

IMPROVING STUDENTS' VOCABULARY MASTERY BY USING INDEX CARD MATCH

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ABSTRACT

The title of this research paper is "Improving Students' Vocabulary Mastery by using Index Card Match". It is to fulfill one of the requirements to the English Education Study Program of FKIP UNIBBA for sarjana pendidikan degree. There are two purposes of the research paper; those are whether index card match is effective to improve students' vocabulary mastery of the second grade of Junior High School Handayani 1 Banjaran, and the students' response towards the Index card match in vocabulary learning. The research method used in this paper is pre-experimental. The population of this research is students of second grade of Handayani 1 Banjaran, and the sample is one class of the second grade having 30 students. The instruments are pre-test, treatment, post-test and questionnaires. The result of the research shows that there is significant difference in the students mean score before and after the treatment by using index card match. The result of the t-test computation shows that the value of the derived t (t_o) is higher than that of the critical t (t-table) ($6.219 > 2.045$). It means that the null hypothesis is rejected, and the alternative hypothesis is accepted. This means that index card match in vocabulary learning is effective. This means index card match method is effective to improve students' vocabulary mastery. Meanwhile based on the analysis of the answer of the questionnaire, it can be concluded that the students give positive response, almost all of the students were interested to improve vocabulary using index card match. The use of Index Card match can help and make them easier to improve their vocabulary skill in learning vocabulary.

Keywords : *Pre-experimental, vocabulary, index card match, matching card.*

ABSTRACT

Judul makalah penelitian ini adalah “Meningkatkan Penguasaan Kosakata Siswa dengan Menggunakan Index Card Match”. Hal ini untuk memenuhi salah satu persyaratan Program Studi Pendidikan Bahasa Inggris FKIP UNIBBA untuk mendapatkan gelar sarjana Pendidikan. Ada dua tujuan dari penelitian ini, yaitu apakah Index Card Match efektif untuk Meningkatkan penguasaan kosakata siswa kelas II SMP Handayani 1 Banjarnegara, dan respon siswa terhadap Index Card Match dalam pembelajaran kosakata. Metode penelitian yang digunakan dalam makalah ini adalah pra-eksperimen. Populasi penelitian ini adalah siswa kelas II SMP Handayani 1 Banjarnegara, dan sampelnya adalah satu kelas, kelas II yang berjumlah 30 siswa. Instrumen yang digunakan adalah pre-test, treatment, post-test dan angket. Hasil Penelitian menunjukkan bahwa terdapat perbedaan yang signifikan pada nilai rata-rata siswa sebelum dan sesudah diberi perlakuan menggunakan index card match. Hasil perhitungan uji t menunjukkan nilai t turunan (to) lebih besar dibandingkan nilai t kritis (t-tabel) ($6.219 > 2,045$). Artinya hipotesis nol ditolak dan hipotesis alternative diterima. Artinya, Index Card Match dalam pembelajaran kosakata efektif. Artinya metode Index Card Match efektif untuk meningkatkan penguasaan kosakata siswa. Sedangkan berdasarkan analisis jawaban angket, dapat disimpulkan bahwa siswa memberikan respon positif, hampir semua siswa tertarik untuk meningkatkan kosakata menggunakan Index Card Match. Penggunaan Index Card Match dapat membantu dan memudahkan mereka dalam meningkatkan kemampuan kosakata dalam mempelajari kosakata.

Kata Kunci: *Pra-eksperimental, kosakata, pencocokan kartu index, pencocokan kartu.*

INTRODUCTION

Vocabulary is needed to improve the four English skills; listening, speaking, reading and writing. This means that vocabulary plays an important role for the study in their field of study. The students, who are lack of and vocabulary, will be difficult in understanding the text, unable to speak English and difficult to write their own idea. In addition, students with a small number of vocabulary also read slowly because they do not understand many words or have to stop and look them up in dictionary (Edward, 2004). According to Steven (2004:3) Vocabulary is the knowledge of meaning of words. It means vocabulary is a meaning of word that can help people, not only students. But vocabulary is also to build sentences for communication between people.

The students often found difficulty in learning English because they cannot understand all of the words and the meaning of the words. In other words, they have limited vocabulary. Many experts of language teaching methodology also agree that playing game is a good way to learn vocabulary (Newton, 2001). Based on the problem and the statement above, the writer offers one interesting way of teaching vocabulary that

is using index card match, because it has been known to have advantages and effectiveness in learning vocabulary in various ways.

