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The Effectiveness of Using Related Words and Unrelated Words in Teaching Vocabulary for Seventh Graders

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Abstract: This present study is aimed at examining whether there is a significant difference in the vocabulary mastery of students who are taught using semantically related words and those who are taught using unrelated words. Quasi Experimental Research is used with Posttest Only Design involving 54 students from two classes. A vocabulary test is constructed as a main instrument. Data of students' score are analyzed by using Independent T-test. Findings reveal that semantically related words method has positive effects on students' retention. It is recommended that English teachers implement semantically related words. They should also consider the materials is beneficial for students.

Key Words: semantically related words, unrelated words, teaching vocabulary

Abstrak: Penelitian ini ini bertujuan untuk menguji keberadaan perbedaan signifikan dalam penguasaan kosakata siswa yang diajar menggunakan *semantically related words* dan siswa yang diajarkan menggunakan *semantically unrelated words*. Kuasi *Experimental Research* digunakan dengan *Posttest Only Design* dan melibatkan 54 siswa dari dua kelas. Sebuah tes kosakata dibangun sebagai instrumen utama. Data skor siswa dianalisis dengan menggunakan *Independent T-test*. Temuan menunjukkan bahwa *semantically related words* memiliki efek positif pada retensi siswa. Disarankan agar guru bahasa Inggris menerapkan *semantically related words*. Mereka juga harus mempertimbangkan materi-materi yang bermanfaat bagi siswa.

Kata kunci: *semantically related words*, unrelated words, pengajaran kosakata

Vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write. Unfortunately, vocabulary teaching and learning were neglected in the past (Renandya and Richards 2002:255). During the active decades of the mid–twentieth century, vocabulary building was not a priority for researchers or curriculum designers in the context of language teaching and learning.

Vocabulary is one of the most essential aspects of a foreign language. That is why it is important for language learners to learn and master vocabulary in order to be able to communicate in the target language. The more the learners build it, the more easily they will learn. Building up vocabulary helps the learners to understand and use the language easily. For example, in speaking activity, when they communicate with other people by using a foreign language, the conversation will be more alive if the learners know a lot of the vocabulary.

Various techniques have been introduced and used for teaching vocabulary as a result of which researchers have started testing and evaluating these techniques. Thematic and semantic clustering were among these strategies proposed by educational researchers and psychologists. Currently, new vocabulary items are typically presented to ESL/EFL students in semantically and thematically related sets in the current ESL (English as Second Language) textbooks. Words can be related and grouped in various ways. This type of word grouping is called clustering.

Papathansiou (2009) conducted similar experimental research in EFL classrooms with Greek EFL students. The main conclusion of the study is related words impedes L2 vocabulary learning at beginner level. Two crucial variables were found in

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implementing this method might lead the result in failure because she could not control the two important variables. The weaknesses were the use of the same materials for both distinct groups which have different levels of proficiency (the beginner adult and the intermediate young) and the different degrees of motivation of the participants in joining the class.

This study employs two different ways in presenting vocabulary: semantically related words and unrelated words. The use of semantical words in vocabulary acquisition has been a popular subject for numerous studies. The purpose of this study is to investigate which of the two ways of vocabulary presentation would prove to be a practical method in improving the quality of learning English, particularly vocabulary.

There is some experimental evidence which strongly supports the idea and it is very useful to present words of related meaning together so that learners can see the distinctions between them and gain a complete coverage of the defined area of meaning. A study conducted by Princess (2011) aimed to investigate the use of related vocabulary and unrelated vocabulary in presenting vocabulary for Descriptive Text and its impact on students' retention which involved seventh graders of SMP Negeri Sidoarjo. The mean score showed that there is a significant difference between using related word to the level of mastery of English vocabulary of the VII grade students of SMP Negeri 1 Sidoarjo. The students who were taught using semantically related words showed better performance than those who were taught using unrelated words.

A study conducted by a lecturer of STIBA Saraswati Denpasar, Sahidin (2009) reveals the significant difference of teaching the vocabulary using related words and unrelated words conducted in Foreign Languages Saraswati Denpasar to take students of Japanese Literature as the subjects. Data obtained improved student learning outcomes. It can be concluded the parcipants taught using related words produced better performance than those taught using unrelated words.

