

A Comparison of Using Diglot Weave Technique and Student Team Achievement Division on Student Vocabulary Achievement

Caroline V. Katemba and Nur Ayu Sitompul

Abstract

The first aim of this study was to find out the differences in student's vocabulary achievement between students who were taught using the Diglot Weave Technique (DWT), and those taught using a Student Team Achievement Division (STAD) strategy; the second was to find which gender group gained the higher score. This comparative study was completed at Public Junior High School #1 (Sekolah Menengah Pertama Negeri – SMPN), Parongpong, Bandung, West Java, Indonesia, and involved two groups, one from grade 8B as the DWT class, and another from grade 8C as the STAD class. Total participants were 74 students. The DWT group consisted of 26 females and 11 males, and the STAD group consisted of 23 females and 14 males. Based on an SPSS 16.0 data analysis, a p value of $0.035 < 0.05$ was obtained. The significantly higher score was achieved when students were taught using DWT. Furthermore, it was found that, with both methods, female and male' normalized gain scores were only slightly different.

Keywords: *Diglot Weave Technique (DWT), Student Team Achievement Division strategy (STAD)*

Introduction

Persons in all corners of the world are willing to learn English, since it has important roles. Its part in life is inseparable, for wherever a person goes, English will be found from advertisements to banners on the road. Furthermore, English has been implemented as an official subject in the classroom. The Indonesian Education and Culture Ministry's Director General for secondary education, Muhammad (2012), interviewed by *Jakarta Post*, stated that:

"In Indonesia, English is deemed as a foreign language instead of a second language. However, as our local communities are becoming more global, coupled with our country's booming economy, learning and mastering English has become a must."

Since learning English is essential, the Indonesian Government implemented English acquisition, based on the 2006 KTSP curriculum, as one of official subjects to learn. It is taught from the elementary level. Katemba (2013) stated that in "Indonesian schools, however, the teaching of English consists mainly of learning correct grammatical structures or forms, increasing vocabularies, working on exercises on the sentence level, and asking students to repeat over and over similar structures. Therefore in Indonesia, English is viewed not only as an indispensable vehicle of access to scholarly disciplines but also as a medium for international communication." Further, in communication, students need vocabulary that can support them to produce and use meaningful sentences. That is why vocabulary is very important to be mastered. Students sometimes experience difficulties in using vocabulary that has been studied for some reasons (Katemba, 2011).

Problems in vocabulary learning are found in some countries, one of them is Malaysia. Subon (2015), in his recent research, found that many students were still unable to acquire the English language after spending many years in school. Students spend between 11-13 years learning English, for instance, 6 years in primary school and between 5-7 years in secondary school. Students' lack of vocabulary was quoted as the main reason for their inability to acquire English. Further, Huyen and

Nga (2003) conducted research in Vietnam and noted that when students knew the words and recognized how to use the words, it brings success in communication.

In Indonesia, Ivone (2005) found that vocabulary is the most essential part in English. If students lack vocabulary, it will be a barrier to improving other skills in English, especially in reading. Recent research in Palu, conducted by Windasari, Rita, Salehuddin (2016, p. 2), led them to state: "many students cannot read and understand a text which is written in English because they did not have a good mastery of vocabulary, or they doubt to express their idea in English because they have limited vocabulary in their mind." Therefore, teaching vocabulary is a domain of knowledge that is worth investigating. Further, Mukoroli (2011, p. 8) noted that "without some knowledge of vocabulary, neither language production nor language comprehension would be possible."

However, sometimes learning a new language is boring. Thuy (2010, p. 268) stated that "one of the reasons for students' low vocabulary retention and retrieval can be addressed as their learning habits such as writing down words on a piece of paper, heavily depending on wordlists in textbook, passively waiting for teacher's explanation for new words seem to be ineffective and make them bored with learning vocabulary." Furthermore, Kashani and Shafiee (2016) noted that the key of teaching vocabulary to EFL is to let them make use of words. Without practice and creativity in the learning process, students will simply memorize the words for a few days and then forget them by the end of the learning course.

Thus, the main focus for future teachers is to find an effective and efficient strategy for teaching vocabulary so that they can help the students to memorize words better as well as to improve their vocabulary achievement. According to Jingxia (2008),

A common phenomenon in foreign language classrooms [sic] is code-switching between the target language and the first language. [Sic] This is widely adopted by teachers in the process of teaching to build a bridge from known (the first language) to unknown (the target language).

Indeed, using target language in the classroom can assist students to gain the target language, as Novitasari (2013, p. 3) stated in her research. She said, "It will be difficult for the students to catch the lesson of new language when they are learning new language without knowing the meaning of that new language. This problem becomes one of the obstacles in learning process. Sometimes it may decrease learners' spirit to learn vocabulary."

