

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter present the finding and discussion. Therefore, this chapter focused on the discription of data, hypothesis testing, and discussion.

A. The Description of Data

In this chapter, the researcher presented the data of the students' phrasal verbs mastery between students' taught by using Memrise application and those taught by using conventional method. The study was conducted at the first grade of SMAN 1 Gondang Tulungagung. Here, the researcher want to knew the effectiveness of using Memrise application toward the students' phrasal verbs mastery of the first grade at SMAN 1 Gondang Tulungagung. The effectiveness can be seen from the significant difference in scores from pre-test and post-test, between students' taught by using Memrise application and those taught by using conventional method.

The data obtained in this study were obtained through tests, namely pre-test and post-test. Tests are carried out to measure the level of mastery of phrasal verbs. The researcher gave 30 questions, there were 20 multiple choices and 10 fill in the blank. Tests have been tested for reliability and validity in classes other than experimental and control. The table showed the students' score of pre-test and post test, consisted of 30 students' of experimental group and 30 students of control group. The results of the pre-test and post-test in the control and experimental group are as follow:

Table 4.1 Pre-Test and Post-Test Score in Experimental Group

| NO | Name | Pre-Test | Post-Test | NO | Name | Pre-Test | Post-Test |
|-----------|-------------|-----------------|------------------|-----------|-------------|-----------------|------------------|
| 1 | AYP | 66 | 82 | 16 | NHP | 71 | 81 |
| 2 | AS | 70 | 84 | 17 | PVDS | 67 | 78 |
| 3 | AF | 73 | 84 | 18 | RPA | 62 | 69 |
| 4 | APO | 68 | 53 | 19 | RA | 53 | 84 |
| 5 | DNAP | 59 | 57 | 20 | RDA | 55 | 81 |
| 6 | EW | 69 | 70 | 21 | RF | 50 | 74 |
| 7 | FBPP | 70 | 78 | 22 | RAK | 56 | 66 |
| 8 | HATP | 56 | 66 | 23 | RF | 57 | 78 |
| 9 | JEL | 70 | 78 | 24 | SAM | 50 | 58 |
| 10 | LA | 64 | 78 | 25 | S | 54 | 78 |
| 11 | MZF | 62 | 84 | 26 | TY | 68 | 81 |
| 12 | MJF | 65 | 81 | 27 | VMH | 65 | 76 |
| 13 | MTA | 56 | 56 | 28 | VIS | 65 | 86 |
| 14 | NO | 50 | 54 | 29 | WAN | 50 | 74 |
| 15 | NR | 56 | 59 | 30 | YF | 46 | 77 |

The table 4.1 showed the score of experimental group, which thought by using Memrise application. It mentioned the score of pre-test and post test.

Table 4.2 Pre-Test and Post-Test Score in Control Group

| No | Name | Pre-Test | Post-Test | No | Name | Pre-Test | Post-Test |
|----|-------|----------|-----------|----|------|----------|-----------|
| 1 | ASAW | 38 | 54 | 16 | IA | 70 | 71 |
| 2 | AFRAD | 67 | 62 | 17 | LPS | 70 | 59 |
| 3 | AKM | 52 | 72 | 18 | MTV | 65 | 78 |
| 4 | AFS | 70 | 79 | 19 | NBR | 57 | 72 |
| 5 | ASD | 67 | 86 | 20 | NZ | 67 | 78 |
| 6 | AS | 61 | 48 | 21 | OBW | 71 | 54 |
| 7 | DFDO | 64 | 78 | 22 | RSP | 53 | 72 |
| 8 | DFJ | 56 | 75 | 23 | RTL | 67 | 43 |
| 9 | ES | 57 | 42 | 24 | SNA | 67 | 60 |
| 10 | FAY | 74 | 69 | 25 | SPJ | 65 | 81 |
| 11 | FAH | 65 | 62 | 26 | SF | 57 | 53 |
| 12 | GTS | 73 | 63 | 27 | UTS | 58 | 78 |
| 13 | HRS | 49 | 72 | 28 | WAS | 60 | 66 |
| 14 | IGRF | 71 | 88 | 29 | YPP | 68 | 75 |
| 15 | ITHF | 61 | 44 | 30 | ZDP | 60 | 50 |

The table 4.2 showed the score of control group, which thought by using conventional method. it mentioned the score of Pre-test and post test.