Some theoretical framework strongly suggests learning semantically related words (for example, body parts) at the same time makes learning much easier. According to Fillmore (1985), speakers can be said to know the meaning of the word only by first understanding the background frames. So, words are related by their links to a common background. A theory which is in favour of related clustering is schema theory. This theory explains how old information possessed by the learner influences the learning of new information. It aims to explain the way different types of knowledge are learned and people's interpretation of the world from a psychological perspective Schema is an active organization of past reactions or experiences.

Other arguments that support the use of semantic clustering are pragmatic arguments (Tinkham, 1994). Gairns and Redman (1986) assert semantic clusters help learners to understand the semantic boundaries; to see where meaning overlaps and learn the limits of use of an item' (P.32). Hence, semantic clustering helps students to distinguish between semantically related words and it also gives coherence to the lesson. They also believe semantic clusters form building blocks and can be expanded as students' progress. It also provides a clear context for practice.

Reviewing the studies carried out in the past, the writers came across justifications for using semantic clusters, Channel (1981) mentions that the presentation of semantically related vocabulary makes the meaning of these words clearer by seeing how they relate to and are different from other words in set. There is evidence for the usability and effectiveness of presenting related vocabulary in classroom activities. Jullian (2000) refers to a classroom activity which incorporates an explicit approach towards the presentation of semantically related vocabulary. The writer points out that this type of classroom activity helps students understand the full semantic content of the related words and detect what makes them similar and different from each other. Seal (1991), the author of American Vocabulary Builder, provides two reasons for his use of semantic clusters. They give students the sense of structure they need and this organization may help students guess the meaning of new words within the lexical set.

It is also important to mention here the research by Schneider, Healy, and Bourne (1998) whose findings initially appeared to suggest that learning related words together (for example, parts of the body) was easier than learning unrelated words. The researchers found the participants (presented with related vocabulary) were faster and made fewer errors than those in the presented with unrelated vocabulary. This meth-od, semantically related words, provides the related-ness of the meaning, so the participants can see clearer context in learning new vocabulary.

However, there is some theoretical evidence against the presentation of semantically related vocabulary in sets. An argument against semantic clustering is related to Interference Theory which was

formulated by McGeoch (1942). It is hypothesized that "as similarity increases between targeted information and other information learned either before or after the targeted information the difficulty of learning and remembering the target information also increases"(Tinkham,1993:37). It can be evoked to argue that presenting L2 learners with vocabulary items grouped in semantic clusters actually impedes vocabulary learning rather than acting as a support to learning. It refers to the decrease in retention because of a learning activity that interpolates between original learning and later recall. The theory's hypothesis is that new knowledge loss or retention is influenced by the nature of subsequently acquired knowledge.

Another piece of evidence against semantic clustering is the distinctiveness hypothesis (Eyseck, 1979), which received considerable attention during the 1980s. This hypothesis considers the ease with which distinctive information is learned. It relates the ease of learning to the distinctiveness (non-similarity) of the information to be learnt (Tinkham, 1993). The claim is that people remember distinct items better than they remember those that are indistinct. Tinkham hypothesized new word learning would be greater if the words learned are unrelated.

Concerning semantic clustering, a growing body of research indicates that this widely accepted way of presenting new vocabulary items does not facilitate learning (Tinkham 1993; Altarriba and Mathis, 1997; Waring, 1997; Finkbeiner and Nicole, 2003). Rather, it makes learning more difficult and interferes with the learning of similar words. The terms such as*: eye, nose, mouth and ear* provide an example of semantic cluster. A cluster perceived as thematically related would include terms like *frog, pond, swim* and *green* (Tinkham 1994). These terms do not refer to semantically similar concepts; however, they cluster around the concept of frog.

In a more recent study, Finkbeiner and Nicol (2003) used 32 new words and each was paired with a picture of familiar concept. The result revealed participants translated L2 labels learnt in seman-tic sets significantly more slowly than they did L2 labels learnt in random order.

The arguments for and against presenting new vocabulary in lexical sets reported above suggest a need for further research. We have two contrasting views on the presentation of vocabulary in an L2. However, we do not have enough convincing evidence to decide which of the two contrasting approaches to learning vocabulary is the more useful and appropriate for L2 vocabulary teaching. The best way for us to make a decision is to apply both approaches in EFL classrooms and compare the results.