Words matching is very simple and intuitive way to estimate the nature of a self explanation. Words matching is an enjoyable way to assess an initial understanding of word and concept (Allen 2006 : 103). And Index Card Match is a strategy to overcome learning problems by mathing index cards, Silberman (2009 : 240) argues, index card match is a fun and active way to review subject matter, it allows students matter, it allows students to pair up and play quizzes with classmates.

Although in general there is a context that learning vocabulary from cards is beneficial, previous researchers have shown that many variables affect vocabulary learning outcomes regardless of the strategic learning vocabulary used by learners. In addition, word cards can only be effective if the learners has activated them and understands how to use them (Reynolds et al., 2020), more specifically for the use of word cards, it covers both aspects of word knowledge (e.g., Bangsa, 2013, Chap.11).

RESEARCH QUESTION

On the basis of this research background, he researcher formulate, the research questions as follow :

1. Is index card match technique effective for improving students' vocabulary learning ?
2. How do students respond to the technique in teaching vocabulary?

RESEARCH DESIGN

The researcher decides to use pre-experimental design with pre-test, post-test, and questionnaires. In other words, to complete a quantitative study, an experimental design is needed. Pre-experimental design research, with the following design:

Table 3 1 pre-experimental design

Pre-test	Treatment	Post-test
01	X	02

Note :

01 = Pre-test

X = Treatment

02 = Post-test

From Sugiyono (2011:76)

Data Collecting Technique

The researcher collected the following research data :

1. Pre-test

In the process of collecting the data, the researcher came to the class as a teacher. The researcher gave the test for students before explaining the material. Pre-test is to identify the students' ability in vocabulary. The test was given to all of group, experimental and control group. It is intended to measure the ability of students in vocabulary before using "index card match"

2. Post-test

Before the researcher gave the students post-test, the researcher gave treatment to the experimental group. Post-test is used to see if there is a significant difference in improving vocabulary mastery by using index card match. The test was completed to get the students' vocabulary knowledge scores after treatment.

3. Questionnaire

The author used questionnaires to obtain students' reflective data. This was taken by giving questionnaire to students. The author used this technique to find out the obstacles faced by students in improving students' vocabulary skills using index card match.

Data Analysis Technique

In this research, the writer would like to use the formula of the test for dependent group (Coolidge 2000:24). In analysing research data, the researcher use dependent t-test.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

Where:

\bar{x}_1 = The mean of the pre-test scores.

\bar{x}_2 = The mean of the post-test.

$\sum D^2$ = The sum of the squares of the differences between the pre-test scores and the post-test scores.

$(\sum D)^2$ = The squares of the sum of the differences between the pre-test and the post-test scores.

N = The number of pairs of scores.

DF = The degree of freedom

DF = N - 1

The researcher uses t-test for dependent group, there are five steps for computing the data:

Step 1 : Subtracting the pairs of scores from each other

Subject	Pre-test scores (X1)	Post-test scores (X2)	D Scores	D^2
	$\sum X_1 =$	$\sum X_2$	$\sum D$	$\sum D^2$

Step 2 : calculating the mean of the pre-test scores \bar{x}_1

$$\bar{x}_1 = \frac{\sum x_1}{n} =$$

Where :

\bar{x}_2 = mean of sample

$\sum x_1$ = total number of all individual observation of x

n = total number of observation

Step 3 : calculating the mean of the post-test scores \bar{x}_2

$$\bar{x}_2 = \frac{\sum x_2}{n}$$

Where :

\bar{x}_2 = mean of sample

$\sum x_2$ = total number of all individual observation of x

n = total number of observation

Step 4 : enter the value obtained from step 1-3 into the formula for the dependent t-test

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

Step 5 : the interpreting the result of the computation

The writer gave the questionnaire after giving the pre-test and post-test. The questionnaire consists of a series of statements and two answer choices are given i.e yes and no. The questionnaire is analysed in chapter four by using the formula is as follows Sudjono (2008):

$$P = \frac{F}{N} \times 100\%$$

Where:

P= Percentages

F= Number of students choose every choice of answer for each statement.

N= Total number of students

100%= Constant value

LITERATURE RIVIEW

To avoid misunderstanding and to make it clear, some keywords related to the title of this research are attached, including :

1. Vocabulary

Vocabulary is needed to improve the four English skills; listening, speaking, reading and writing. This means that vocabulary plays an important role for the study in their field of study. The students who are lack of vocabulary, will be difficult in understanding the text, unable to speak English and difficult to write their own idea.

