

## An Experimental Study of Picture Word Inductive Model to Foster Students' Vocabulary in an Indonesian Junior Highschool Setting

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### ABSTRACT

The objective of the research is to know whether the application of Picture word inductive model improve students' vocabulary at SMP Negeri 2 Jikumerasa. In this research, the researcher used quantitative research method with pre-Experimental design of the one group pretest and posttest. The sample of the research was 26 students learning at the seventh grade of SMP Negeri 2 Jikumerasa which consist of 7 male students and 19 female students. The data were collected by using 30 items of multiple choice test. The data obtained were analyzed by applying dependent t-test the formula. The result of the analysis show that the average score in posttest  $X_2 = 1818$  is greater than score of pretest  $X_1 = 1449$ , calculation of t-test  $= 9.39$  exceeds the t-table  $= 1.711$  at significant level of  $= 0.05$ . Thus the alternative hypothesis ( $H_1$ ) stating that the use of Picture word inductive model improve students English vocabulary is accepted while the null hypothesis ( $H_0$ ) which stated that the Picture Word Inductive Model could not improve students' English vocabulary was rejected. The findings suggested that the model serves as an alternative to foster students' English vocabulary in EFL classroom setting.

Keywords: *Picture Word Inductive Model, Improve, Vocabulary*

### INTRODUCTION

English is used by many people in the world and in many areas of everyday life. Therefore, using English is the easiest way to communicate with people from other countries about many aspects in human life such as technology, economy, social, and politics. But English is still a foreign language in Indonesia.

Learning a foreign language is an integrated process that the learner should study the four basic skills: listening, speaking, reading, and writing. We use it to communicate our feeling, need, and desires through speaking and writing. By having more knowledge about language skills, we have much better chance in understanding learning process like writing and speaking, students or learners should master some components of English. There are structure and vocabulary.

If students or learners wants to speak or writing English, they should have sufficient vocabulary in the mastering the structure. It means that without vocabulary nothing can be conveyed. Students who want to be able to communicate in English well must have wide range of vocabulary. Only with sufficient vocabulary the students can express their ideas effectively (Thornbury, 2002:13).

Vocabulary teaching is one of the most important parts of language teaching because the words in a sentence play an important role in conveying the meaning. Teaching vocabulary is not easy for the teachers, but the students usually get bored of learning this subject. In a classroom in which traditional methods are implemented, the learners have difficulties in learning new vocabulary (Tavil, 2015:153).

To make students motivate and enjoyable in studying vocabulary, the teacher should be creatively in delivering material. The underlying reason for this problem is the fact that most teaching techniques, such as using dictionaries and getting definitions lead learners to memorize words.

One of the strategies that can be used by teacher is using media to support the teaching learning process. The teacher should provide a good exercise or a way of teaching vocabulary, thus that students will enjoy and understand the learning process well. Learning vocabulary at Junior High School can be done through many ways, such as: dictionary, picture, guessing, or reading.

In this case the researcher took the picture in teaching vocabulary, because through picture students can see person, place and thing directly. The use of picture are more efficient and practical than word, they easier to recall and remember than words, further more they expose real life situation although it happen a long time ago. In this research the researcher uses Picture Word Inductive Model in teaching vocabulary at the class VII students of SMP Negeri 2 Jikumerasa.

Why the authors chose the class VII students of SMP Negeri 2 Jikumerasa? It was primarily due to teachers still preferred conventional method. It can make the students very bored in learning of English because the method applied is teacher centered. Picture word inductive model can help the students to memorize the vocabulary. In addition, picture word inductive model can improve their English vocabulary. The Researcher hopes that with PWIM (Picture Word Inductive Model), the students can learn English more enjoyable during the English learning process especially in vocabulary.

Based on the statement above, the objective of the research is to find the effectiveness in using the Picture Word Inductive Model to improve student's vocabulary of the class VII students of SMP Negeri 2 Jikumerasa.

