

# ***THE EFFECT OF USING PICTURE WORD INDUCTIVE MODEL (PWIM) ON VOCABULARY LEARNING ACHIEVEMENT OF THE FIRST YEAR STUDENTS OF MTs AL FAJAR PEKANBARU***

**<sup>1)</sup> Susanna, <sup>2)</sup> Afrianto, <sup>3)</sup> Fadly Azhar**

Email: <sup>1)</sup>susannatholib@gmail.com, <sup>2)</sup>afrianto.a@lecturer.unri.ac.id, <sup>3)</sup>fadlyazhar57@gmail.com

Contact: 085215895854

*English Study Program  
Language and Arts Department  
Faculty of Teachers Training and Education  
Universitas Riau*

**Abstract :** *This research is aimed at finding out the effect of Picture Word Inductive Model (PWIM) on vocabulary learning achievement of the first year students of MTs Al Fajar Pekanbaru in academic year 2017/2018. The data were collected on April. The population of this research is the first year students of MTs Al Fajar Pekanbaru. The number of sample is 34 students selected by using cluster random sampling technique. This research is a pre experimental research with one group pre-test post-test design. The instruments to collect the data were multiple choice test with 25 questions and matching word test with 10 questions. The result of the data analysis showed that the mean score of pre-test is 58.65 while in post-test is 76.22. It showed us that the mean score of post-test was higher than pre-test. Hence, there is a significant effect of Picture Word Inductive Model (PWIM) on students' vocabulary learning achievement. In other words, the alternative hypothesis of this research, "There is any significant effect of Picture Word Inductive Model (PWIM) on the vocabulary learning achievement of the first year students of MTs Al Fajar Pekanbaru" is accepted and the null hypothesis is rejected. It can be inferred that teaching vocabulary by using Picture Word Inductive Model (PWIM) as one of the alternative strategies has an effect on the students' vocabulary learning achievement.*

**Keywords:** *PWIM, Vocabulary, Learning Achievement.*

# **PENGARUH MODEL INDUKTIF KATA BERGAMBAR TERHADAP PRESTASI PEMBELAJARAN KOSA KATA PADA SISWA TAHUN PERTAMA DI MTS AL FAJAR PEKANBARU.**

<sup>1)</sup> **Susanna**, <sup>2)</sup> **Afrianto**, <sup>3)</sup> **Fadly Azhar**

*Email: <sup>1)</sup>susannatholib@gmail.com, <sup>2)</sup>afrianto.a@lecturer.unri.ac.id, <sup>3)</sup>fadlyazhar57@gmail.com*

*Contact: 085215895854*

Mahasiswa Program Studi Bahasa Inggris  
Jurusan Bahasa dan Seni  
Fakultas Keguruan dan Ilmu Pendidikan  
Universitas Riau

**Abstrak** : Penelitian ini bertujuan untuk menemukan pengaruh model induktif kata bergambar pada prestasi pembelajaran kosa kata pada siswa tahun pertama di MTs Al Fajar Pekanbaru dalam tahun ajaran 2017/2018. Data dikumpulkan pada bulan April. Populasi penelitian ini adalah siswa kelas satu MTs Al Fajar Pekanbaru. Jumlah sampel adalah 34 siswa yang dipilih dengan menggunakan teknik pemilihan secara acak. Penelitian ini merupakan penelitian pra-eksperimental dengan satu kelompok pre-test pre-test desain. Instrumen untuk mengumpulkan data adalah tes pilihan ganda dengan 25 pertanyaan dan tes mencocokkan kata dengan 10 pertanyaan. Hasil analisis menunjukkan bahwa nilai rata-rata pre-test adalah 58,65 sedangkan pada posttest adalah 76,22. Ini menunjukkan bahwa skor rata-rata post-test lebih tinggi daripada pre-test. Oleh karena itu, ada pengaruh yang signifikan dari model induktif kata bergambar pada prestasi pembelajaran kosa kata siswa. Dengan kata lain, alternative hypothesis dari penelitian ini “Terdapat pengaruh yang signifikan dari model induktif kata bergambar pada prestasi pembelajaran kosa kata pada siswa tahun pertama di MTs Al Fajar Pekanbaru” dapat diterima dan null hypothesis ditolak. Dapat disimpulkan bahwa mengajar kosa kata dengan menggunakan model induktif kata bergambar sebagai strategi yg alternatif memiliki pengaruh pada prestasi pembelajaran kosa kata siswa.