METHOD

This present study employs quasi-experimental with Posttest Only Design research because the study is conducted in educational settings where selecting sample randomly out of all the population is not possible so the researcher can only assign randomly to two different classes (Charles, 1995 as quoted by Latief, 2012).

The aim of the study is to examine the relative claims of the two different procedures by using two different groups of students (Class A and Class B). Instead of using random sampling technique, the researcher consulted with the English teacher which classes have equality in competence. To assure the homogeneity of given information, the researcher conducted a pretest for determining the subjects. The subjects of the study are the seventh graders at SMP 1 Pakisaji. Both groups (VII C and VII D) have the same level of competence in English. Each class consisted of 27 students. The total number was 54 students. At the end of the research period, all students are tested to determine which of the two competing methods is more effective. This study employs two different ways of organizing new vocabulary for presentation; (1) presenting semantically related words (words that share certain semantic and syntactic similarities, for example, topic-related vocabulary, such as 'knife', 'fork', 'spoon', synonyms, antonyms, or homonyms) together at the same time, and (2) presenting vocabulary in an unrelated (mixed) fashion (words that are not semantically related, for example 'book', 'hospital', 'freedom').

Two groups, which have not been organized by the researcher into parallel classes, are used for this experimental study. Both groups serve as the experimental groups A and experimental B. In order to measure the students' mastery before the treatment is given, a pretest is given to the two groups at the beginning of this study. A pretest is administered to see the homogeneity of the students and the score of the pretest is not to be compared with the posttest score. Short-term (SHT) test is administered to the students. Since the researcher are using vocabulary translation tests, the knowledge of the meanings of the words in their L1 is taken into consideration. For this reason, the researcher provides all subjects (both groups) with a

list of the words (used in the study) translated into Indonesian in order for them to tick the words they did not know. This procedure ensures the study is not affected by unknown L1 vocabulary. Then, at the end of the treat-ment, both groups are given a posttest to see the effect of the treatment given.

The research instrument developed in this study is a word set (semantically related words and unrelated words). The reseacher constructed the test in the the form of paper test and media cards which two sides of the card stated two languages, L1 and foreign language for example 'knife' and 'pisau'. The words are taken from the textbook, "*Interactive English*" (Sukarni, Iswahyuni, Ulfa, Isviola & Hariana, 2009) published by Yudhistira and other supplements that supported the material.

Then, the subjects in Class A are taught the association between 60 English words with words that are semantically related (topic-related vocabulary, homonyms, synonyms, and anto-nyms) for a period of two weeks. There are two meet-ings per week. Each vocabulary lesson lasts for 45 minutes and take place the normal class that students attend every Monday and Friday. At the same time, the subjects in Class B are taught the association bet-ween 60 English words with words that are not related semantically. The words are presented in a mixed (un-related) order. At the end of the second week, an im-mediate short-term (SHT) vocabulary test is admin-istered to both classes. This type of test determine the average retention level for a minimum of 2-14 days. Short-term test is the best way to estimate the immediate effect of a treatment (Keeley, 1997).

The teaching procedure is the same for both groups (Table 1). Both groups are exposed to the same teaching material. Each lesson lasts for 45 minutes. The teacher (myself as a practitioner) first introduces the students to the new vocabulary and then elaborates, expands, and consolidates these words into classroom exercises (see Steps 1, 2, and 3 of the teaching procedure below). The treatment will be done within 2 weeks and there will be 4 cycles for 4 meetings.

The purpose of this study was whether the students taught using semantically related words produce better performance in retention test than who taught using unrelated words.

After the data of both groups are recorded, the analysis used is Independent Samples t-test with the help of SPSS Program in order to determine the significant difference between the mean scores of both groups.

RESULTS AND DISCUSSION

Right after giving treatment to both groups, post-test is administered to get the data of their vocabulary ability. The treatment given to the Experimental A is teaching by using semantically related words, while to the Experimental B is teaching by using unrelated words. The result of the posttest shows the experimental A gets better average score (47.296) than the experimental B (40.851). From the comparison, the clear difference (D) of both group was 6.715 (47.296–40.851).

First analysis, the writer uses Kolmogorov-Smirnov Test to see whether the data distributed normally. The data distribute normally if the observed significance is greater than 5% level of significance, and the data do not distribute normally of the observed significance is less than 5% level of significance. The result of normality data was presented in Table 2.