Descriptive analysis is useful for describing and describing research data, including the amount of data, the maximum value, the minimum value, the average value, etc. The result of descriptive statistic showed in the table:

Table 4.3 Descriptive Statistic Pre-test and Post-test of Two Groups

| | | Statistics | | | |
|----------------|---------|--------------------------|---------------------------|------------------|-------------------|
| | | Pre-Test Experimental | Post-Test Experimental | Pre-Test Control | Post-Test Control |
| N | Valid | 30 | 30 | 30 | 30 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | 60.77 | 74.97 | 62.67 | 66.13 |
| Median | | 62.00 | 78.00 | 65.00 | 70.00 |
| Mode | | 50 ^a | 78 | 67 | 72 ^a |
| Std. Deviation | | 7.758 | 7.976 | 8.010 | 13.059 |
| Minimum | | 46 | 58 | 38 | 42 |
| Maximum | | 73 | 86 | 74 | 88 |
| Sum | | 1823 | 2249 | 1880 | 1984 |

a. Multiple modes exist. The smallest value is shown

1. Students' Score in Experimental Group

Experimental group that got a treatment by using Memrise application toward students' phrasal verbs achievement. The subject of the study experimental which of 30 students from total 36 student in X MIPA 1. The pre-test was done on March 3th 2020. The table 4.3 showed the result of pre-test and post-test both experimental group and control group. The result of experimental group, it shown that the minimum score of pre-test was 46 and the maximum score was 73. The mean was 60.77, the median was 62. The sum data was 1823. The researcher know the mean, median, and sum by using SPSS.

Then, after the researcher gave treatment by using Memrise application for three meetings. The post-test was done on May, 8th 2020 via google form. The question consist of 30 question about phrasal verbs. The post-test result of

experimental group, the minimum score was 58 and the maximum was 86. By using SPSS, the researcher know the mean was 74.97, the median was 78, and the sum was 2249. Then, it can be conclude that the gained score between pre-test and post-test in experimental group was 426, and the gained mean score was 14.2. The students' score io the experimental group was significantly increased. It means that Memrise was good application to increase the students' phrasal verbs mastery.

2. Students' Score in Control Group

Control group that got a treatment by using conventional method for three meetings. The pre-test was given before treatment, it was done on March, 2th 2020. The subject of this group was 30 form 35 student on X MIPA 3. Based on the descriptive statistic of control group on the table 4.3, the minimum score pre-test of control group was 38 and maximum score was 74. By using SPSS the mean was 62.67, the median was 65, and the sum data was 1880.

Student's in the control group was given the treatment by using convensional method. The post-test was done on May, 8th 2020 via google form. The students answer 30 questions of phrasal verbs. The post-test result of control group, the minimum score was 42 and the maximum score was 88. By using SPSS, the researcher know the mean was 66.13, the median was 70, and the sum was 1984. Then, it can be concluded that the gained score between pre-test and post-test in control group was 104, and the gained mean score was 3.46. The students' score of control group was increased, but the post-test

result showed that the mean score of the experimental group was higher than the control group.

B. The Result of Normality and Homogeneity Testing

1. The Result of Normality Testing

Normality test is conducted to determine whether the research data is normally distributed or not. Normal data is an absolute requirement before researcher conducted parametric statistical analysis. The researcher used SPSS 16.0 *Kolmogorov-Smirnov* by significant value 0,05. *Kolmogorov-Smirnov* is a test for normality for large samples. The result showed in the table:

Table 4.4 The Result of Normality Testing

| | | One-Sample Kolmogorov-Smirnov Test | |
|---------------------------------|----------------|------------------------------------|----------|
| | | PreTest | PostTest |
| N | | 30 | 30 |
| Normal Parameters ^a | Mean | 60.73 | 74.97 |
| | Std. Deviation | 7.741 | 7.976 |
| Most Extreme Differences | Absolute | .130 | .181 |
| | Positive | .130 | .095 |
| | Negative | -.130 | -.181 |
| Kolmogorov-Smirnov Z | | .713 | .994 |
| Asymp. Sig. (2-tailed) | | .690 | .277 |
| a. Test distribution is Normal. | | | |

Table 4.4 showed the result of normality testing of experimental group. In the table 4.4 noted the significant score. The significant score of pre-test was 0.690, while significant score of post-test was 0.227. So, 0.690 larger than 0.05 and 0.227 larger than 0.05 ($0.690 > 0.050$ and $0.227 > 0.050$), it mean that data distribution was normally distributed.

2. Homogeneity Testing

Homogeneity testing conducted is conducted to measure whether the data has homogenous variance or not. Homogeneous data is one of the requirements (not an absolute requirement) in the *independent sample T-Test*. Homogeneity test aims to determine whether a variant of data from two groups there are homogeneous or heterogeneous. In this study, the homogeneity test is used to determine whether the variance of the experimental group post-test data and the control group post-test data are homogeneous or not. The researcher used SPSS 16.0 *Test of Homogeneity of Variances* by the value significant is 0,05.

Table 4.5 The Result of Homogeneity Testing

| Test of Homogeneity of Variances | | | |
|----------------------------------|-----|-----|------|
| Result of Study | | | |
| Levene Statistic | df1 | df2 | Sig. |
| 2.734 | 1 | 58 | .104 |

Based on the table 4.5 of the homogeneity test it is known that the significance value for all data in the Homogeneity test was 0.104. So, 0.104 larger than 0.05 ($0.104 > 0.05$), it can be concluded that the variance of the post-test experimental group data and the post-test control group data was homogeneity.

C. Hypothesis Testing

The researcher conducted *Independent Sample T-Test* by using SPSS 16.0, to know the hypothesis testing. The hypothesis testing of this study as follow:

1. Alternative hypothesis (H_a): there is significant difference on the students' mastery of phrasal verbs before and after taught by using Memrise Application.
2. Null hypothesis (H_0): there is no significant difference on the students' mastery of phrasal verbs before and after taught by using Memrise Application.

Table 4.6 Descriptive Statistic Post-Test of Two Groups

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|------------------------|----|---------|---------|-------|----------------|
| Post-Test Experimental | 30 | 58 | 86 | 74.97 | 7.976 |
| Post-Test Control | 30 | 42 | 88 | 66.13 | 13.059 |
| Valid N (listwise) | 30 | | | | |

Table 4.6 showed the descriptive statistic of experimental group and control group. It can be seen the differences score between experimental and control group. Experimental group has 30 students', the mean was 74.97, standard deviation was post-test 7.976. Whereas control group has 30 students', the mean was 66.13, standard deviation was 13.059. the result showed that experimental group that was given the treatment by using Memrise application to teach phrasal verbs has higher score than a score from control group that using conventional method. There was significantly different from the students' score with and without being taught by using Memrise application.

The table 4.7 showed the result of Levene's Test. H_0 is accepted if $F > 0.05$. Then, H_0 is rejected if $F < 0.05$. Based on the Levene's Test on table 4.7, the value of F was 9.436. So, 9.436 larger than 0.05 ($9.436 > 0.05$), it can be interpreted that the data variance between experimental group and control group was homogeneous (H_0 is accepted). So that the interpretation of the Independent T-test table was guided by the values contained in the *Equal Variances Assumed* on the table 4.7.

Based on the column T-test on the table 4.7, which the significant value was 0.002. So, 0.002 lower than 0.05 ($0.002 < 0.05$). Then, as the basis for making the T-test decision, it means that the null hypothesis is rejected, so the alternative hypothesis is accepted.

So, it can be concluded that there is significant difference on the students' mastery of phrasal verbs with and without taught by using Memrise Application. It means that using Memrise application was improved the students' phrasal verbs mastery.