Meanwhile, the Student Team Achievement Division (STAD) strategy is one of simplest cooperative learning methods. According to Slavin (1995, p. 40), the STAD method is able to motivate students so that they can support and help each other. Further, STAD also can plant the awareness that learning is important, useful and fun. The students will be more aware in learning process, and students encourage having a positive thinking in learning the lesson that is given."

Considering the explanation given above, we conducted a comparative study to compare improvement in students' English vocabulary at Junior High School level. The comparison involved using the Diglot Weave Technique (DWT) and a Student Team Achievement Division strategy on their vocabulary achievement.

Statement of the Problem

This study had several aims. After teaching vocabulary using the DWT and STAD methods to Indonesian Junior High School students, two questions were posed:

1. Is there any significant difference in students' vocabulary achievement between those who were taught using the two methods?
2. Which group, male or female, will gain the higher score in vocabulary achievement after using DWT and STAD?

Hypothesis of the Study

The hypotheses in this research were:

Null Hypothesis (H_0): There is no significant difference in the students' vocabulary achievement after using the Diglot Weave Technique and Student Team Achievement Division strategy.

Alternative Hypothesis (H_a): There is a significant difference in the students' vocabulary achievement after using the Diglot Weave Technique and Student Team Achievement Division strategy.

Scope and Limitation

The study was completed at SMPN #1 Parongpong, Bandung, West Java, Indonesia. The students were the 8th grade students from two classes, 8B as the DWT class and 8C as the STAD class. In this study the researchers used the material that was adopted from the School Based Curriculum in Junior High school. The vocabulary focused on open words such as nouns, verbs, adjectives and adverbs. Then, the researcher evaluated students' vocabulary ability by using a test.

Review of Related Literature

Learning Vocabulary: Vocabulary has impacts on four English skills. In reading skills, the role of vocabulary cannot be avoided. Braze et al. (2007) stated that "efforts directed at vocabulary development might be an especially helpful adjunct to reading instruction for adult poor readers." Further, Furqon (2013), in his study, concluded that vocabulary mastery contributions in helping students comprehend texts. In addition, the findings suggested that morphological awareness can hold multiple important roles in second language reading comprehension.

The essential step in language acquisition is vocabulary, yet teaching vocabulary is not easy to do. According to Brown (2000:7), "teaching" is guiding and facilitating learning, enabling the learner to learn, constructing the situation for learning. Based on this, teaching vocabulary aims to guide and facilitate students by using various strategies and methods and how to apply vocabulary in the correct way. After teaching vocabulary, the next step is presenting the meaning. Based on Thornbury's statement (2002), one of the ways to present the meaning is through translation; translate the target language to the first language.

Mixing the Codes: Code-switching involves using the two languages concurrently or alternately. According to Lightbown (2001, p. 598), code-switching is "the systematic alternating use of two languages or language varieties within a single conversation or utterance." Using code-switching in the classroom also has impacts on students, Moodley (2007) observed that bilingual classrooms using code-switching by English language students assists in achieving specific learning objectives. Samani, and Narafshan (2016) concluded "that students held a positive attitude towards teachers' code-switching. In addition, [sic] the majority of the students believed that teachers' code switching motivated and engaged students more. Also, a number of students believed that when the teacher code switches he can make a better relationship with the students."

Diglot Weave Technique: The Diglot Weave, from the Greek 'di', meaning 'two', and 'glot', meaning 'language', is a breakthrough in language learning. Diglot Weave is related to code-mixing and code-switching that are common and well-documented processes in the speech of multilingual individuals. According to Pritz (2015), "the term 'diglot weave' was coined by Dr. Robert Blair." It is a technique for teaching a second language or a foreign language. The Power-Glide Method actually employs the diglot weave as a main technique. It is based upon a comprehension-based approach to learning a second language. Further, Nemati and Maleki (2014) noted that this method smoothly weaves the new language into the learners' own, taking them from the familiar to the unfamiliar. Gradually moving from their language to the target language quickly builds comprehension skills and increases confidence.

The diglot method addresses the low second language vocabulary threshold and a beginner's paradox by embedding new second language vocabulary within a familiar first language text. The first language strengths are used for allowing students to access context clue strategies and develop

a schema while reading. More complete comprehension is achieved since the first language surrounds the new vocabulary.

