

THE THEORETICAL RELEVANCE AND EFFECT OF USING JIGSAW STUDENTS VOCABULARY MASTERY

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Abstract

This literature review aims to analyze jigsaw technique in teaching vocabulary effect. Vocabulary is the first important in language learning component, to mastering four language skill. In this study, researchers are figure out on jigsaw effectiveness whether the results are positive or negative, and are also looking for the differences and similarities of the journal entries. The associated journal paper was identified and chosen using Google scholar and the educational research center. In the seven journals, there were five to use the same design research is quantitative research and one jurnal using qualitative research an ttthe other one library research. Many similarities from the seven journals, in obtaining data quantitative using quasi experimental and pre experimental and the data using tukey tests, anova and purposive. To qualitative the researchers employed observation, questionnaire, interview, and document analysis. And for library research, just trying to figure out how to teach grammar in English using jigsaw techniques and the benefits of doing so. Although the settings are different whether it's the media but all the positive results are jigsaw technique can improve students' vocabulary ability, can enhance student interaction, also jigsaw technique can improve students' vocabulary ability, as well as their interaction with the teacher and other students. It was also effective in English vocabulary development.

Keywords: Vocabulary; Jigsaw Technique; Literatur Review

INTRODUCTION

Learning English requires mastering four language skill and their components. Speaking, writing, listening, reading are language skills, and grammar, vocabulary, and sound system are language components. Because vocabulary is always present, it an important role in learning all language skills and other language components. According to Mehta (2009) as cited in Putri (2013), "vocabulary is the first and most important step in language acquisition." It means that when learning a foreign language, students usually start with vocabulary before moving on to more complex structure. A vocabulary is a collection of words in a foreign language that are used to express meaning through symbols of letter groups, either a physical object or an idea. It can also be constructed as a skill or knowledge of words used to express meaning and can be formed from a single or more than one word. The importance of vocabulary in English teaching cannot be overstated. It is at the heart of language teaching and learning (Trimastuti, 2016). However, Vocabulary in English is often challenge because it involves all the language skill. It is can not compered to the other components languages because grammar is always present. Vocabulary is the main components language because it affects the four linguistic abilities. This is why their vocabulary should be improved. According Nugroho et al (2012) in (Parmi, 2019), the subject is indicated by two indicators: It is derived from two sources: first, vocabulary mastery, and second, student motivation during the learning process. Moreover, I find several problems with student vocabulary skill, such as problems in understanding the meaning of words, problems with proper speech pronunciation and failure to correctly write the words. By

mastering vocabulary, students can communicate fluently with others. A large vocabulary can be a valuable asset both at university and later in our careers. Without much knowledge of vocabulary, students get difficulty mastering English. In English language teaching and learning vocabulary should thus be the first priority. Based on Hikmawati (2016) The English teacher plays an important role in the mastering of the English vocabulary. English professor should have ideas to make it interesting to her students for her teaching. He/she should not give up the ability of students to speak English.

There are some problems that can be identified by researcher with figure out some previous study are students have low vocabulary, students have a low vocabulary, appear passive in the teaching-learning process, have difficulty understanding the meaning of words, have difficulty with proper speech pronunciation, and fail to correctly write the words.

In order to solve the problems mentioned the researcher figure out that they must devise strategies to manage the diversity of students' characteristics while also motivating students to learn vocabulary at the same time. Based on the problem statement above, the researcher figure out the solution to improve students' vocabulary by using jigsaw technique. Jigsaw technique is a good way to teach vocabulary because there are many researcher and theories prove that using jigsaw technique is very beneficial. According to Slavin (1995:3) as cited in Putri (2013) "cooperative learning/jigsaw technique can help make diversity a resource rather than a problem." This really suits teaching vocabulary with jigsaw, in addition Arranson (1978) in Pariati (2019) the jigsaw technique was used to develop the skills and knowledge required for effective group participation. It focuses on hearing, talking, cooperating, reflecting and solving problems. Jigsaw is a very useful tool to help students integrate knowledge from diverse sources and experts. The basic concept is straightforward: students are divided into groups, each with their own research topic. Following research, each thematic group is divided so that new groups contain a single member from each of the previous thematic groups. Based on the problem above the researcher would like to express the purpose of the following research: To explore effect using jigsaw on students language skill in previous study.

