

VOCABULARY MASTERY OF THE STUDENTS WITH DIFFERENT LEARNING STYLES TAUGHT THROUGH JIGSAW AND THINK-PAIR SHARE

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Abstract: The article reports on a study conducted on college students to examine the difference in vocabulary achievement of students who were taught through Jigsaw and TPS, to estimate the difference in vocabulary achievement of global and analytic learners, and to explore the interaction between the teaching technique and learning styles on students' vocabulary mastery. The subjects were taken purposively after being tested by a learning style checklist to classify the students' learning styles and a vocabulary test to measure their understanding of English vocabulary. The results showed that TPS is better than Jigsaw in improving the students' vocabulary mastery, there was no difference in vocabulary achievement of global and analytic learners that might cause that there was an interaction among the variables although it was not significant. Sometimes, learning styles can depend on the situation. It can be said that both global and analytic learners tend to be fond of TPS technique.

Keywords: learning styles, teaching techniques, vocabulary mastery.

Abstrak: Artikel ini melaporkan studi penelitian yang dilakukan pada mahasiswa untuk memeriksa perbedaan dalam pencapaian kosakata siswa yang diajar melalui Jigsaw dan TPS, untuk memperkirakannya dari pelajar global dan analitik, dan untuk mengetahui interaksi antara teknik pengajaran dan gaya belajar pada penguasaan kosakata siswa. Subjek penelitian diambil secara acak setelah diuji dengan learning style checklist untuk mengklasifikasikan gaya belajar siswa dan tes kosakata untuk mengukur pemahaman mereka tentang kosakata bahasa Inggris. Hasil penelitian menunjukkan bahwa TPS lebih baik daripada Jigsaw dalam meningkatkan penguasaan kosakata siswa, tidak ada perbedaan dalam pencapaian kosakata pelajar global dan analitik yang mungkin menyebabkan bahwa ada interaksi antara penguasaan kosakata, teknik mengajar, dan gaya belajar walaupun itu tidak signifikan. Terkadang, gaya belajar dapat bergantung pada situasi. Dapat dikatakan bahwa pelajar global dan analitik cenderung menyukai teknik TPS.

Kata kunci: gaya belajar, teknik mengajar, penguasaan kosakata.

INTRODUCTION

Vocabulary mastery is the most basic things that must be mastered in learning English for all English foreign language learners. The importance of vocabulary mastery is to relate how many vocabularies are mastered by students with academic language learning materials. If the students lack the vocabulary, they will get difficulties to express their language skills. They cannot communicate their ideas as clearly as they want both oral and written and they cannot express perfectly what they want to convey when they speak or write. This is also supported by Nation (2000) who did some studies of native speakers, he mentioned and suggested that second language learners needed to know a large number of words.

Based on the study of Nurweni and Read (1999) on average the students had some knowledge of 1225 English words, a figure falls far short of 3000-5000 word range that is widely considered the threshold level for independent reading of unsimplified texts. Only a small proportion of the students came close to the threshold, in terms of breadth and depth of knowledge.

In addition, Nurweni (2017) did a study on a teaching and learning practice in three big-sized English classes incorporating the learning goal set by the students and that by their institution. She found that their English vocabulary size was not considered high on average. Many students complained that they had problems with English vocabulary, such as having a little vocabulary, being unable to use vocabulary appropriately, forgetting words, and not understanding the meaning.

Here, it can be said that many English learners often faced some problems dealing with vocabulary mastery. The most common factors that become the obstacles

are the limited number of words mastered by the English learners, the difficulty to recognize the meaning of the words and to choose the appropriate words in making sentences. Students cannot identify the word class, for example in differentiating the use of the words 'die', 'died', 'death', and 'dead'. Students are also not able to recognize the words' meaning, especially meaning in context. In addition, the students cannot pronounce English words well. They also lack the motivation to learn English. This also may happen because the teacher's teaching technique is not suitable. Most learners have difficulty to use the words in an appropriate context. By looking at those problems above, this study would like to try to help students to improve students' vocabulary mastery although this study only focuses on recognizing the meaning of the words and identify the meaning of the words in context.