Student Teams Achievement Divisions (STAD) Strategy: STAD is one of the simplest of cooperative learning methods and it is a goal model to begin, especially for teachers who are new to the cooperative approach. STAD is one of the most straightforward approaches to cooperative learning. It was devised by Robert Slavin and his partner at Johns Hopkins University (Slavin, 1978). It involves four or five students from different performance, gender and ethnicity levels combined in a small group and where they work together to accomplish tasks. It consists of five major components: class presentations, teams, quizzes, individual improvement scores, and team recognition (Slavin, 1995). In STAD, some initial preparations are necessary as follows:

1. Material - STAD can be used with materials adapted from textbooks or other published sources or with teacher-made materials.
2. Assigning students to Teams - STAD teams represent a cross-section of the class. A four person team in a class that is male and female combined, low-high level students and all from different backgrounds.
3. Determining initial base scores - Base scores represent students' average scores on past quizzes. If a teacher is starting STAD after having given three or more quizzes, then the students' average quiz scores are used as the base score.
4. Team building - Before starting any cooperative learning program, it is a good idea to start off with one or more team-building exercises just to give teams members a chance to do something fun to know one another.

Methodology

This research used a quantitative research method utilizing a comparative design (Table 1). This kind of design compares the students' vocabulary achievement before and after the treatment through a pre-test and post-test that given to both experimental groups.

Table 1. Test Strategy Used in Comparing Vocabulary Teaching Methods

Sampling	Pre-test	Treatment	Post-test
Diglot Weave Technique	T1	X1	T2
Student Team Achievement Division	T1	X2	T2

X1: Treatment application by using DWT; X2: Treatment application by using STAD; T1: Score of the students in pre-test; T2: Score of the students in post-test

Participants: The participants in this study were from grade 8 at SMPN 1 Parongpong, Bandung Barat, West Java, Indonesia. The sample for the study was from two grade VIII classes. The two classes were experimental groups. The students' age range was from about 13-15 years old. There were 74 students, 49 females and 25 males.

Research Instrument: Pre- and post-tests were administered at the beginning and end of the program. For the pre-test, the students were given a vocabulary test in the form of 45 multiple choice questions, to determine their prior ability and vocabulary level. Materials used during the treatment time were school textbooks. At the end of the programs, students were given a post-test to determine the result of their vocabulary achievement. The post-test was the same as for the pre-test.

Procedures of Implementation DWT and STAD: The researchers applied DWT to class 8B and STAD to class 8C. Both classes learned the same materials from the text books. Students were given the narrative text and the procedures adopted for the DWT and STAD methods were explained (Table 2).

Table 2. Details of Procedures Adopted for Applying the DWT and STAD Teaching Strategies

Procedures of Using DWT	Procedures of Using STAD
<p>1. Teacher presented the lesson. The text was read to the students to present the L2 equivalents. A text in which new words from L1 had been inserted was read to the students.</p> <p>For example:</p> <p><i>Suatu hari, Polly bertanya the Young Man, "Tidakkah you lelah day dan night hanya tidur? The sun sudah terbit beberapa jam yang lalu, and people telah menyelesaikan setengah pekerjaan mereka.</i></p>	<p>1. The teacher presented the lesson. The lesson was introduced by specifying the goals, presenting, explaining, and modeling the skills or applications of concepts, principles, generalizations, and rules, and providing for guided practice and dividing the students into groups from different academic levels, sexes, and background ethnics. Teachers should explain how cooperative learning works and the specific rules to be followed. When introducing students to cooperative learning, the initial directions needed to be very detailed.</p>
<p>2. Then, material sheet was distributed to the students. Students read a native language text with second language vocabulary and grammatical structures were increasingly embedded within the text.</p>	<p>2. Students were divided four or five in a group. Then they were given the materials they needed to learn and the teacher explained the outcome that they were expected to achieve.</p>
<p>3. As the class moved ahead during the lesson in question, the teacher weaves more and more English words into Indonesia sentences, until almost all the sentences are uttered in English.</p>	<p>3. Students were given an outline of what they will be learning and why (Get them focused on the outcomes that students were expected to achieve).</p>
<p>4. The teacher might even ask comprehension questions to check the students' grasp of the new words; for example the teacher addressed the students with questions.</p>	<p>4. Team work: Students were given the worksheet to help them master the academic materials. These worksheets should guide them through the materials and show them how they could help one another learn through tutoring, quizzing one another, or team discussion. Teacher gave the learners sufficient time or work together to understand the ideas teachers have presented – several periods are involved if necessary.</p>
<p>5. The teacher could also encourage students to use the technique in answering such questions to promote student's ability in producing the words in question.</p>	<p>5. Students have worksheet and answer sheet in their teams to practice the skill being taught and to assess themselves and their team mates.</p>
<p>6. Afterwards, students were asked to underline the word which was in open words classes; noun, adjectives, verbs, or adverbs.</p>	<p>6. Teacher gave an individual test, or called 'quizzes' to the students to see whether they have learned what the teacher wanted them to learn.</p>
<p>7. Test was given to the students according to the new vocabularies that they have found on the reading passage.</p>	<p>7. The quizzes' score was shown and students were given a chance for an improvement score. This improvement score is based on the degree to which the quiz score exceeds the learner's past average on similar quizzes. Teacher added the individual improvement score to give a team score.</p>
	<p>8. The last step was the rewards that are given to group achievement.</p>

The method of scoring adopted is detailed in Table 3.