One aspect of language that must be studied is vocabulary. Learning a vocabulary is important because in order to speak, write, and listen effectively, we must first understand the vocabulary. If a person recognizes a word when they see it, they are said to 'know' it (Cameron 2001: 75) in (Hikmawati, 2016). It means that in the study of vocabulary we must know the meaning as well as understand and be able to use it in the context of the sentence. Based on Trimastuti (2016) A vocabulary is a set of words in a language that conveys the meaning in the form of a body of letters, both physical and concept. It can also be formed from one or more words, implying the ability to combine the skill or knowledge of the words used to express meaning. Vocabulary was important in English teaching. This is the language teaching and learning center. It is easier for students to communicate with others when they have mastered their vocabulary. Vocabulary knowledge is an essential aspect of learning English or other foreign languages because students must master vocabulary before moving on to more complex structure. Richards & Renadya (2002) suggest that, "vocabulary is a core component of language proficiency and provides much of the foundation for how well learners speak, listen, read, and write."

Based on Kitao (1996), vocabulary knowledge is classified into three types:

1. Intense speaking vocabulary refers to words that can be used by the speaker whilst still speaking. Words are frequently misused due to the improvised nature of the speaking vocabulary. Facial expressions, tone of voice, and hand gestures can be used to compensate for this minor and unintentional misappropriation.
2. Passive listening vocabulary consists of words recognized by the listener but not always produced when speaking. Context and tone of voice aid in the expansion of this vocabulary.

3. The term "passive reading vocabulary" refers to words that a reader recognizes but may be unable to produce.

The vocabulary aspects, according to Ur in Pavlu (2009: 26) in Trimastuti (2016) are the following:

1. Form: Knowing a word's form involves understanding how to pronounce and spell it. A word's pronunciation is what it sounds like, and its spelling is what it looks like. The pronunciation must be accurately presented and learned during the teaching and learning process.
2. Grammar: If the grammar of the new item is not clearly covered by general grammatical rules, it will need to be taught. An item that changes form unexpectedly in certain grammatical contexts may have a unique way of connecting with other words in sentences; It is critical to provide the same information to students at the same time that teachers teach basic form.
3. Aspect of meaning:
 - a. Synonyms are words that have the same or nearly the same meaning as intelligent: bright, clever, and smart are all synonyms for intelligent.
 - b. Antonyms: words that mean the opposite of one another; for example, rich is an antonym for poor.
 - c. Hyponyms: specific examples of general concepts; for example, animal hyponyms include dog, lion, and mouse.
 - d. Co-hyponyms or co-ordinates: similar items; co-ordinates are red, blue, green, and brown.
 - e. Superordinate: broad concepts that "cover" specific items, for example, animal, which is the superordinate of dog, lion, and mouse.
 - f. Translation: words or expressions in the learner's native language with a similar meaning to the item being taught.

Based on the explanation above, it is possible to conclude that vocabulary nature and importance the meaning of the word, using it, correctly pronouncing it, and spelling it, all of which students should be able to do.

Elliot Aronson and colleagues were the first to introduce and experiment with Jigsaw. Slavin and colleagues at Johns Hopkins University in Texas have since adopted them University (Arends, 2009). This teaching method was created as a result of the cooperative learning method for teaching speaking, reading, and listening as well as writing. Aside from that, language components can be taught using this technique. The word "cooperative" comes from the word "cooperate." (Hornby, 1995:257) defines cooperative as "acting or working together with another or others for a common purpose." According to (Lie, 2008), Cooperative learning is an alternative approach to problem solving in the effort to engage students in learning. Cooperative learning methods necessitate students working in four-person groups to master material presented by the teacher (Slavin, 1980).