**Kata Kunci:** Model Induktif Kata Bergambar, Kosa Kata, Prestasi Belajar.

## INTRODUCTION

English is one of the important subjects that learned by the students in the learning process. There are four skills should be mastered by the students, they are listening, speaking, reading and writing. In mastering these skills, vocabulary becomes a basic and important aspect or component that should be learned by the students.

According to Hiebert and Kamil (2005), vocabulary is the knowledge of the meanings of words. The students who want to use a language, need to know what to say the word in the target language. In other words, without vocabulary, nothing can be conveyed. Vocabulary is one linguistic feature which influences the communicative competence. Nation (2011) states that in English as a second language (ESL) and English as a foreign language (EFL) learning vocabulary items plays a vital role in all language skills, listening, speaking, reading, and writing. It means that the students who have good vocabulary will be able to master the four language skills. Besides that, by mastering the vocabulary, the students' achievement in language components will also be improved.

Vocabulary is not easy to learn without a proper way of how to build it up. In this case, English becomes one of difficult subjects for the students because they are lacking in vocabulary. Based on the information gotten from an interview with an English teacher of MTs Al Fajar Pekanbaru (Indah Pratiwi, S.Pd) indicates that the students cannot remember and memorize the vocabulary for a long time. As the result, they had a very limited number of vocabulary. It was hard for them to express their ideas in four skills of English. If the students require to be able to speak, listen, write and read, the students have to learn some vocabularies.

The researcher did not only interview the English teacher but also observed the situation in the class. Teaching activity is not easy for teachers as most teachers seem to have difficulty in choosing a strategy to teach English, especially vocabulary. They commonly use a conventional strategy such as writing down the list of vocabulary and asking the students to memorize the word. In pedagogical competency, the teacher must be able to decide the best strategy and media that will be used in the teaching-learning process. Moreover, the teacher has to be able to maintain an inquisitively in trying out new ways of teaching. In fact, the teacher rarely combined the teaching process with any interesting media like picture or video. Therefore, the teaching and learning process seemed to be monotonous. In this case, the researcher found that the teaching and learning process in MTs Al Fajar Pekanbaru was teacher-centered. The teacher's style in teaching was dominant. Hence, the students were less active and bored in the class.

To solve the problems, the researcher should use a good strategy and media to help the students increase their vocabulary in learning English, catch the students' attention, make the students interested and active in the class. In this case, the researcher used pictures as a media. There are actually many kinds of strategy using pictures that can be used to help students remember vocabulary longer. One of them is Picture Word Inductive Model (PWIM). Picture Word Inductive Model (PWIM) is a strategy of teaching vocabulary which is used to stimulate students to think inductively by looking at the selected pictures and the identified words to build a sentence. Using Picture Word Inductive Model (PWIM) can make the students interested in learning English; help the students memorize the words, and enjoying the active process of teaching-learning in the class.

Based on the explanation above, the researcher is interested in conducting this research with the title “The Effect of Using Picture Word Inductive Model (PWIM) on Vocabulary Learning Achievement of the First Year Students of MTs Al Fajar Pekanbaru”.

## **METHODOLOGY**

This research was pre-experimental design. According to (Hatch and Farhady, 1985), pre-experimental research is divided into three categories, one-shot case study, one group pre-test post-test design, and intact group comparison. It used one group pre-test post-test design that only one group as a sample. This research was designed to find out the students’ vocabulary learning achievement of the first year students of MTs Al Fajar Pekanbaru.

