Enlarging vocabulary to improve writing descriptive text of junior high school students using spider concept map

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Abstract: The main aims of this study were to enlarge students' vocabulary mastery and to improve their descriptive text writing ability by using Spider Concept Map. It was also to find out to what extent did vocabulary influence students' writing achievement. Applying experimental method with one group time series design, 30 students of one integrated junior high school in a region of South Sumatra Province were selected purposively as sample. The data were collected by giving vocabulary and writing tests before and after the treatment. The data were analyzed using paired sample t-test and regression analysis. The result of the study showed that the students' vocabulary was enlarged significantly with the mean difference between pretest and posttest of 15.06; $p<0.05$ and their writing achievement was improved a little bit with the mean difference was 1.21; $p<0.05$. Moreover, the result also showed that the influence of vocabulary on writing achievement was 30.1%.

Keywords: vocabulary, writing, spider concept map

Introduction

Writing as one of English four skills must be mastered by students although it may not be easy. For language learners, it is the most difficult skill because they must generate and organize ideas by constructing words into meaningful sentences. As what Pasand and Haghi (2013) states that writing is one of the most important skills in learning a foreign language. It involves the development of ideas and experience with subjects.

According to the World's Most Literate Nation (WMLN), in March 2016, Indonesia was in the 60th rank out of 61 countries in literacy. It showed even in Bahasa Indonesia, literacy of Indonesian people is still very low in reading and writing. Moreover, Annual report October 2013 – October 2014 from International Publisher Association (IPA) showed a number of books published in Indonesia were 30.000 in a year. It is still low compared with other countries in the world, such as UK, US, China, and Russia.

Many Indonesia learners have problems in writing English. It becomes harder when they do not have a sufficient number of words or good grammar mastery needed to express ideas on thought. (Harmer, 2001). Furthermore, Professional Development Service for Teacher (PDST) 2013, an international teacher organization which is located in Dublin, mentioned that the problems of writing are also caused by key components of writing; handwriting, vocabulary, spelling, grammar, and punctuation.

Vocabulary as one of writing key components cannot be separated from any language process. Laufer (1997) points out the importance of vocabulary knowledge and adds that without words to express a wider range of meaning, communication in a second language cannot happen in a meaningful way. Therefore vocabulary instruction should be given a high priority in teaching English as a foreign language since it is the corner of communication.

To improve vocabulary approximately 3000 words and 1.000 to 3.000 word meaning in primary school as what Coady and Huckin (1997) and Graves(2006) state, Spider Concept Map technique can be used. It guide students to make a list of words, pull the idea (word) to be

grouped and connect from broad to more narrow and connect subtopics.

The problems in English vocabulary and writing were also encountered by the students at SMP IT Bina Insani Kayuagung, South Sumatera. All was about the limitation of strategies exposure to the skills and the concern of the vocabulary and grammar lackness. Students needed to be guided how to write 'a good writing'. Furthermore, this study focused on writing descriptive text. Therefore, the objectives of this study was to enlarge students' vocabulary mastery, improve their descriptive text writing ability and find out whether vocabulary mastery could influence their writing achievement by using Spider Concept map.

Methodology

This study was an experimental study and used Time series design. The method was used to know a possible cause and effect of independent on the influence of dependent variable (Cresswell, 2012). To know the effect of the independent variable (Spider Concept Map) on dependent variable (writing and vocabulary achievement), one group time series design with a treatment and a posttest measure was applied. The students were given pretest before giving the treatment by using spider concept map. Monitoring were done to students' vocabulary and writing achievement during the treatment, in order to see the progress.

Population and Samples of The study

The population of this study was all students of seventh grade of SMP Islam terpadu Bina Insani Kayuagung in academic year 2016/2017. 30 students were selected purposively as samples based on the following criteria:the students have the same teacher of English, do not take English course after school hours, and stay in a school dormitory.