The Jigsaw technique had been used to develop the skills required for effective participation in group activities. It focuses on skills such as listening, speaking, cooperating, reflecting, and problem solving. Jigsaw is a fantastic tool for assisting students in integrating knowledge and understanding from a variety of sources and experts. The basic concept is straightforward: students are divided into groups, each with their own research topic to investigate. Following the research, each topic group is divided into new groups, each with one member from the previous topic groups.. Following the formation of the new groups, each topic expert is responsible for integrating his or her topic-specific knowledge into the understanding of the new group to which he or she belongs. (Aronson, 1978) in (Pariati, 2019).

Jigsaw technique is a good way to teach vocabulary because there are many researcher and theories prove tha using jigsaw technique is very benefical, there are many benefits of using Jigsaws in the classroom including the following (Neno & Erfiani, 2018):

1. Jigsaw can improve team and class dynamics by fostering trust and creating a safe space for candor.
2. Jigsaw can foster respectful disagreement while also creating a safe environment for emotional risks.
3. Jigsaw can aid in the formation of cohorts (i.e., within majors) by allowing students to truly get to know one another.
4. Students not only study the material provided, but they must also be ready to give and work on the material to other members of the group, so that their knowledge increases.
5. Jigsaw may require shy or quiet students to engage more fully and actively.
6. Increases the student's sense of responsibility towards his or her own learning as well as the learning of others.
7. Enhance cooperative cooperation to study the assigned material.

METHOD

A In this study, a literature review was conducted. A few recent articles and journals on the effectiveness of jigsaw's use in teaching vocabulary at educational institutions, to learn more about its, benefits, equations, and differences, as well as the outcomes of using jigsaw puzzles to teach vocabulary (Creswell, & Clark, 2010) in (Syathroh et al., 2021). The associated journal paper was identified and chosen using Google scholar and the educational research center. Finally, the paper concludes with a summary of the main conclusions that can provide a more comprehensive and in-depth understanding of vocabulary study using Jigsaw techniques. In addition, from the few journals encountered, only those chosen with the focus and scope of the "vocabulary and Jjigsaw technique (Cooperative learning)." At this stage seven journals are obtained: this list of seven journals can be seen in table 1. In addition, all articles from all issues published in the past 5 years, containing seven journals, were downloaded and analyzed.

Table 1. The list of journals used in this study

| No | Journals | Publisher | e-ISSN |
|----|--|--|-----------|
| 1 | The Effectiveness of Cooperative Language Learning in Teaching Vocabulary (2016) | Universitas of Pembangunan Nasional Veteran Surabaya | 2302-2957 |
| 2 | Teaching Vocabulary Using Analogy Through Cooperative Learning to The Students of Junior High School (2016) | Universitas Muhammadiyah Purworejo | 1815-4320 |
| 3 | The Effect of Jigsaw Technique and Students' Vocabulary Mastery on Reading Comprehension of The Eight Grade Students of SMPN 4 Singaraja (2018) | Yavana Bhasa Journal of English Language Education | 2620-4983 |
| 4 | The use of cue card in Cooperative Learning For Teaching Vocabulary (2019) | Universitas Negri Semarang | 2252-6706 |
| 5 | Investigating The Effect of Cooperative Learning and Competitive Learning Strategies On The English Vocabulary Development of Iranian Intermediate EFL Learners (2016) | Islamic Azad University Aliabad katoul, Iran | 1916-4750 |

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| 6 | Effects of Coopetaive Learning on Vocabulary Achievment of Relative/Impulsive Iranian EFL Learners (2017) | Islamic Azad University, Shareza, Iran | 2032-2975 |
| 7 | The Effect of Jigsaw Method to Improve EFL Students Vocabulary Ability (2018) | Universitas Timor NTT | 2580-2720 |

There are three aspects were analyzed in this study. Each journal is reviewed and classified on three aspects: (I) research method (ii) Result (iii) Conclusion.

