semantic Feature Analysis to the students. The researcher also explained how certain words varied in the sentences based on the context where they were used. The students were equipped with Semantic Feature Analysis chart before discussing the sentence that would be identified.

During the treatment the students were interested in learning English to improve their vocabulary and grammar ability. It can be seen from the students’ enthusiasm to guess the meaning of the words. Although sometimes they failed to guess the correct meaning, the researcher helped to understand the meaning of the words correctly. The researcher explained what became important for them to point out before guessing the three aspects discussed through Semantic Feature Analysis. the researcher then showed how the Semantic Feature Analysis chart would manage them to cover the important items in understanding the words. The researcher found that the students were mostly easy to find the meaning of the words using Semantic Feature Analysis. The researcher did not forget to measure how far the understanding of the students by trying them another context of sentences.

After giving treatment, the researcher distributed posttest. The result indicated that, the score of the students’ posttest improved. They finally could distinguish the parts of speech of the words in different sentence with different context also. They also finally could guess the meaning of the words correctly based on the determination of the parts of speech. At last, they also could determine the correct transcription of the words which led to the correct pronunciation after considering the parts of speech and the meaning of the words in each sentence.

The result of the test showed that there was a significant difference between t-test value and t-table value. The mean score of the students pretest and posttest show the improvement of their achievement. It is proved by the score of posttest is higher than the pretest, and the students’ score of posttest is better than the pretest score. It means that the application of Semantic Feature Analysis was very helpful for the students to enrich their vocabulary.

Based on the positive effect of treatment using Semantic Feature Analysis, the score of the students’ posttest improved. The values of t-test and t-table have known and after comparing the result shows that t-test is higher than t-table. So the researcher can conclude that students’ vocabulary is enriched after treating them by using Semantic Feature Analysis. It means that the application of Semantic Feature Analysis in this research has significant influence in students’ vocabulary enrichment.

CONCLUSION

The total mean score of the students’ at the pre-test is 41.03, and the total mean score of the students’ at the posttest is 72.71. The result of T-test value 16.24 which greater than T-table value is (1.703). Based on the research findings above, the researcher concluded that the learning
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of vocabulary by applying Semantic Feature Analysis is effective to improve the students’ vocabulary. Based on the findings and discussion, the researcher concluded that applying Semantic Feature Analysis could significantly enrich students’ vocabulary of the second grade students of SMA Negeri 1 Majene. The researcher concluded the significances of three aspects as follows:

1. In parts of speech determination aspect, there is different result of the mean score between pretest and posttest. The mean score of posttest is higher than pretest. Based on the table the researcher concluded that Semantic Feature Analysis enriches students’ vocabulary in the aspect of parts of speech determination.

2. In meaning aspect, there is different result of the mean score between pretest and posttest. The mean score of posttest is higher than pretest. Based on the table the researcher concluded that Semantic Feature Analysis enriches students’ vocabulary in the aspect of meaning.

3. In transcription aspect, there is different result of the mean score between pretest and posttest. The mean score of posttest is higher than pretest. Based on the table the researcher concluded that Semantic Feature Analysis enriches students’ vocabulary in the aspect of transcription.

REFERENCES