Pre-test (O1) was aimed to find out the students’ vocabulary learning achievement before the treatment. Treatment (X) was applied by using Picture Word Inductive Model (PWIM). Post-test (O2) was aimed to see the improvement of the students’ vocabulary learning achievement after teach by using Picture Word Inductive Model (PWIM). The researcher compared the students’ score between pre-test and post-test and the students get effect or not by the treatment.

In collecting the data the students were given a multiple choice test with 40 questions and matching word test with 10 questions. The duration time needed for students to answer the questions was 60 minutes. The population may be all the individuals of a particular type or more restricted part of that group (Best and Kahn, 2003). In this research, the population was the first year students of MTs Al Fajar Pekanbaru in academic year 2017/2018 with 101 students. Sample is a subset of the population to which the researcher intends to generalize the results (Best and Kahn, 2003). Sampling is a process of selecting a number of individuals for a study in such a way that they represent the larger group from which they are selected (Ogula, 2005). In this research, the sample was VII-C with 34 students who selected by using cluster random sampling technique. Cluster random sampling means that the sampling in which groups, not individuals, is randomly selected (Gay and Peter, 2000).

## **RESULTS AND DISSCUSION**

After collecting data, the researcher continued to analyze the data. The first stage was giving the pre-test. The pre-test was given to the students in order to know their vocabulary learning achievement before they had been thought by using Picture Word Inductive Model (PWIM). The test consists of total 35 items of vocabulary in the descriptive texts. The result of pre-test was shown in the following table:

**Table 1. The Students' Scores in Pre-Test**

Score	Frequency	Percent	Valid Percent	Cumulative Percent
45.71	2	5.9	5.9	5.9
48.57	1	2.9	2.9	8.8
51.43	4	11.8	11.8	20.6
54.29	4	11.8	11.8	32.4
57.14	3	8.8	8.8	41.2
60.00	5	14.7	14.7	55.9
62.86	9	26.5	26.5	82.4
65.71	6	17.6	17.6	100.0
Total	34	100.0	100.0	

From the Table 1, based on the classification of students' score by Hughes (2003), it shows that the students who got score ranging from 45.71 to 60.00 are categorized into *mediocre* level. The students who got score 62.86 and 65.71 are categorized into *good* level. Finally, the percentage of the students' score can be shown in the following table:

**Table 2. The Percentage of the Students' Score in Pre-test**

Test Score	Level of Comprehension	Frequency	Percentage
81-100	Excellent	0	0%
61-80	Good	15	44.12%
41-60	Mediocre	19	55.88%
21-40	Poor	0	0%
0-20	Very Poor	0	0%
<b>Total</b>		<b>34</b>	<b>100%</b>

Table 2 shows that there are no students who achieved excellent, poor and very poor level in the pre-test with percentage 0%. While, there are 15 students who achieved good level with percentage 44.12% and 19 students who achieved mediocre level with percentage 55.88%.

After analyzing the percentage of the students score in pre-test, the researcher analyzed the mean score of pre-test based on five types of Vocabulary Questions by Mehta (2009). The students' vocabulary learning achievement in each type of vocabulary questions in pre-test can be shown in the following table:

**Table 3. The Students' Vocabulary Learning Achievement in Each Type of Vocabulary Questions in Pre-test**

No	Vocabulary Questions	Mean Score
1	Picture	11.86
2	Synonym and Antonym	10.60
3	Class of Word	10.68
4	Fill in the Blank	8.86
5	Definition	16.65
<b>Total</b>		<b>58.65</b>

Table 3 shows that the lowest score of the five types of Vocabulary Question in pre-test is 'Fill in the Blank' with 8.86 as mean score and the highest one is 'Definition' with 16.65 as mean score.