RESULTS AND DISCUSSION

Results

In this part the researchers presents identification in table and will be explain in some paragraph to clearing the result

Table 2. Display Data

| No | Author | Research Method | Result | Conclusion |
|----|------------------|-------------------------------|---|--|
| 1 | Wahyu Trimastuti | Quantitative (Experimentatal) | a. Cooperative learning b. The population is freshman majoring in management consistef of thirty students c. Using method through engineering teams-games-tournament(TGT) in teaching d. This research using tuckey test | Effective to teach vocabulary, can improve Students' potential to remember vocabulary is expected to improve, and students are expected to be more active in the learning process to improve their ability to solve vocabulary problems. |
| 2 | Hikmawati | Library research | a. The purpose of this paper is to explain how to help educate English vocabulary through analogy and to discover the benefits of teaching vocabulary using analogy. | This paper explains why teaching vocabulary through The analogy through cooperative learning (jigsaw) is divided into three activities, each with its own set of benefits. Their names are as follows: It improves the enjoyment and |

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| | | | | interest in vocabulary learning, it increases students' enthusiasm for learning by making the classroom more active and alive, it can pique students' interest in learning new vocabulary, and it can also contribute to making learning new words easier for students. |
| 3 | Ni Nengah Pariati | Quantitative (quasi experimental) | a. Only the control group was tested after the test. a group of 80 students A vocabulary, reading, and comprehension test was used to collect the data. and the results were analyzed using two-way ANOVA and the Tukey test. | Reading comprehension differed significantly between students those who are taught using the Jigsaw technique and those who are taught using traditional methods. The connection between teaching technique implementation and students' vocabulary knowledge had a significant effect on reading comprehension, and there was a significant difference in reading comprehension between students with high vocabulary mastery who were taught using the |

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| | | | | Jigsaw technique and those who were taught using the conventional technique. |
| 4 | Parmi | Qualitative | a. Emphasis is placed on the use of cue cards as learning media, and cooperative learning is used to teach vocabulary. b. Subject this research are 7 th grade student c. The purpose of this study was to explain the use of cue cards in cooperative learning. d. Collect data using observation, questionnaire, interview, and document analysis | By use of cue cards for teaching vocabulary is interesting, effective, efficient, and inexpensive, and it also helps to boost the student's confidence. |
| 5 | Neda Fekri | Quantitative | a. Randomly selected participant institutes in Tehran, Iran then selected into three groups: control grup and experimental grup (via cooperative learning and competitive learning) b. One-way ANOVA and the independent sample test were used to analyze the data. c. It explored what types strategies more effective | The findings revealed that all of these strategies were effective in helping Iranian EFL intermediate students develop their English vocabulary. |
| 6 | Sajad Shafie | Quantitative | a. The purpose of this study was to | Test data analysis indicates that |

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| | | | <p>investigate the effect of cooperative learning techniques on the vocabulary of reflective or impulsive students of an Iranian efl course.</p> <p>b. 90 participants were chosen and divided into two groups: reflective students and impulsive students</p> <p>c. C1 was designated as the control group.</p> <p>d. test data analysis indicates that groups of adapgroups (impulsive and impulsive) were better to achieve their vocabulary after exams than to group control</p> <p>e. Independent- and paired-samples To determine whether there were significant inter- and intra-group differences, t tests were used.</p> | <p>groups of The experimental groups (reflective and impulsive) outperformed the control group in terms of vocabulary achievement after exams. Reflective learners are better at vocabulary achievement and cooperative learning improving learners' vocabulary capability especially reflective ones.</p> |
| 7 | Yohanes P. F. Erfiani Hesni Neno | Quantitative (quasi experimental) | <p>a. The population this study was second semester students total 120 into three classes every class consist 30 students.</p> <p>b. Relates to the pre-experimental method, with a</p> | <p>In this study, the Jigsaw technique was found to improve students' vocabulary ability as well as their interaction with the teacher and other students.</p> |

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- one-group pre-test
– post-test design;
 - c. Employs purposive sampling; and
 - d. This study was conducted in a single class that received treatment.
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Trimastuti (2016) conducted the first study the goal of this The purpose of this study is to see if cooperative language teaching and learning methods are more effective than traditional learning methods for teaching vocabulary. This is a quantitative experimental study. The research population is made up of first-year management students. Through tims-games-tournament (TGT) techniques, cooperative language teaching and learning methods are considered effective, creative, and fun in increasing students' motivation to learn and improving their vocabulary mastery. The results revealed that the Cooperative Language Vocabulary can be effectively taught using the Teaching and Learning method. As a result, it is recommended that to remember vocabulary.