D. Discussion

In this research, the objective of research is to investigate the effectiveness of using the application of the students' phrasal verbs mastery of the first grade at SMAN 1 Gondang Tulungagung.

Researchers conducted the research in two classes, both experimental and control groups, the subjects in the experimental class were 30 students and in the control class were 30 students, so the number of research subjects was 60 students Researchers carry out 3 steps in the study.

The first was a pre-test. Pre-test aims to find out the student's score before gave treatment. The second was treatment conducted for 3 meetings. The last step was post-test, post-test aims to find out the students' score after getting treatment.

Based on table 4.7 showed a significant value (Sig.) was 0.002. because the significant p-value was lower than 0.05 ($0.002 < 0.05$). It could be concluded that the null hypothesis (H_0) that stated “there is no significant difference on the students’ mastery of phrasal verbs before and after taught by using Memrise Application” was rejected. Then, Alternative hypothesis (H_a) that stated “there is significant difference on the students’ mastery of phrasal verbs before and after taught by using Memrise Application” was accepted.

The advantages of using the Memrise application have a positive effect on the students' phrasal verbs mastery. The results of the t-test showed a significant difference in the experimental class taught using the Memrise application between the control class who were taught using conventional method. It could be said that by using Memrise application students can increase mastery of phrasal verbs better than that do not use the Memrise application.

The study of Memrise application was carried out by Elly Cholifatur Rosyidah (2018), Dian Fadhilwati (2016), and Alexander Luczak (2017). The difference between this study and the three previous studies was that Elly Cholifatur Rosyidah used a quasi-experimental study and her research subjects was teaching irregular verbs in tenth grade MAN Sidoarjo. The

student's mastery of Irregular verb of the experimental class was significantly improved. Second, Dian Fadhilwati used CAR (Classroom Action Research) as research design. Her research dealt with learning and reviewing vocabulary through Memrise to improve the second-semester students' vocabulary achievement at Faculty of Agriculture and Husbandry at the Islamic University of Balitar. The result showed the students' improved vocabulary by using Memrise. And the last Alexandra Luczak. Her research was about showing the possible effects of using Memrise application in teaching and learning legal English vocabulary during tertiary courses leading to the TOLES (Test of Legal English Skill) exam. The result showed the students has good result in TOLES test after taught by using Memrise.

Whereas in this study, researchers used a quasi-experimental research design with a quantitative approach. The purpose of this research to investigate the effectiveness of using Memrise application on the students' phrasal verbs mastery of the first grade at SMAN 1 Gondang Tulungagung. In this case the use of the Memrise application both has a good impact in teaching and learning English. The results of this study and previous studies showed that Memrise can improve student achievement, positively affect the results obtained by students, students involvement in work affects students in memorizing material, and prove that by using the Memrise application students can increase mastery of English material better than that do not use the Memrise application.

Finally it can ben proven that the students found using Memrise enjoyable and convenient, and therefore it would be a useful tool in teaching

vocabulary (Louis, 2016). The atmosphere that make students feel comfortable and conditions that are conducive to their senses, will make learning fun and get good results. This can be done because with enthusiastic and enjoyable learning will motivate them to learn phrasal verbs, so that information can be understood and managed well. According to the findings it is proved that using Memrise application give advantages in teaching English phrasal verbs. The advantages of Memrise is the student get improve their achievement in mastering phrasal verbs.

It is relevant to Masoud Azizi Abarghoui (2018) stated that the program is created to develop long-term memory of taught items by frequent and systematic testing. The material in Memrise makes it easy for students to memorizing a new of phrasal verbs, because of drill and practice method. Where the material and quiz in application is given repeatedly. The review feature makes it easy for students to review some of the material they have not mastered, by identifying of the difficult words. It is also relevant to Cook (2017) argued that Memrise has a number of strong features that make it an appealing learning option for students and teachers. It could be said that Memrise application could be the alternative media to teaching English, especially phrasal verbs. Memrise application can help the students to improve their phrasal verbs mastery. So, this research can be concluded that Memrise application was effective on the students' phrasal verbs mastery of the first grade at SMAN 1 Gondang Tulungagung.