On the one hand, in mastering vocabulary, the students need to understand the definition, meaning, spelling, and even the meaning in a grammatical context of the English words. In this case, learning vocabulary through reading is good to apply. On the other hand, in delivering the teaching materials, the good technique is needed. There are two reading techniques to teach the students new words through reading activities, they are Jigsaw Reading and Think-Pair-Share. In teaching and learning process, the students' have their own styles to learn. It is called learning styles. According to Ellis (as cited in Xu, 2011) defines learning styles as the characteristic ways in which individuals orientate to problem-solving.

The idea of this study is based on the theories of the previous studies which had conducted some researches related to the positive effect of applying Jigsaw to improve reading comprehensions such as

(Adhami and Marzban, 2014; Meng, 2010) and Fauziyati and Istiyana (2013) who found that Think-Pair-Share can improve students' reading comprehension.

In addition, it is important to consider the previous study about learning styles which are done by Graham, et.al. (2001) who found that the relationship existed between students' learning styles and perceptions of the instructor's teaching performance. Then, there is also a study which found the relationship between learning styles and teaching techniques toward vocabulary mastery that had been done by Tulbure (2012) who said that when considering the learning style frameworks, the essential question for teachers and researchers is whether matching teaching strategies with students' learning styles will lead to higher academic achievement. Here, it can be assumed that academic achievement can be referred to the students' vocabulary mastery that in this research, are getting from the vocabulary test.

Based on the theories above, it can be concluded that it is better for the teacher to know his/her students' learning styles. It means that the teaching techniques chosen will have a different impact on different learning styles. That is why the teacher should use various ways to deliver the materials because each student has a different learning style.

Therefore, in this research, the writer would like to examine a difference in vocabulary achievement of students who were taught through Jigsaw and Think-Pair-Share, to estimate a difference in vocabulary achievement of global and analytic learners, and to explore the interaction between the teaching techniques and learning styles on students' vocabulary mastery.

METHODS

The factorial design 2x2 was employed in this research. The research was conducted at the fourth semester of STKIP-PGRI Bandar Lampung in 2016/2017. There were 22 students taken purposively after being tested by a learning style checklist to classify the students' learning styles and a vocabulary test to measure their understanding of English vocabulary. The validity of the learning style checklist was analyzed by Pearson Correlation (2-tailed) by SPSS. The valid items, then, were calculated by Cronbach's Alpha to know whether those were reliable or not. To know the validity and reliability of the vocabulary test, the writer used iteman.

It is known that to use two-way ANOVA, the data must have a normal distribution and homogenous. One-Sample Kolmogorov-Smirnov test by using SPSS 16 was used to measure the normality test. Then, the SPSS program by using Compare Means--One Way ANOVA was used to analyze homogeneity variance.

RESULTS

The hypothesis test was used to know whether the hypothesis proposed was accepted or not. The researcher used the SPSS program (Two-Way ANOVA) to test the hypothesis since the data had a normal distribution and homogenous.

The result shows that there is a different vocabulary achievement of the students who are taught through Jigsaw Reading and Think-Pair-Share. As seen in table 4.2 above, it can be interpreted that:

1. $F_{\text{corrected model}} = 7.945$ and $\text{Sig.} = 0.000$
2. $F_{\text{techniques}} = 22.866$ and $\text{Sig.} = 0.000$
3. $F_{\text{learningstyles}} = 0.263$ and $\text{Sig.} = 0.611$
4. $F_{\text{techniques*learningstyles}} = 0.705$ and $\text{Sig.} = 0.406$

$$F_{\text{table}} = 3.23$$

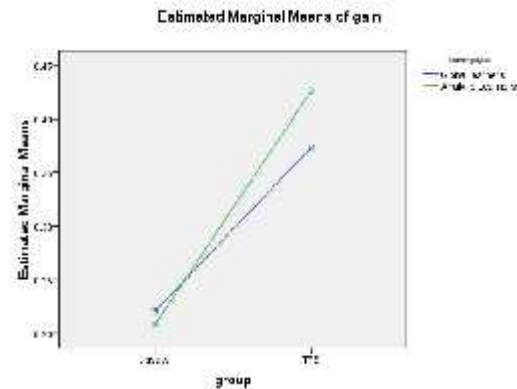
F_{table} is got from $df1 = k - 1$ and $df2 = n - k$, where 'k' means the total number of dependent and independent variables and 'n' means the total number of the sample. Then, it can be calculated that $df1 = k - 1 = 3 - 1 = 2$ and $df2 = n - k = 44 - 3 = 41$. Therefore, it is got that $F_{table} = 3.23$ by looking at F_{table} .