2. Card

A card is small flat thin object, generally made of thick paper or plastic. Cards are thick paper that is rectangular in shape. According to Eka (2017:65) Word card media is a medium used to help improve students' memory, because this media has a greater influence on remembering and understanding vocabulary and picture.

3. Index Card Match

The Index card match method is a method of finding pairs of cards used in the learning process. This method is carried out by matching cards which consist of two parts, namely questions and answers that are matched by students with pairs of questions and answers (Annisa & Marlina, 2019).

Findings

The researcher use the pre-experimental method to implement her research where the research use one experimental class as a sample. The researcher took samples at SMP Handayani 1 Banjaran class 8D with a total of 30 students.

Pre-Test

Pre-test was used to know the students vocabulary scores before the treatment. The test was given on 31th July 2023 to 15th August 2023, beginning at 13.30 until 14.30. The pre-test was vocabulary test. The students were obliged to answer the vocabulary test where the topic is school object. The test consist of 25 questions consisting of multiple choice and matching questions.

Table 4 1 The Result of Pre-test

No	Subject	Correct Answer	Pre-test Score
1.	Student 1	25	100
2.	Student 2	20	80
3.	Student 3	19	76
4.	Student 4	17	68
5.	Student 5	17	68
6.	Student 6	21	84
7.	Student 7	25	100
8.	Student 8	21	84
9.	Student 9	20	80
10.	Student 10	19	76
11.	Student 11	19	76
12.	Student 12	25	100
13.	Student 13	20	80
14.	Student 14	21	84
15.	Student 15	12	48
16.	Student 16	16	64
17.	Student 17	22	88
18.	Student 18	19	76
19.	Student 19	25	100
20.	Student 20	21	84
21.	Student 21	19	76
22.	Student 22	25	100
23.	Student 23	24	96
24.	Student 24	20	80
25.	Student 25	19	76
26.	Student 26	19	76
27.	Student 27	18	72

28.	Student 28	21	84
29.	Student 29	25	100
30.	Student 30	11	44
	Total		2.420
	Mean		80,67

The table above, it could be put forward that the result of the students pre-test was bad because there were some students who had bad and good scores. It could be seen from the result of pre-test more than half of student had bad scores. The lowest scores of the pre-test was 44 which was got by four students. The mean of the pre-test was 80.67. And half of the students got pre-test scores below the school's KKM. Therefore, the researcher gave the treatment to improve students' vocabulary mastery.

Post-Test

The post-test was used to know the students' score of vocabulary ability after the treatment used. The test was given on Thursday August 12th 2023 begin at 14.40 until 16.30. In the post-test used vocabulary test. On the post-test students doing a post-test with the topic of a garden and objects in the park.

Table 4 2 The Post-Test Scores

No	Subject	Post-test score
1.	Student 1	100
2.	Student 2	95
3.	Student 3	90
4.	Student 4	90
5.	Student 5	100
6.	Student 6	95
7.	Student 7	100
8.	Student 8	100
9.	Student 9	100
10.	Student 10	90

11.	Student 11	95
12.	Student 12	100
13.	Student 13	100
14.	Student 14	100
15.	Student 15	100
16.	Student 16	90
17.	Student 17	95
18.	Student 18	100
19.	Student 19	100
20.	Student 20	100
21.	Student 21	100
22.	Student 22	95
23.	Student 23	95
24.	Student 24	100
25.	Student 25	95
26.	Student 26	100
27.	Student 27	95
28.	Student 28	90
29.	Student 29	100
30.	Student 30	95
	Total	2.905
	Mean	96,83

After the students' were given the treatment by using index card match. The result of the students' scores increased. The lowest score of post-test was 90 and the highest scores of post-test was 100. The means of pre-test was 96.83.

The calculation of Both Pre-test and Post-test

The table below shows the process of the data analysis of the pre-test and post-test. The researcher uses some steps to calculate the data of students' pre-test and post-test. They are:

Subtract the pairs scores from each other in the following manner :

Subject	Scores X1	Scores X2	Scores D	Scores D ²
1.	100	100	0	0
2.	80	95	-15	225
3.	76	90	-14	196
4.	68	90	-22	484
5.	68	100	-32	1.024
6.	84	95	-11	121
7.	100	100	0	0
8.	84	100	-16	256
9.	80	100	-20	400
10.	76	90	-14	196
11.	76	95	-19	361
12.	100	100	0	0
13.	80	100	-20	400
14.	84	100	-16	256
15.	48	100	-52	2.704
16.	64	90	-26	676
17.	88	95	-7	49
18.	76	100	-24	576
19.	100	100	0	0
20.	84	100	-16	256
21.	76	100	-24	576
22.	100	95	5	25
23.	96	95	1	1
24.	80	100	-20	400
25.	76	95	-19	361
26.	76	100	-24	576