After the treatment done for six meetings, the post-test was conducted in order to measure the students' vocabulary learning achievement after being taught by applying Picture Word Inductive Model (PWIM). Finally, the researcher computed the data and found the result as presented in following table:

**Table 4. The Students' Scores in Post-Test**

Score	Frequency	Percent	Valid Percent	Cumulative Percent
62.86	1	2.9	2.9	2.9
65.71	2	5.9	5.9	8.8
68.57	2	5.9	5.9	14.7
71.43	7	20.6	20.6	35.3
74.28	1	2.9	2.9	38.2
74.29	5	14.7	14.7	52.9
77.14	5	14.7	14.7	67.6
80.00	5	14.7	14.7	82.4
82.86	1	2.9	2.9	85.3
85.71	2	5.9	5.9	91.2
88.57	2	5.9	5.9	97.1
97.14	1	2.9	2.9	100.0
Total	34	100.0	100.0	

From the Table 4, based on the classification of students' score, it shows that the students who got score ranging from 62.86 to 80.00 are categorized into *good* level. The students who got score ranging from 82.86 to 97.14 are categorized into *excellent* level. Finally, the percentage of the students' score can be shown in the following table:

**Table 5. The Percentage of the Students' Score in Post-test**

Test Score	Level of Comprehension	Frequency	Percentage
81-100	Excellent	6	17.65%
61-80	Good	28	82.35%
41-60	Mediocre	0	0%
21-40	Poor	0	0%
0-20	Very Poor	0	0%
<b>Total</b>		<b>34</b>	<b>100%</b>

Table 5 shows that there are 6 students who achieved excellent level with percentage 17.65% and 28 students who achieved good level with percentage 82.35%. There are no students who achieved mediocre, poor and very poor level in the post-test with percentage 0%.

After analyzing the percentage of the students score in post-test, the researcher analyzed the mean score of post-test based on five types of Vocabulary Questions. The students' vocabulary learning achievement in each type of vocabulary questions in post-test can be shown in the following table:

**Table 6. The Students' Vocabulary Learning Achievement in Each Type of Vocabulary Questions in Post-test**

No	Vocabulary Questions	Mean Score
1	Picture	14.56
2	Synonym and Antonym	13.37
3	Class of Word	13.21
4	Fill in the Blank	13.88
5	Definition	21.20
<b>Total</b>		<b>76.22</b>

Table 6 shows that the lowest score of the five types of Vocabulary Questions in post-test was 'Class of Word' with 13.21 as mean score and the highest one were 'Definition' with 21.20 as mean score.

After calculating the result both of the test, there were the difference result of pre-test and post-test. The students' answers were analyzed per component to see which component that was effected significantly and which component that score increased by using Picture Word Inductive Model (PWIM) on the students' vocabulary learning achievement in descriptive text.

Their improvement in learning vocabulary score was proved through their test score. The comparison of the mean score was presented in the following table.

**Table 7. The Improvement of Students' Vocabulary Learning Achievement for Each Type of Vocabulary Questions**

Test	Types of Vocabulary Questions					Total
	P	S&A	C	F	D	
Pre-test	11.86	10.60	10.68	8.86	16.65	58.65
Post-test	14.56	13.37	13.21	13.88	21.20	76.22
Improvement	2.7	2.77	2.53	5.02	4.55	17.57

According to Table 7, the improvement of students' score in identifying picture is 2.7, the improvement of students' score in finding synonym and antonym is 2.77, the improvement of students' score in classifying the word formation is 2.53, the improvement of students' score in fulfilling the text is 5.02 and the improvement of students' score in finding the definition of words is 4.55. The total improvement of the students' mean score is 17.57.

The last stage in analyzing the data was hypothesis. In this research, t-test formula was used to compared the result of pre-test and post-test in determining whether the hypothesis is accepted and whether the treatment has an effect on the students' vocabulary learning achievement or not. The result can be seen in the following table:

**Table 8. Paired Samples Test**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post Test – Pre Test	17.56265	8.73277	1.49766	14.51564	20.60965	11.727	33	.000

$$\begin{aligned}
 t\text{-table} &= n-1 ; \alpha/2 \\
 &= 34-1 ; 0,05/2 \\
 &= 33 ; 0,025 \\
 &= 2.035
 \end{aligned}$$

Finally, to prove the hypothesis, the data were calculated by using t-test formula with assumption as follows:

- If  $t\text{-test} > t\text{-table}$ , the Null Hypothesis ( $H_0$ ) is rejected and alternative hypothesis ( $H_a$ ) is accepted.
- If  $t\text{-test} < t\text{-table}$ , the Null hypothesis ( $H_0$ ) is accepted and alternative hypothesis ( $H_a$ ) is rejected.