Based on the analysis, it can be shown that both Experimental A and Experimental B groups have normal data which was shown by the *significance p* 0.971 for Experimental B and *p* 0.614 for Experimental A. They are higher than 5% level of significance (*sig p*>*á*), therefore it indicates that the data could be tested for further computation–Levene's test and Independent Sample t-test.

Secondly, independent sample t-test is used to know whether there is enough evidence or not to reject H_0.

Independent Samples Test

Another method used for hypothesis testing is by observing the ratio of *t.* in the Table 3.2, it is found that the number of degree of freedom (df) is 52 with the observed ratio of 11.376. Then, researcher uses *t-table* to determine the significance of the result. For df 52 (two tailed), the researcher gets the value of 2.039 at the 0.025 level of significance. The observed ratio of 11.376 is greater than 2.039, which meant that the difference between the two groups (Experimental A and Experimental B) is greater than the value required to reject the null hypothesis at 0.025 level of significance. In other words, it can be concluded that the students in Experimental A perform significantly better than the students in Experimental B. As the result, it proves using semantically related words method in English teaching and learning activity especially in teaching vocabulary can improve the students' ability in mastering vocabulary better.

Table 1. Teaching Procedure

The Treatment for Experimental A & Experimental B	
Step 1 (noticing) **Duration : 10 minutes**	
Student Activity	**Teacher Activity**
• The students see a list of ten English words (in semantically related words and random set) written on the board. • The students write the English word on one side of a card and the meaning (using L1 translation) on the other to encourage recall. Small cards (around 5 · 4 cm) are used so that they could be easily carried around. • The students are encouraged to learn words, receptively, for example, to see the L2 word and recall the meaning using L1 translation.	• The teacher then read aloud the words one by one and provides their Indonesian translations.
Step 2 (retrieval) **Duration: 15minutes**	
Student Activity	**Teacher Activity**
• Each of the students goes through the set of cards looking at each foreign word and trying to retrieve its meaning. If the student does not remember the Indonesian word, he or she will turn the card over. • The students repeat this process for each of the new words. • The students, then, are asked to give (orally) the Indonesian translation for each new English word, for example, answering questions like 'What is the Indonesian word for ''priest''?'. • The students have to say the Indonesian meaning. The questions help them instantiate and apply the words.	• The teacher ensures that the word cards are used repeatedly by practicing the word card strategy with the whole group. The purpose of the repetitions is simply to facilitate learning. Tinkham (1993) found that most learners required five to seven repetitions for the learning of a group of six paired associates. • The teacher goes through the set of cards with the students at least five to six times.
Step 3 (producing) **Duration: 20minutes**	
Student Activity	**Teacher Activity**
• During the third phase of the teaching process, the students are asked to do two different exercises to encourage repetition of the new vocabulary in each lesson. The same format of exercises is used for both Class A and Class B.	

Table 2. The Distribution of the Test (One-Sample Kolmogorov-Smirnov Test)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Experimental B is normal with mean 40,85 and standard deviation 3,66.	One-Sample Kolmogorov-Smirnov Test	,971	Retain the null hypothesis.
2	The distribution of Experimental A is normal with mean 47,30 and standard deviation 2,25.	One-Sample Kolmogorov-Smirnov Test	,614	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

The difference of the mean scores between the experimental A and the experimental B is caused by the use of relatedness method in the teaching and learning of English. The experimental A is taught by using semantically related words method in the teaching and learning; while the experimental B is taught using unrelated words method.

The findings show the different treatment used for the experimental A and the experimental B gave a significant different result in the students' mastery of vocabulary which means there is enough evidence to reject H_0. Two weeks of treatment is already enough to collect data because this study was considered as short term (SHT) vocabulary which tested vocabulary and see the effect immediately.

It is crucial to mention these results reinforce the positions stated by the researchers mentioned above that the students were faster and made fewer errors than those in the presented with unrelated vocabulary. This method, semantically related words, provides the relatedness of the meaning so the

participants can see clearer context in learning new vocabulary.