The first research question is to examine whether there is a difference between the vocabulary of the students who are taught through Jigsaw and Think-Pair-Share towards global and analytic learners.

Based on the result above, it can be seen that the significant value is 0.000. It is lower than 0.05. The result shows that H_0 is rejected, therefore H_1 is accepted.

The second research question is to estimate whether there is a difference between the vocabulary mastery of the analytic and global learners. Based on the result above, it can be seen that the significant value is 0.611. It is higher than 0.05. the result shows that H_0 is accepted and H_1 is rejected. Therefore, the researcher concluded that there is no difference in vocabulary achievement of global and analytic learners.

The third research question is to explore the interaction between teaching techniques and learning styles on students' vocabulary mastery. After analyzing the data by using two-way ANOVA, it can be seen the significant value of the corrected model is 0.000. It is lower than 0.05. Meanwhile, the F_{value} of the corrected model is 7.945. It is higher than $F_{table} = 3.23$. It means that the model is valid. It is known that corrected model is the influence of all independent variables (teaching techniques, learning styles, and the interaction between the teaching techniques and learning styles) towards the dependent variable (vocabulary mastery). Then, the result is suitable with the diagram below.



Based on the diagram above, it can be said that there is an interaction between the variables although it was not significant because the result also shows that the significant score of $F_{group*learningstyles}$ is 0.406. It is higher than the alpha score, 0.05. It can be said that there is no relation between the technique techniques and learning styles towards the students' vocabulary mastery. This can be due to no different vocabulary achievement of global and analytic learners. In other words, both Jigsaw and Think-Pair-Share can increase the students' vocabulary mastery of the students with different learning styles although the result of the first research question showed that Think-Pair-Share is better than Jigsaw in increasing students' vocabulary mastery.

DISCUSSION

Based on the result, the first research shows that there is a significant difference between vocabulary mastery of the students who are taught through Jigsaw and Think-Pair-Share. It is also got that Think-Pair-Share is better than Jigsaw Reading in increasing students' vocabulary mastery.

In the Jigsaw group, the students cooperatively discuss the content of each piece of the paragraph before they arrange the pieces into a good text. This is suitable with the statement of Day (1993) who said that Jigsaw reading aims to help students work cooperatively, to figure out the

ordering of paragraphs in the reading passage. Then, it is suitable for global learners who like to learn in a group.

Nonetheless, the students have to understand the information and the content of each paragraph, it is suitable for analytic learners who like to learn in details as mentioned by Barkley, et.al. (2005) Think-Pair-Share is particularly effective as a warm-up for whole class discussion. The "Think" component requires students to stop and reflect before speaking, thus giving them an opportunity to collect and organize their thoughts. The "Pair" and "Share" components encourage learners to compare and contrast their understandings with those of another and to rehearse their response first in a low-risk situation before going public with the whole class. This opportunity to practice comment first with a peer tends to improve the quality and readiness to speak in a larger group.

In the Think-Pair-Share group when the students think and understand about the topic they get, it is suitable for analytic learners who like to learn individually. However, when students have to discuss their own thinking with their partners, it is suitable for global learners. Even more, in the 'share' activity, when the students share their own opinion to the whole class discussion, it is interesting for both global and analytic learners.

In the term of vocabulary mastery, in Jigsaw group, when the students have to understand the content of the paragraphs and the text, mastering vocabulary is very needed. So does in Think-Pair-Share group. When the students have to understand the text and deliver their opinion, mastering vocabulary is very needed.

However, through Think-Pair-Share, the students are asked a question related to the words discussed. For example, when there is a word 'empathy', the teacher will ask a

question such as 'when do you feel empathy?'. Through this question, the students are asked to think about the answer. Then, the discussion about the answer with their pairs before they share it the whole class discussion.