Table 3. Criteria Adopted to Indicate Both Individual and Team Improvements

Criteria Adopted	Score/Designation
Individual Quiz score	Improvement Score
▪ More than 10 points below base score	5
▪ 10 points below to 1 point below base score	10
▪ Base score to points above base score	20
▪ More than 10 points above base score	30
▪ Prefect paper (regardless of base score)	30
Team Average	
15	Good Team
20	Great Team
25	Super Team

Results

The data were analysed using Microsoft Excel and the Statistical Program, SPSS 16.0. Details of the differences obtained in pre- and post-tests and gain are given in Table 4.

Table 4. Results of Pre- and Post-tests, Means, Standard Deviations, and Gains for Two Vocabulary Teaching Methods

Group	DWT		STAD	
	Mean	SD	Mean	SD
Pre-Test	64.7568	9.89221	62.6757	11.10819
Post-Test	93.8108	5.73894	89.2162	7.60166
Gain Score	0.8105	0.17101	0.7214	0.18634

Based on the data above, it can be seen that for both DWT and STAD the gain score increased. Thus, it can be concluded that the both methods increased student' vocabulary achievement. A normality test' showed that the data from both groups was normally distributed, where the Diglot Weave Technique Class was $0.092 > 0.05$ and the STAD Class $0.200 > 0.05$.

Further analysis indicated that the data was homogeneous as $0.637 > 0.05$. Since the result of normality test was normally distributed and the result of homogeneity test was homogeneous, then an independent sample t-test was done to determine whether there were significant student performance differences between the two methods, DWT and STAD.

Table 5. The Result of an Independent Sample T-test of Normalized Gain

Assumption	Levene Statistic				
	F	Sig.	t	df	Sig. (2 tailed)
Equal variances assumed	0.225	0.637	2.145	72	0.035
Equal variances not assumed			2.145	71.476	0.035

Table 6. Score Gains by Gender Following Application of DWT and STAD Strategies for Vocabulary Acquisition

Group	DWT		STAD	
	Mean	SD	Mean	SD
Female Score Gains	0.8223	0.17142	0.7161	0.20661
Male Score Gains	0.8107	0.17493	0.7171	0.14531

Based on the result, the 2-tailed test figure is significant at the 5 percent level, which means that H_0 is rejected and H_a is accepted. Thus, there is significant difference in vocabulary achievement between student who were taught by using the Diglot Weave Technique method and those taught by using a Student Team Achievement Division strategy.

Furthermore, analysis of gender differences (Table 6) showed slight differences between male and female gain scores, with higher scores being achieved when the DWT method was used.

Discussion

From the data analyses, the normalized gain in the DWT class was higher than in the STAD class. Scores in both class groups increased, with the normalized gain of both groups being in the high category. Obstacles noted in the STAD class, where the teaching process is ongoing, were that teams do not always listen to the instructions and, alternatively, team members may not give attention to the other members. Hence, when the individual quizzes are given, difficulties in understanding naturally are experienced.

The DWT instructed class gained a better gain score, which may be explained by reference to Yuhua (1999). This author believed that using DWT to tell stories "provide children with interesting and comprehensible input, intake occurs easily and in large quantities. As children acquire more and more words and their sentences change from sandwich to monolingual, from short to long, their ability to express themselves and to communicate in the large language increases."

Regarding the gender differences, both genders benefited in the DWT class with the female's score being higher than the male. In the STAD class, female's and male's score were almost equal.

In brief, this study showed that there are significant differences in students' vocabulary achievements when taught using the DWT and STAD approaches, even though the achievement of both groups was high. The two methods are satisfactory in learning English vocabulary, with preference going to DWT, where the result was better than for the STAD approach. Both the DWT and STAD methods are effective in increasing vocabulary achievement for both genders.

Conclusion

It can be concluded that the alternative hypothesis can be accepted. Thus, the answer to the first research question is that there is a significant difference between students who were taught by using DWT and students who were taught by using a STAD strategy. Students who were taught using DWT received higher vocabulary achievement scores than students who were taught using a STAD strategy. Regarding differences in gender scores, both sexes can benefit from the application of either DWT or STAD. Overall, it was concluded that DWT is superior to STAD in improving student' vocabulary achievement in learning English. As well, both genders can benefit from application of the methods.

About the Authors

Caroline V. Katemba is Director of the Research Center and Community Service, and an Associate Professor in the School of Education at Universitas Advent Indonesia (UNAI), Bandung, Indonesia. Nur Ayu Sitompul is a co-researcher and graduate of the UNAI English Department, School of Education. Email of corresponding author: linakatemba@gmail.com.

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