### **Vocabulary in EFL Setting**

Studying language cannot be separated from studying vocabulary because it is an essential component of language. Vocabulary is one of components beside grammar. Students who want to learn a target language, have to learn those components.

Generically, vocabulary is the knowledge of meanings of words. What complicates this definition is the fact that words come in at least two forms: oral and print. Knowledge of words also comes in at least two forms, oral and productive vocabulary we use when we write or speak (Kamil, 2005:3).

Oral vocabulary is the set of words for which we know the meanings when we speak or read orally. Print vocabulary consists of those words for which the meaning is known when we write or read silently. Productive vocabulary is the set of words that an individual can use when writing or speaking. They are words that are well-known, familiar, and used frequently.

When the students do not know the ways to increase their vocabulary they will lose their interest in learning foreign language, because they cannot understand the foreign language words. Knowledge of basic grammar is particularly important for future classroom teachers. Instructors and their students need a shared vocabulary to communicate clearly and effectively about their texts (Sullivan, 2015:xvi)

In Indonesian classroom in which traditional methods are implemented, the learners have difficulties in learning new vocabulary words. The underlying reason for this problem is the fact that most teaching techniques, such as using dictionaries and getting definitions lead learners to memorize words. (Tavil, 2015:15)

There are principles of teaching and learning vocabulary in the class (McCarten 2007:20).

- 1) Focus on vocabulary

In this view, knowing what to learn is a necessary prerequisite to learning. Teachers can help learners get into the habit of noticing by making clear in classroom instruction and homework assignments: which items should be learned, what each item is (a single word, a phrase, and a collocation) and for what purpose (active use or passive recognition).

- 2) Offer variety

Teachers can use different ways to present vocabulary including pictures, sounds, and different text types with which students can identify: stories, conversations, web pages, questionnaires, or news reports. In each of these contexts, topics should be relevant to students' interests. Similarly, practice activities should vary and engage students at different levels.

- 3) Repeat and recycle

Learning vocabulary is largely about remembering, and students generally need to see, say, and write newly learned words many times before they can be said to have learned them. The implications for the vocabulary classroom are self-evident: Review vocabulary as often as possible in activities that have students actively recall words and produce them rather than merely see or hear them.

- 4) Provide opportunities to organize vocabulary

Textbooks often present new vocabulary in thematic sets as an aid to memory, but there are other types of organization and these can be

described under three broad headings: real-world groups, language-based groups, and personalized groups.

5) Make vocabulary learning personal

Related to the point above, materials should provide opportunities for students to use the vocabulary meaningfully, to say and write true things about themselves and their lives. Students should be encouraged to add vocabulary they want to learn, too. And if the experience of

learning is also enjoyable, so much the better. One note of caution is that personalization may be more appropriate for some students than others.

### **Picture Word Inductive Model as Media in Teaching Vocabulary**

Media is a tool which used as a channel to send a message or delivers the information from resources to receiver (Aqib, 2013:50). There is a tendency to consider media as the mass. Media of television, radio and print in learning situation, the human voice, gesticulation, handwriting, duplicating hand out, chalk boards, display, specimens, models, and overhead projector are the common media.

Picture Word Inductive Model has been used to teach reading and writing. But, in this case the researcher used Picture Word Inductive Model to teach vocabulary. Because in PWIM there are pictures containing familiar objects, actions and scenes, the students can hear and see the words spelled correctly directly and they will analyze word by word, in example phonetic, synonym, antonym, and how to spell it. They also read the vocabulary, so it can make them more understandable and make easier to memorize the vocabulary.

It's very important to teach vocabulary trough PWIM because PWIM can help students learn about the structure of words as they build an understanding of inflection, the change of form that words undergo to indicate number, gender, person, and tense. In this case teaching vocabulary trough PWIM can help the students to think inductively, analyze and identify the pictures, automatically; the students have to find out the words which related to the pictures. It can make the students to add and develop their new words. Thus, PWIM can help the students to develop and understand their vocabularies.