Therefore, it can be assumed that this could make the students easier to remember about the meaning of the words and they could also use the words in making sentences of their own.

Then, based on the explanation above, then it is concluded that Think-Pair-Share technique is better than Jigsaw to apply in the teaching and learning process in the term of increasing the students' vocabulary mastery through reading.

Meanwhile, the result of the second research question shows that there is no significant difference between vocabulary mastery of the analytic and global learners.

According to James and Gardner (as cited in Awla, 2014) learning styles are the way a person takes in, understands, expresses and remembers information. Learning styles are defined as "the complex manner in which, and conditions under which, learners most effectively perceive, process, store, and recall what they are attempting to learn.

It is known that analytic learners are also known as sequential learners (in a logical progression of incremental steps) and global learners are known as holistic learners. As questioned by Felder and Brent (2005) "How does the student characteristically progress toward understanding": sequentially (in a logical progression of incremental steps) or globally (in large 'big picture' jumps)? sequential learners tend to think in a linear manner and are able to function with an only partial understanding of the material they have been taught. Meanwhile, global learners think in a systems-oriented

manner and may have trouble applying new material until they fully understand it and see how it relates to the material they already know about and understand. Once they grasp the big picture, however, their holistic perspective enables them to see innovative solutions to problems that sequential learners might take much longer to reach, if they yet there at all.

Nasab and Hesabi (2014) also mentioned that it should be kept in mind that, no style has priority over the other and individuals may utilize different learning styles in different situations for performing different tasks. It can be said that learning style is abstract. It can be based on the situation. Jigsaw Reading and Think-Pair-Share have their own characteristics. Although Jigsaw Reading and Think-Pair-Share are including cooperative learning, they have some characteristics that are suitable for both global and analytic learners.

In TPS group, the global learners can read the whole text. It is matched with their characters who like to grasp the big picture of information they get after reading the text. Furthermore, there are some exercises related to the comprehending the text and dealing with the understanding of vocabularies used in the text.

Meanwhile, in the Jigsaw group, the global learners need to understand every piece of the paragraphs but they still may discuss with their friends in the group to arrange the pieces of paragraphs into a good text. This is suitable for their characteristics who like to learn or study in a group discussion.

In addition, the writer also assumed that both Jigsaw Reading and Think-Pair-Share have some steps which are suitable with the characteristics of analytic learners. In Jigsaw Reading group, the learners are asked to understand every piece of the paragraph before arranging them into a

good text. Nevertheless, the writer thought that the students have an obstacle in this step. The analytic learners like to read and arrange the text by themselves. Meanwhile, in the Think-Pair-Share group, the analytic learners can read the text as accurate as possible until they understand the content of the text.

After the students understood the content of the text, they were easy to understand the meaning of vocabularies used in the text. Then, the writer may conclude that these can be the reasons why there is no difference between vocabulary mastery of the analytic and global learners.

For the third research question, interaction means cooperation between two different independent variables affecting the dependent variable. It is known that the independent variables here are the reading techniques used to help the students master the English words, they are Jigsaw and Think-Pair-Share, and the students learning styles in the term of global and analytic learners. Meanwhile, the dependent variable in this study is the students' vocabulary mastery.

Then, based on the result, it can be said that there is an interaction among the variables. In other words, both Jigsaw and Think-Pair-Share can increase the students' vocabulary mastery of students with different learning styles. Although the result of the first research question showed that Think-Pair-Share is better than Jigsaw in increasing students' vocabulary mastery.

Nevertheless, the result also shows that a significant score of $F_{\text{group} \times \text{learning styles}}$ is 0.406. It is higher than the alpha score, 0.05. It can be said that there is no influence between the technique techniques and learning styles towards the students' vocabulary mastery. This can be due to no different vocabulary achievement of global and analytic

learners. Both global and analytic learners can learn vocabulary well through Jigsaw Reading and Think-Pair-Share techniques. This supported the finding of Tabalan (2015) who examined the possibility of developing different goals, mastery or competitive, on students and consequently affecting their learning styles. The outcomes revealed that the goals of students could be modified in different manners. But the styles of learning did not determine the effects of the goal modifications.