Technique for collecting Data

The data were collected by using a test as the instrument before and after the treatment. They were vocabulary and writing tests. The vocabulary test consisted of 50 items which constructed in five parts (*pronunciation, cloze paragraph, meaning, synonym-antonym and multiple choice*), while writing test, the students were asked to write one of the topics given (*my favorite teacher, my bedroom, my pet and my favorite toy*).

Technique for Analysing the Data

The data were analyzed by using statistical analysis by means of the computer software SPSS. They are descriptive analysis, paired sample t-test, and Stepwise multiple regressionThe result of vocabulary test wasscored 100 with the score of each itemwas 2,00. Meanwhile, the result of writing test(pretest and posttest) was scored by two raters by using writing rubricadapted from Brown (2007). Next, the students' score were classified intoscore interval and certain categories in the form of frequency and percentage.

Findings and Discussion

The Score Distribution of Students' Vocabulary and Writing Achievements in Pretest and Posttest

The result of the score distribution of students' vocabulary achievement was presented in the form of score. The scoring system used in ranging from 1-100.

Based on the result, in vocabulary, for pretest, none students (0%) was in the very good category. 5 students (16.7%) were in good category, 14 students (46,7%) were an average category, 7 students (23.3%) were in the poor category and 4 students in the very poor category. For posttest, 4 students (13.3%) were in the very good category, 9 students (30%) were in the good category, 17 students (56,7%) were in average category and none students (0%) in poor and ver poor category. It can be concluded that there was a significant difference in vocabulary achievement after the students were taught by using spider concept map.

In Writing, for pretest, none students (0%) was in very good and very poor category, 4 students (13.3%) were in the good category, 20 students (66.7%) were in average category, and 6 students (20%) were in the poor category. For posttest, None students (0%) in very good and very poor category, 12 students (40%) were in a good category, 10 students (33.3%) were in

average category, and 8 students (26.7%) were in the poor category.

The Result of Paired Sample T-test

The writer used paired sample t-test to compare the result of pretest and posttest. The mean difference of the result of pretest and posttest of vocabulary test was 15.06 and the significant value was 0.00 <0.05 in two tail testing (t-table (df= 29) was 14.068). The mean difference of the result of pretest and posttest of each vocabulary aspects were in pronunciation 1.00, spelling 2.00, meaning in isolation 1.48, and meaning in context (0.50). Based on the analysis, it could be concluded that there was a significant difference in vocabulary achievement before and after the students were taught by using Spider Concept Map. As the result H_{a1}, H_{a2} were accepted and H_{01}, H_{o2} were rejected

For writing, the mean difference of the result of pretest and posttest was 1.21 and the significant value was 0.044<0.05 in two-tailed testing. It meant that the mean difference was significant. Furthermore, the value of t-table (df= 29) was .2.104. It also happened for the aspects of writing (content, organization, grammar, syntax, and mechanic). The result of each aspect of writing was in content 0.53, organization 0.35, grammar 0.43, syntax 0.15 and mechanics 0.30. it could be concluded that there was a significantdifference in writing descriptive text and the aspect of writing achievement after the students were taught by using Spider Concept Map. Therefore, H_{a3}, H_{a4} were accepted and H_{03}, H_{04} were rejected. Table 1 shows the result of paired sample t-test.

Table 1   Students' Vocabulary and Writing Achievement Based on Paired Sample T-Test (N=30)

Variables	Mean Score		Mean Difference Pre and Posttest	t-value	sig
	Pretest	Posttest			
Vacabulary	57.87	72.67	15.06	14.068	.000
· Pronounciation	6.967	7.967	1.00	5.385	.000
· Spelling	4.767	6.767	2.00	7.88	.000
Meaning in isolation	5.283	7.033	1.48	6.48	.001
· Meaning context	6.400	7.433	1.03	2.47	.019
Writing	9.800	11.016	1.21	2.104	.044
· Content	2.050	2.58	.53	3.357	.002
· Organization	1.216	2.21	.35	3.597	.001
· Grammar	1.86	2.20	.43	2.659	.013
· Syntax	2.20	2.35	.15	2.626	.014
· Mechanic	1.91	2.21	.30	4.539	.000