The result above supports the result of previous studies. Welasati (2000) in her study concluded that the students taught using semantically related words method got better achievement than the students who were taught using unrelated words method. Her study was carried out for the seventh graders of Junior High School. The same conclusion was also made by Liswinarni (1998) who found significant difference of the students' ability of vocabulary between two groups. She also stated that word relatedness is important in teaching and learning of vocabulary since semantically related vocabulary makes the meaning of these words clearer by seeing how they relate to and are different from other words in set. Azizah (1996), in addition, also found teaching English vocabulary using semantically related vocabulary is effective for building up the students' mastery of vocabulary.

Gairns and Redman (1986:32) assert that semantic clusters help learners understand the semantic boundaries; to see where meaning overlaps and learn the limits of use of an item. Hence, semantic clustering helps students distinguish between semantically related words and it also gives coherence to the lesson. They also believe semantic clusters form building blocks and can be expanded as students' progress. It also provides a clear context for practice.

The result above was reinforced by the results of previous research (Tinkham 1997; Waring 1997; Schneider, Healy, and Bourne 1998; Finkbeiner and Nicol 2003) illustrating that presenting L2 students (beginners) with new vocabulary grouped together in sets of syntactically and semantically similar words facilitates the learning of those words.

The findings of the present study were incompatible with the theory of McGeoch (1942). It is hypothesized that "as similarity increases between targeted information and other information learned either before or after the targeted information the difficulty of learning and remembering the target information also increases". It can be evoked to argue that presenting L2 learners with vocabulary items grouped in semantic clusters actually impedes vocabulary learning rather than acting as a support to learning.

Another piece of evidence against semantic clustering is the distinctiveness hypothesis (Eyseck, 1979), which received considerable attention during the 1980s. This hypothesis considers the ease with which distinctive information is learned. It relates ease of learning to the distinctiveness (non-similarity) of the information to be learnt (Tinkham 1993). The claim is that people remember distinct items better than they remember those that are indistinct. Tinkham hypothesized new word learning would be greater if the words learned are unrelated.

A growing body of research indicates that this widely accepted way of presenting new vocabulary items does not facilitate learning (Tinkham' 1993; Altarriba and Mathis, 1997; Waring, 1997; Finkbeiner and Nicole, 2003). Rather, it makes learning more difficult and interferes with the learning of similar words.

Here also important to mention couple experimental evidences which are incompatible with the present findings. A replication of Tinkham's (1993) study was carried out by Waring (1997). Results of trials-to-criterion showed subjects learned the related word-pairs more slowly than they learned the unrelated word-pairs and "presenting new words that share a common super-ordinate in a set of words to learn does interfere with learning". In a more recent study, Finkbeiner and Nicol (2003) used 32 new words and each was paired with a picture of familiar concept. The result revealed participants translated L2 labels learnt in semantic sets signifi-cantly more slowly than they did L2 labels learnt in random order.

CONCLUSIONS AND SUGGESTIONS

Conclusions

The current study has investigated the role of semantic clustering in learning lexical items under two distinct instructional approaches for the same proficiency levels (beginners). The purpose was to find out which clustering type and instructional method can offer a more efficient alternative in acquiring vocabulary. The findings of the empirical study are presented below in terms of the research questions posed.

The vivid visual difference in mean score, the method implemented in experimental A, semantically related words is a better method than unrelated words method as compared by the mean score of both groups. The benefit of utilizing strategy in semantically related words has been experienced by the students. It may therefore be that activities grouping words with related meaning are best used at a secondary stage when the words can be recognized, some meanings have been acquired, and learners

have reached a point where they will benefit from further opportunity to make connections and distinctions (Hedge, 2000:122–3).

In accordance with the research problem and the result of data analysis, it can be concluded that there is enough evidence to reject H_0 which means there is difference in students' achievement between students taught by using semantically related words method and those taught by using unrelated words method.

For the theoretical contribution, this research gives new sight on the implementation of semantically related words method in teaching vocabulary. For practical contribution, the teachers or lecturers may consider to implement semantically related words than implement unrelated words in case that it has been investigated that semantically related words is better method than unrelated words. The teacher also must consider the materials used in the class which is beneficial for students with different learning styles.

Suggestions

For future research, the present study can also be considered as a useful starting point for similar research or replication in order to see if the findings apply in other contexts as well. Further research with intermediate and more advanced students seems to be necessary in order to clarify whether related vocabulary plays a prominent role in L2 learning at this level.

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