The steps in teaching vocabulary trough Picture Word Inductive Model (Perkins, 2013:9):

1. Select a picture.
2. Ask students to identify what they see in the picture.
3. Label the picture parts identified. (Draw a line from the identified object or areas, say the word, write the word; ask students to spell the word aloud and then to pronounce it).
4. Read and review the picture word chart aloud.
5. Ask students to read the words using the lines on the chart if necessary and to classify the words into a variety of groups. Identify common concepts, for instance, beginning consonants, and rhyming words. to emphasize with the whole class.
6. Read and review the picture word chart (say the word, spell it, and

- say it again).
7. Add words, if desired, to the picture word chart and to the word banks.
  8. Lead students into creating a title for the picture word chart. Ask students to think about the information on the chart and what they want to say about it.
  9. Ask students to generate a sentence, or a paragraph about the picture word chart. Ask students to classify sentences; model putting the sentences into a good paragraph.
  10. Read and review the sentences and paragraphs.

Influence research have been done by several researches in our community to know the influences in one subject using particularly methods to other or influence in the one technique to the others.

The first research was conducted by Maswia (2014) with the research entitle “The use of Picture to increase students” vocabulary in elementary school at SD negeri 1 Togeme Kecamatan Oba Tengah in the academic year of 2014”. The result of the research shows that there is significant contribution of the use of picture in the vocabulary teaching, so pictures as media is effective for the success of the vocabulary teaching.

The second is a thesis by Ariani Radjab (2013). The title is *Improving Students’ vocabulary mastery Through Traffic Sigs Picture At The First Year of Mts. Hasirul Khairaat Kota Tidore Kepulauan*. she used Traffic Signs Picture to teach vocabulary. The objectives of her research are, finds out the effectiveness using Picture to teach vocabulary.

Basically, this research is almost the same to teach vocabulary. But it has different media. Maswia Muddin used picture to increase students” vocabulary and Ariani Radjab used Traffic signs Picture to teach vocabulary. But in this research, the researcher tried to do another research related to them. The researcher did another research to teach vocabulary through The Picture Word Inductive Model. In those two studies, this research is further research of those studies in order to improve students' vocabulary.

## METHOD

The researcher used quantitative research and Pre Experimental approach with design “One Group Pretest- Treatment - Posttest Design”. This research was conducted on one class, because the consideration of the class and the schedule. Therefore, pre experimental design is used. Pre Experimental is an experiment conducted without controlling for variables that affect.

To find out the result, the researcher used statistic for data analysis t-test. The researcher needs to manage the design of the research. There is collecting the data. To collect the data the researcher gave the pretest to measure students” vocabulary mastery before using *The Picture Word Inductive Model* and posttests to measure students” vocabulary mastery after using *The Picture Word Inductive Model*. Researcher compares the pretest and posttest score to determine the mean

differences before and  
after using *The Picture  
Word Inductive Model* as a teaching

media.

The researcher used some procedures to collect the data about the impact of using *The Picture Word Inductive Model* (PWIM) for improving vocabulary mastery for the class VII students of SMP Negeri 2 Jikumerasa. The procedures applied are stated below:

- 1) The first step, the researcher went to the head master of SMP Negeri 2 Jikumerasa, and the teacher of English subject to ask for the permission.
- 2) The second, the researcher gave pretest to measure students vocabulary mastery before using *The Picture Word Inductive Model* (PWIM) as a teaching media.
- 3) The third, the researcher gave treatment for students by using *The Picture Word Inductive Model* (PWIM) as a teaching media.
- 4) The fourth, the researcher did posttest to measure student's vocabulary mastery after using *The Picture Word Inductive Model* (PWIM) as a teaching media.
- 5) The fifth, the researcher compared the pretest and posttest score to determine the mean difference before and after using *The Picture Word Inductive Model* (PWIM) as a teaching media.
- 6) The sixth, the researcher used "t-test" to test the hypothesis.
- 7) The last, the researcher interpreted the result and the researcher gives conclusion.