Those findings could support the writer's finding that also rejected the hypothesis proposed. Here, the writer describes her finding that had been related to the teaching and learning process. In this study, this result may be caused by some problems. When the writer was conducting the research, she found some obstacles related to the user if the techniques and the learning styles.

In Jigsaw Reading class, after having the students to sit in their own groups, the teacher found some of them only gave their pieces to one or two students. The ones who received their friends' pieces arranged the paragraphs into a good text. The writer assumed that the students who gave their pieces are categorized into global learners. Meanwhile, the students who arranged the pieces into the text are categorized into analytic learners. The next day, to solve the problem, the writer asked them to tell the content in their pieces to all member in the group rather than giving the pieces of the paragraph to only one member.

In Think-Pair-Share class, the problems were found when the students were doing "Pair" activity. Some of them used Indonesian and others only kept silent and continued thinking by themselves. To solve this problem, the writer asked one student to explain his or her opinion then the writer continued asking another student

whether he or she agreed with his or her friend opinion. Through this situation, after giving a comment about his or her opinion, the student also could explain his or her opinion.

Both in Jigsaw and Think-Pair-Share groups, the writer gave the exercises related to understanding the vocabulary in each text. All students were asked to make Vocabulary Journal, that could be used as their own dictionaries. It contained the English words with its meaning, word class and also the example of using the word in a sentence. The writer also gave questions related to comprehending the text. When the students could answer all questions well, it meant that the understand about the passage an, of course, the meaning of the vocabularies used in the text.

Regarding the first research question that is about the interaction among all variables, the writer assumed that Think-Pair-Share is better than Jigsaw Reading in increasing students' vocabulary mastery. This also happened in the students' learning styles. Both global and analytic learners could follow the teaching and learning process well. Therefore it can be said that there is an interaction among vocabulary mastery, Jigsaw Reading and Think-Pair-Share implemented towards global and analytic learners although it is not significant.

CONCLUSION

Based on the discussion and the results of the data analysis in this research it can be concluded that Think-Pair-Share technique is better than Jigsaw Reading to apply in teaching and learning process in the term of increasing students' vocabulary mastery through reading. It is caused Think-Pair-Share can be suitable for both analytic and global learners. when the students think and understand the topic they get, it is suitable for analytic learners who like to

learn individually. However, when students have to discuss their own thinking with their partners, it is suitable for global learners. Even more, in the 'share' activity, when the students share their own opinion to the whole class discussion, it is interesting for both global and analytic learners.

Besides, learning style is abstract. Sometimes, students' learning styles can depend on the situation. It means that analytic learners do not mean that they are not able to work in a group and so do the global learners. That is why although they were taught through different techniques, they still got the same average results in vocabulary learning. It also can be concluded that both global and analytic learners tend to like Think-Pair-Share technique. It can be seen from the average score achieved in the Think-Pair-Share group that is higher than in the Jigsaw group.

SUGGESTION

In reference to the conclusions, some suggestions are given for both English teachers and further research.

Suggestion for English Teacher

Based on the results of the research, there are several suggestions suggested for the English teachers or lecturers. Since there is an interaction among vocabulary mastery, Jigsaw, and Think-Pair-Share implemented towards global and analytic learners, the teacher may use both techniques alternately to avoid students' boredom. In addition, although authentic literary works are not for pedagogical purpose and it contains difficult words and incorrect grammatical forms, it is suggested to English teachers to choose the literary works carefully based on the students' level. The English teachers should also be able to create exercises related to the understanding the content of the text and of course about the understanding about

vocabularies used in the text in order to make students interested in the learning process.

Suggestion for Further Research

Besides the suggestions for English teachers, there are also several points necessary for further study to concern. This study discussed students' vocabulary mastery of the students in different learning styles (global and analytic learners) taught through Jigsaw and Think-Pair-Share.

In relation to research design, further research may employ qualitative design to know the problems mostly found by the students both global and analytic learners when they are learning English vocabulary through Jigsaw and Think-Pair-Share. In addition, it can be used to find out the weaknesses of the teaching techniques used in delivering the teaching materials.

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