The second research was conducted by Hikmawati (2016) This paper has two goals. They must explain how to teach English vocabulary to Junior High School students through analogy and cooperative learning, as well as the benefits of doing so. While writing this paper, the author conducts library research, gathering numerous sources from books and the internet to support the discussion. To support the discussion, the writer conducts library research, gathering numerous sources from books and the internet. The findings suggest that three activities can be used to teach vocabulary through cooperative learning using analogy. Pre-teaching, while-teaching, and post-teaching are the three types of teaching. After ensuring that everything is in order, the teacher directs students to form groups and assesses their readiness to begin the lesson. The first step in teaching is for the teacher to inform them of what they are going to do, and the second step is for the teacher to explain the vocabulary material using analogy. The next step is to determine the relationship between the first two words in the analogy. Based on that relationship, students can choose the answer for the second half of the analogy. During post-teaching, the teacher gives each group a test to assess their understanding of the vocabulary learned during the activity. The teacher directs that each group respond to the question. There are several benefits that were discovered, and they are as follows: It makes vocabulary learning more enjoyable and interesting, it encourages students' enthusiasm in the learning process and makes the class more active and alive, it can pique students' interest in learning new vocabulary, and it can also make learning new words easier for students.

Pariati (2019) carried out the third study the goal was to look into the effect of Jigsaw techniques and students' vocabulary mastery on eighth-grade reading comprehension at SMPN 4 Singaraja. This is an 80-student experimental study with a test-only control group design and a 2x2 ial setting. The data is collected using a vocabulary and reading and comprehension test, which is then analyzed using both-direction and tukey tests. (1) According to the findings, there is a significant impact of the interaction between the use of teaching techniques and the mastery of students' vocabulary on reading comprehension. 2) The interaction between the application of teaching techniques and the mastery of students' vocabulary has a significant impact on reading comprehension, and (3) there are significant differences in reading and comprehension between students with high vocabulary mastery and those who do not. (4) There is a significant difference in reading comprehension between students taught using Jigsaw techniques and those taught using traditional methods for students with low vocabulary mastery. The Jigsaw

technique, according to the study's findings, is more effective than traditional methods of teaching reading comprehension.

The fourth research was conducted by Parmi (2019) This study investigates the use of cue cards and cooperative learning to teach vocabulary. The goal of this study was to look into the use of cue cards as a learning media and cooperative learning as a method of learning. The subject of this study was a seventh-grade student, and the method used was cooperative learning to teach vocabulary to students in the classroom. A qualitative case study was used in this study. Observation, questionnaires, interviews, and document analysis were used to collect data. At the end of the study, the questionnaire was distributed. The observation sheet is used to keep track of the activities of both students and teachers during the teaching and learning process. The interview took place at the end of the meeting. As a result of the discoveries, the The researcher came to the conclusion that using cue cards to teach English vocabulary is efficient. interesting, efficient, effective, and cost-effective Cooperative learning was also implemented. It is beneficial in raising the student's self-esteem.

The fifth research was conducted by Fekri (2016) The current study looked at the impact of cooperative and competitive learning strategies on the development of English vocabulary in Iranian EFL intermediate learners. Furthermore, it investigated which of these strategies was more effective. 45 out of 77 Iranian EFL intermediate learners from four language institutes in Tehran, Iran, were chosen at random using an Oxford Placement Test (OPT). The participants were then randomly assigned to one of three groups: a control group, one of two experimental groups, and one of two experimental groups (N=15). One experimental group received cooperative learning, while the other received competitive learning. The data was analyzed using one-way ANOVA and the independent sample t-test. Both of these strategies were found to be effective in the development of English vocabulary in Iranian EFL intermediate students, according to the findings. Furthermore, the results showed that the performance of the experimental group taught using a cooperative strategy was superior to that of their counterpart in the experimental group taught using a competitive strategy.