Population is all the subject of the research. In this research, the population or the subjects of research are the class VII students of SMP Negeri 2 Jikumerasa. The number of the students in this class is 26 students. The students are taken as the subject of the research since they have poor vocabulary. In this study, the instrument used is test. The research used multiples choice items. Students are asked to select the one alternative that best completes the statement or answers the questions.

To analyze the data in this research, the researcher used dependent-test. So, the researcher used t-test to test the hypothesis. According to Cramer (2011:121) the t-test formula can be used to analyze pre-experimental results using a pretest and posttest with one group design. The *t*-test assumes that the variances of the two samples are similar so that they can be combined to yield an overall estimate. The unrelated *t*-test combines the variation in the two sets of scores to estimate standard error. This leads to a rather clumsy calculation which superficially is very daunting.

The formula that used in the t-test formula is:  $t = \frac{D}{SxD}$

## FINDING AND DISCUSSION

The data analysis was made in accordance with the data analysis of comparing the scores in the pretest and the posttest, as stated in the previous chapter. From the data analysis which involved 26 students. Data from pretest is 1449 and posttest is 1818, it means that difference score of the posttest is more than the pretest (369).

### The Result of Pretest and Posttest

In the pretest, 3 students obtained very poor scores (0-45), 11 students obtained poor scores (46-55), 7 students obtained fair scores (56-65), and 5 students obtained fairly good scores (66-75). In the pretest, no students obtained excellent, very good, and good scores. It means that the students' English vocabulary related to profession is still poor.

In the posttest, 6 students obtained fair scores (56-66), 15 students obtained fairly good scores (66-75). 3 students obtained good scores (76-85), and 2 students obtained very good scores (86-95). And in the posttest, no students obtained very poor, poor, and excellent scores.

Based on the classification between the average score of pretest (55.73) and the average score of posttest (69.92) the researcher concludes that there is a difference between the students' scores in pretest and posttest (14.19). It can be seen from the comparing of pretest and posttest.

### Comparison between Pretest and Posttest

This analysis is intended to find out the comparison between scores in pretest and posttest. In the pretest, there was 5 students obtain "fairly good" (19.23%), 7 students obtain "fair" (26.92%), 11 students obtain "poor" (42.31%), and 3 students obtain "very poor" (11.54%). In the pretest, no students obtained excellent, very good, and good scores. It means that the students' English vocabulary related to profession is still poor. While in the posttest, 2 students obtain "very good" (7.69%), 3 students obtain "good" (11.54%), 15 students obtain "fairly good" (57.7%), 6 students obtain "fair" (23.07%). In the posttest, no students obtained excellent, poor, and very poor scores.

Finally the average of pretest is 55.73, and the average of posttest is 69.92. It means that there is a difference of students' scores between pretest and posttest. Thus, to differentiate whether the students' results of vocabulary scores are significant or not, the researcher used t-test to test the hypothesis that had been mentioned in the chapter three. With using 0,05 level of significance.

### Analyzing Data

In this research used dependent t-test analysis because the researcher just took one group in this research, and using formula as follow:

$D$

Where

$$\overline{Sx D}$$

- T = Gossett scores
- $\overline{Sx D}$  = Standard error of means
- D = The difference between pretest and posttest
- N = The total of sample

To analyze the formula above, that formula is shown below:

1. Counting the differences between group one (X<sub>1</sub>) and group two (X<sub>2</sub>)
2. Counting standard deviation of the differences between group one (X<sub>1</sub>) and group two (X<sub>2</sub>)

$$D = \frac{\sum D}{N}$$

$$X_1 = \frac{1449}{26} = 55.73$$

$$X_2 = \frac{1818}{26} = 69.92$$

$$\Leftrightarrow X_2 - X_1 = 69.92 - 55.73 = 14.19$$

$$D = \frac{\sum D}{N} = \frac{369}{26} = 14.19$$

$$s_D = \frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N}$$

$$= \frac{6725}{26} - 14.19^2$$

$$= 258.65 - 201.35$$

$$= 57.30$$

$$= 7.56$$



3. Counting standard  
 between means

error of the differences

$$Sx D = \frac{SD}{N-1}$$

$$= \frac{7.56}{26 - 1}$$

$$\frac{7.56}{25}$$

$$= \frac{7.56}{25}$$

$$= \frac{7.56}{5}$$

Counting t- test score

$$t = \frac{D}{Sx D}$$

$$= \frac{14.49}{1.51}$$

$$= 9.39 = 1.708$$

To find out degree of freedom (df) the researcher using the following formula:

$$Df = N-1$$

$$Df = 26 - 1$$

$Df = 25$  (see table of t-critic at the degree of significant of 0,5 ) at the degree of significant 0,5 = 1.708.

Based on the above result the researcher found that t-count (9.39) is higher than t-table (1.708). In other word, the alternative hypothesis ( $H_a$ ) to stating The Picture Word Inductive Model is significantly to increase student's vocabulary is accepted and the null hypothesis ( $H_0$ ) stating that the picture cannot increase student's vocabulary is rejected by using level significance 0.05.

### Discussion

The picture word inductive model can be used to teach phonics and spelling both inductively and explicitly. The Picture Word Inductive Model enables them to build generalizations that form the basis of structural and phonetic analysis. And it respects their ability to think (Calhoun, 1999:21). Based on the data calculation, it can be proved from the average of posttest = 69.92 is higher than the average pretest = 55.73. It means that there is differentiation between the result of students' pretest and posttest score. Pretest is given before the researcher using the Picture

Word Inductive Model, and the posttest is given after the researcher using

the Picture Word Inductive Model.

### Classifying of the Students' Pretest and Posttest Scores

In the pretest are classified as follow: In the pretest, 5 students obtained fairly good scores, 7 students obtained fair scores, 11 students obtained poor scores, and 3 students obtained fairly good score. It means that on these results, the students' mean score of pretest is classified into "poor to fair" category (55.73).

While in the pretest are classified as follow: 6 students obtained fair scores, 15 students obtained fairly good scores, 3 students obtained good scores, and 2 students obtained very good scores.

It means that on these results, the students' mean score of post test is classified into "fairly good" category (69.92).

As calculated before, the students' different score of pre-test and post-test was 14.19. This point showed that the treatment of teaching The Picture Word Inductive Model was effective and its effectiveness was categorized into high ( $9.39 > 1.711$ ).

From those results, the researcher has found the answers of this research questions. The Picture Word Inductive Model can improve students' vocabulary at the class VII students of SMP Negeri 2 Jikumerasa. It is proved by the calculating of t-count that was higher than the t-table. The calculation of t-count indicated as 9.39.

The technique of teaching is one of the factors that influence the result of the research. In the process of teaching, the teachers must choose appropriate technique and the students will enjoy the lesson. Based on the result of tests, the process of learning English using picture word inductive model as a vocabulary teaching technique could help the students to memorize vocabulary and they could improve their vocabulary achievement. Besides, the students who had been taught using picture word inductive model felt more fun and they were not bored in the classroom during the process of teaching learning. In the process of learning, the students in the class were enjoyed and fun.

### CONCLUSION

Based on the conclusion and analysis of the data, from the result of pre-test and post-test score, this is supported by statistical data which showed that the score in the posttest is higher. Posttest ( $X_2 = 1818$ ) is greater than pretest ( $X_1 = 1448$ ) and t-count (9.39) is higher than the t-table (1.708). It means that  $H_a$  is accepted and  $H_0$  is rejected because there are a significant difference between pretest and posttest. It can be inferred that the use of Picture Word Inductive Model improve students' vocabulary mastery. The Picture Word Inductive Model is effective to improve students' vocabulary of at SMP Negeri 2 Jikumerasa. It was proved by the obtained score of t-count.

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