The Result of Stepwise Multiple Regression Statistical Analysis

The result showed that students' vocabulary mastery was contributed by the aspect of pronunciation (2.7%), spelling (17.9%), meaning in isolation (77.1%), and meaning in context (2.3%). For writing, the result indicated that students' writing was contributed by aspects of content (81.9%), organization (9.6%), syntax (5.1%), mechanics (1.3%), and organization (1.0%). In addition, the influence of vocabulary toward writing achievement was 30.1 %. Table 2 shows the result of regression analysis of vocabulary and writing in each aspect of both variables.

Table 2 Students' Vocabulary and Writing Achievements: Contribution of Each Aspect toward The Total

Variables	Aspects	R Square	R Change	Sig. F Change
	Meaning in isolation	1.649	.771	.000
	Meaning in isolation Spelling	.878	.179	.000
Vocabulary	Meaning in isolation Spelling Pronunciation	.977	.027	.000
	Meaning in isolation Spelling Pronunciation Meaning in context	1.000	.023	.000
	Content	.819	.819	.000
	Content, grammar	.915	.096	.000
	Content, grammar, syntax	.967	.051	.000
Writing	Content, grammar, syntax, mechanics	.980	.013	.000
	Content, grammar, syntax, mechanics, organisation	.990	.010	.000

Discussion

On the basis of findings stated previously, some interpretation could be said that using Spider Concept Map could enlarge the students' vocabulary and increase writing achievement significantly. After the students were taught using Spider Concept map, their vocabulary mastery was enlarge and writing achievement was better than before. The finding was supported by the result statistical analysis t-test. It showed that the mean difference of vocabulary and writing achievement of students in the experimental group was the significant differentces between before and after the treatment. Deep vocabulary knowledge involves how well a person knows a word, in contrast to breath of vocabulary knowledge which involves how many words are known (Brown, 2007).

The usage of Spider Concept Map was also effective in increasing students' descriptive text writing ability and could solve their problem in writing descriptive text. The students showed positive responses in using this technique. It was in line with Ramadhani and Saun (2013) statement. They stated that the teacher should choose a strategy that can involve the students to write independently, especially writing a descriptive text.

Furthermore, there was the influence of vocabulary to writing descripive text achievement after the students were taught using spider concept map. This finding was supported by result stepwise multiple regression statistical analysis. Brown (2007) states that written language requires much more understanding and use of vocabulary than spoken language

Based on the data analysis of each aspect both vocabulary and writing, it was proved that Spider Concept map gave influence toward both of them. In vocabulary , the result of indicated that aspect of meaning in isolation (77.1%) was highest influence toward students vocabulary while in writing, the aspect of content (81.9%) made the highest contribution to the students' writing achievement.

Overall, the result of paired sample t-test showed of vocabulary and writing achievement had a significant result for the experimental students. The writer inferred that using Spider concept

map could be as an effective medium in teaching English in enlarging students' vocabulary and their writing achievement.

Conclusion

Based on the finding and the implementation of the study, several conclusions can be mentioned. Firstly, Spider Concept Map was effective to erlarge students' vocabulary mastery and improve their writing.It could be seen from the progress they got before and after treatment accomplished. Secondly, Spider Concept Map was able to guide and encourage the students to have better achievement in both vocabulary and writing achievement and they were also enjoy teaching and learning process.

Suggestions

There were two suggestions for the English teachers and furthur researchers who are interested in this study: For English teachers, it suggested to implement Spider Concept Map as one of the alternative teaching vocabulary and writing descriptive paragraph since the result of study showed it was effective to help students in generating the ideas.

For further researchers who are interested in this study, it is suggested to conduct further study dealing with using Spider Concept Map on different grades of education level to see the effectiveness of this in composing descriptive text. Furtherresearchers may conduct research on the other genre of text to improve their writing skill in a different kind of text.

Acknowledgments

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