27.	72	95	-23	529
28.	84	90	-6	36
29.	100	100	0	0
30.	44	95	-51	2.601
Total Score	2.420	2.905	-469	13.258
Average	$\bar{x}_1 = 80.66$	$\bar{x}_2 = 96.83$	$(\sum D)^2 = -469$	$\sum D^2 = 13.258$

Continued by the calculating the sum of the differences between pre-test scores and post-test scores. And then enter the steps above into the formula of dependent t-test. For further explanation about computation of dependent t-test can be seen as follows :

- **Step 1 : Calculate the mean of the pre-test (\bar{x}_1)**

$$\bar{x}_1 = \frac{\sum x_1}{n} = \frac{2420}{30} = 80.66$$

- **Step 2 : Calculate the mean of the post-test (\bar{x}_2)**

$$\bar{x}_2 = \frac{\sum x_2}{n} = \frac{2905}{30} = 96.83$$

- **Step 3 : Calculate the sum of the squares of the differences between the pre-test scores and post-test scores.**

$$(\sum D = -469$$

- **Step 4 : Calculate the sum of the differences between the pre-test scores and post-test scores.**

$$\sum D^2 = 13.258$$

- **Step 5 : Enter the values obtained from step 1-4 into the formula the dependent t-test.**

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

$$\begin{aligned}
&= \frac{80,66 - 96,83}{\sqrt{\frac{\sum 13,258 - \frac{(219,961)^2}{30}}{30(30-1)}}} \\
&= \frac{-16,17}{\sqrt{\frac{13,258 - 7,332,0}{30(29)}}} = \frac{-16,17}{\sqrt{\frac{5,926}{870}}} \\
&= \frac{-16,17}{\sqrt{6,81}} = \frac{-16,17}{\sqrt{2,60}} = -6,219
\end{aligned}$$

The value of t-table is gained from degree of freedom (df), the formula used is $df=N-1$, where N is the number of respondent, so $df = 30-1 = 29$ at the level of significance of .05 for two tailed test is 2.045. It means that the t-observed is higher than t-table ($6.219 > 2.045$). Therefore, H_0 is rejected and H_a is accepted. This also means that there is a significant difference in students' scores before and after the treatment using Index Card Match. The mean of the post-test is significantly higher than the mean of the pre-test, indicating that the use of index card match to improve students' vocabulary mastery is effective.

Discussions

Based on the result of the research done by the researcher, after computing all of data, the researcher found that as derived $t = 6.219$ does exceed the table critical value of $t = 2.045$, at the level of significance of .05 for two tailed test with $df = 29$ ($6.219 > 2.045$). Therefore, H_0 is rejected and H_a is accepted. This means that there is significant difference in students' score before and after the treatment using index card match. This also means that teaching vocabulary using index card match for the second grade of Handayani 1 Junior High School is effective. In this research, the researcher find that students enjoy and have fun way to learn vocabulary using index card match.

The result of the questionnaire, it could be concluded that most of students showed positive responses toward the use of index card match as the method in improving students' vocabulary mastery. It could be proved in the result of the questionnaire almost of the students admitted that index card match method can motivate them to improve their vocabulary mastery and it also helps them to know the meaning of the text.

Conclusion and Suggestion

Based on the research findings elicited in the previous chapter, it showed that the t -observed is higher than t -table. That means that H_a is accepted, thus the index card match is effective towards improving students' vocabulary mastery in the second grade of Handayani 1 Junior High School. Then, the implementation of the index card match got positive responses from the students (experimental class). It can be seen from the questionnaire data result that the writer gets.

Based on the conclusion above, it can be delivered some suggestion. For English teacher, Index card match is an effective method and it can be considered for improving students' vocabulary mastery, motivating students in learning vocabulary and creating fun atmosphere in the classroom. Teachers have to create index card match that can increase students' vocabulary that is suitable with the learning materials. For Students Index card match not only can improve vocabulary mastery but can build students' critical thinking, and work together well. For further researcher, have to find new ways that are more interesting and train students' skills in learning other components of English, such as grammar, spelling, pronunciation, reading, etc.

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