**CHAPTER IV**

**RESEARCH FINDINGS AND DISCUSSION**

1. **Data Description**

This chapter focuses with the presentation of the results of the test given to the sample, the students of tenth grade SMKN 1 Cinangka. The result was used to get empirical evidence about the effect of using rosetta stone software as media in teaching students’ listening at tenth grade of SMKN 1 Cinangka,based on the result of the test. The result of the data analysis obtained from the participants’ pre-test and post-test score.

1. **Data Analysis**
2. Pre test ofExperimental Group

The writer applying for tenth grade of Hotel Acomodation I students, SMK 1 Cinangka as an experimental group which consists of 36 students.

Table 4.1

Pre Test Score of Experimental Group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO  | Nama Siswa | Pre Test | Xa | Xa2 |
| 1 | AM34 | 50 | 0,98 | 0.97 |
| 2 | AB | 45 | 5.98 | 35.77 |
| 3 | AL | 50 | 0.98 | 0.97 |
| 4 | AG | 40 | 10.98 | 120.57 |
| 5 | BR | 50 | 0.98 | 0.97 |
| 6 | DN | 60 | -9.02 | 81.37 |
| 7 | DR | 40 | 10.98 | 120.57 |
| 8 | FP | 65 | -14.02 | 196.57 |
| 9 | FR | 50 | 0.98 | 0.97 |
| 10 | HR | 60 | -9.02 | 81.37 |
| 11 | IP | 60 | -9.02 | 81.37 |
| 12 | JA | 40 | 10.98 | 120.57 |
| 13 | JH | 60 | -9.02 | 81.37 |
| 14 | KS | 65 | -14.02 | 196.57 |
| 15 | LS | 50 | 0.98 | 0.97 |
| 16 | MR | 45 | 5.98 | 35.77 |
| 17 | ML | 45 | 5.98 | 35.77 |
| 18 | MJ | 60 | -9.02 | 81.37 |
| 19 | MA | 60 | -9.02 | 81.37 |
| 20 | NL | 45 | 5.98 | 35.77 |
| 21 | NA | 40 | 10.98 | 120.57 |
| 22 | PH | 60 | -9.02 | 81.37 |
| 23 | RA | 30 | 20.98 | 440.17 |
| 24 | RY | 50 | 0.98 | 0.97 |
| 25 | SF | 60 | -9.02 | 81.37 |
| 26 | ST | 50 | 0.98 | 0.97 |
| 27 | SH | 60 | -9.02 | 81.37 |
| 28 | SH | 50 | 0.98 | 0.97 |
| 29 | SR | 40 | 10.98 | 120.57 |
| 30 | SA | 50 | 0.98 | 0.97 |
| 31 | SL | 40 | 10.98 | 120.57 |
| 32 | TP | 50 | 0.98 | 0.97 |
| 33 | TL | 60 | -9.02 | 81.37 |
| 34 | UR | 50 | 0.98 | 0.97 |
| 35 | WF | 55 | -4.02 | 16.17 |
| 36 | WN | 50 | 0.98 | 0.97 |
|  | **Σ**  | 1835 |  | Σ xa2 = 2817.98 |
|  | **Mean**  | 50.98 |  |  |

From the table above, the results are known as follows:

 Average (Ma) = 50.98

Deviasi (Σ xa2) = 2817.98

Number of respondents (na) = 36

1. Pre test ofControl Group

The writer applying for tenth grade of Hotel Acomodation II students , SMK 1 Cinangka as an experimental group which consists of 36 students.