Based on the table 8, it shows that the result of t-test is 11.727. Meanwhile, t-table is 2.035. The comparison between t-test and t-table showed  $11.727 > 2.035$  means that t-test is higher than t-table. It can be concluded that the alternative hypothesis “there is any significant effect of using Picture Word Inductive Model (PWIM) on vocabulary learning achievement of the first year students of MTs Al Fajar Pekanbaru” was accepted and null hypothesis was rejected.

## DISCUSSION

Based on the procedure of the data collection technique, the teaching and learning process was divided into three steps. The first step was giving pre-test to the students in order to know their vocabulary learning achievement before using Picture Word Inductive Model (PWIM).

The second step was giving the treatment in six meetings. The treatment applied Picture Word Inductive Model (PWIM) in teaching descriptive text. It required the teacher to select a picture; the teacher chooses the picture about the common picture which most liked by the students, ask the students to identify what they see in the picture, to identify the activities or thing based on what they see in the picture, label the picture, read and review the picture word chart aloud, ask students to read the words, read and review the picture word chart, add words, if desired, to the picture, ask students to generate a sentence, sentences, or a paragraph about the picture word chart, and read and review the sentences and paragraphs. At the end of the treatment, they were asked to answer the quiz based on the material. The last step was giving post-test in order to know their students' vocabulary learning achievement after the treatment was applied.

After conducting this research, the researcher can prove that the Picture Word Inductive Model (PWIM) is suitable and appropriate strategy in teaching vocabulary. According to Calhoun (1999), Picture Word Inductive Model (PWIM) is an effective tool for teachers to use as they strive to meet this goal for all students. From the explanation above, it proved that Picture Word Inductive Model could help the students to improve their vocabulary learning achievement.

The result showed that the *mean* score of post-test was higher than the score of pre-test. ( $76.22 > 58.65$ ). It means that the students' post-test score was better than their pre-test scores which indicated the improvement of students' vocabulary learning achievement in descriptive text. Then, the data analysis showed that t-test was higher than t-table ( $11.727 > 2.035$ ). It can be concluded that Picture Word Inductive Model (PWIM) could improve the students' vocabulary learning achievement especially in descriptive text.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

After the researcher conducted the steps of pre-experimental research design, the researcher concluded that there is a significant effect of using Picture Word Inductive

Model (PWIM) on vocabulary learning achievement of the first year students of MTs Al Fajar Pekanbaru. It can be seen from the mean score of of pre-test is 58.65. After having conducted Picture Word Inductive Model (PWIM) as a teaching strategy and analyzed the result of post-test, it was found that the mean score of post-test is 76.22. In other words, the mean score of post-test is higher than the mean score of pre-test.

The result also showed that the value of t-test (11.727) is higher than t-table (2.035) at the significance level 5%. It means that alternative hypothesis ( $H_a$ ) is accepted and null hypothesis ( $H_o$ ) is rejected.

## Recommendations

Based on the previous explanations, the researcher would like to give some suggestions for the students, the teachers and further researchers. For the students, they are suggested to study and do Picture Word Inductive Model (PWIM) activities in their daily activities to develop their vocabulary learning achievement. For the teachers, they are suggested to apply Picture Word Inductive Model (PWIM) as an alternative strategy to help the students in developing their vocabulary learning achievement. Also, the teachers should managed and controlled the time spent during teaching learning process using Picture Word Inductive Model (PWIM) as good as possible in order to get satisfied and more high improvement of result. For further researchers, they are suggested to use this research as the contribution to increase students' motivation in teaching and learning process, especially in vocabulary. The further researchers can do a research with same problem in different subjects and level. They also may use other kinds of research design.

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