The sixth research was conducted by Shafiee and Branch (2017) The participants were split into two experimental groups (reflective and impulsive learners), with one control group receiving conventional instruction (CI). The device that divides The Eysenck (1990) Impulsivity Scale was used to categorize participants as reflective or impulsive. Questionnaire. The experimental groups were taught using the student team achievement division. The STAD (Student Team Achievement Division) technique was taught to the experimental group for ten weeks, while the traditional method was taught to the control group. To begin, assess the learners' vocabulary knowledge in different groups. as well as a pretest and a posttest consisting of 40 items on new material at the end of the experiment They used words from their book in English. T-tests were used on both independent and paired samples to determine whether there were any significant inter- or intra-group differences. The statistical analysis of the results revealed that the experimental groups (reflective and impulsive) outperformed the control group (CI) on the vocabulary achievement posttest, and that reflective learners outperformed impulsive learners on vocabulary achievement.

The seventh research was conducted by Neno & Erfiani (2018) The primary goal of this study is to see how using the jigsaw method improves students' vocabulary ability. The pre-experimental method is used in this study, with a one-group pretest-posttest design. The treatment was administered to a single class in this study. The treatment for this study is a teaching and learning process that employs the jigsaw technique. Participants in this study were Timor University English study program students in their second semester during the 2017/2018 academic year. There were 120 students in total for the second semester, divided into three (3) courses. Each class has 30 students in it. The writers used the purposive sampling technique to collect the data. Because the writers believed that the students in this class already

knew enough English, they only chose one class. As a result, the sample size for this study was 30 students. The writers conducted a pre-test before administering the treatment to the students. Finally, at the conclusion of the teaching and learning process, the researchers administered a post-test to assess the students' vocabulary skills. The writers discovered that the average of the students' vocabulary was improving based on data analysis. The average pretest score for students was 65%, and the average posttest score was 79%. Following their research, the authors concluded that (1). the jigsaw technique can assist students in improving their vocabulary skills. (2). The Jigsaw technique can help students interact more effectively with their teachers and peers.

Discussion

According to literature review, jigsaw technique (cooperative learning) is effective in teaching vocabulary, There is a factor in the success that can affect its success and it can be considered, in this study researchers take from a few journals and identify there are some similarities and differences in the process of data taking and the research methods used in his research, specifically to the subject. all of them definitely have discrepancies depending on the subject subject. There are seven journals and the remaining ones using literature and qualitative research, of the five journals of quantitative easing, by which quasi experimental and pre experimental of the quantitative in which there is control group and experimental groups and of course they use treatment. To collect data quantitative researchers using. Tukey tests, anova, and purposive sampling are commonly used in the pre and post tests, as well as when collecting data. The withdraw results of the five journals by quantitative it all positif result. They used the same research design but took different parts in the collect data and the count of the data. And for journals using qualitative work also has a positive results, the researcher employed observation, questionnaire, interview, and analysis documents to collect data. One journal that use library research is just to identify how teaching vocabulary using jigsaw technique and to find out the out the advantages.

CONCLUSION

After identifying the seven journal, the researcher concludes that it turns out teaching vocabulary using jigsaw technique with different Settings in taking data, data collection, research design, subjects, different media but all the result is positif results that jigsaw technique used to teach vocabulary is effective. Jigsaw technique can help students improve their vocabulary, the jigsaw technique can help students interact with the teacher and other students, and also effective in English vocabulary development.

ACKNOWLEDGMENTS

The researcher thank to the lecture Rissa San Riqiya, M.Pd for guiding until finished the project. Thank to our colleagues from IKIP Siliwangi Bandung who provide insight and expertise that greatly assisted the research.

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