Table 4.2

Pre Test Score of Control Group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO  | Nama Siswa | Pre Test | Xb | Xb2 |
| 1 | AG | 70 | -20.56 | 422.71 |
| 2 | AO | 50 | -0.56 | 0.31 |
| 3 | AK | 50 | -0.56 | 0.31 |
| 4 | AP | 50 | -0.56 | 0.31 |
| 5 | AF | 50 | -0.56 | 0.31 |
| 6 | AS | 40 | 9.44 | 89.11 |
| 7 | DY | 50 | -0.56 | 0.31 |
| 8 | DA | 30 | 19.44 | 377.91 |
| 9 | DP | 50 | -0.56 | 0.31 |
| 10 | ECP | 50 | -0.56 | 0.31 |
| 11 | EM | 35 | 14.44 | 208.51 |
| 12 | ER | 60 | -10.56 | 111.51 |
| 13 | EA | 50 | -0.56 | 0.31 |
| 14 | FR | 50 | -0.56 | 0.31 |
| 15 | FPI | 50 | -0.56 | 0.31 |
| 16 | HD | 50 | -0.56 | 0.31 |
| 17 | IA | 30 | 19.44 | 377.91 |
| 18 | KT | 30 | 19.44 | 377.91 |
| 19 | LF | 60 | -10.56 | 111.51 |
| 20 | MA | 55 | -5.56 | 30.91 |
| 21 | MY | 70 | -20.56 | 422.71 |
| 22 | MAF | 50 | -0.56 | 0.31 |
| 23 | NR | 40 | 9.44 | 89.11 |
| 24 | RS | 50 | -0.56 | 0.31 |
| 25 | RO | 50 | -0.56 | 0.31 |
| 26 | RM | 40 | 9.44 | 89.11 |
| 27 | RM | 50 | -0.56 | 0.31 |
| 28 | RA | 60 | -10.56 | 111.51 |
| 29 | SK | 70 | -20.56 | 422.71 |
| 30 | SH | 50 | -0.56 | 0.31 |
| 31 | SI | 50 | -0.56 | 0.31 |
| 32 | SA | 50 | -0.56 | 0.31 |
| 33 | SJ | 40 | 9.44 | 89.11 |
| 34 | WY | 60 | -10.56 | 111.51 |
| 35 | TN | 40 | 9.44 | 89.11 |
| 36 | UW | 50 | -0.56 | 0.31 |
|  | **Σ**  | 1780 |  | Σ xb2 =2.714.19 |
|  | **Mean**  | 49.44 |  |  |

From the table above, the results are known as follows:

 Average (Ma) = 49.44

Deviasi (Σ xa2) = 2.714.19

Number of respondents (na) = 36

1. Pre Test Data Analysis

The writer began the experiment by giving a pre test to find the students before getting different treatments. The result of the pre test than was calculated as follows:

1. The score of experimental group (A)

Na = 36

Σxa2 = 2817.98

Ma = $\frac{ΣFa}{Na }$

=$\frac{1835}{36}$

=50.98

1. The score of control group (B)

Nb = 36

Σxb2 = 2714.19

Mb = $\frac{ΣFb}{Nb}$

=$\frac{1780}{36}$

= 49.44

1. The difference of ratee between the two group

*to* =$\frac{Ma-Mb}{\sqrt{\left(\frac{Σxa2+Σxb2}{na+nb-2}\right)\left(\frac{1}{na}+\frac{1}{nb}\right)}}$

*to=*$\frac{50.98-49.44}{\sqrt{\left(\frac{2817.98+2714.19}{36+36-2}\right)\left(\frac{1}{36}+\frac{1}{36}\right)}}$

*to=* $\frac{1.54}{\sqrt{\left(\frac{5532.17}{70}\right)\left(\frac{70}{1224}\right)}}$

*to=* $\frac{1.54}{\sqrt{\left(79.03\right)\left(0.05\right)}}$

*to=* $\frac{1.54}{\sqrt{3.95}}$

*to=*$\frac{1.54}{1.99}$

*to=* 0.78

From the calculation above, the writer concludes that the score of mean pre test between experimental group and control group is not so different, because the mean of pre test of experimental group (50,98) is higher than or similar with the mean of pre test of control group (49,44) where Ma ≥ Mb; both the groups have equal ability. The calculation result of t-test = 0,78 with Df = na+ nb – 2, Df = 70, level of signification 5% and t-table = 1,99. The result of t-test is 0,78<1,99. It shows that t-table is higher than t-test. It means that there is no significant difference of pre test scores between experimental group and control group.

1. Post Test of Experimental Group

The writer applying for tenth grade of Hotel Acomodation I students , SMK 1 Cinangka as an experimental group which consists of 36 students.

Table 4.3

Post Test Score of Experimental Group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO  |  Nama Siswa  | Post Test | Ya | Ya2 |
| 1 | AM | 75 | -2.91 | 8.47 |
| 2 | AB | 70 |  2.90 | 4.37 |
| 3 | AL | 75 | -2.91 | 8.47 |
| 4 | AG | 65 | 7.09 | 50.27 |
| 5 | BR | 70 | 2.09 | 4.37 |
| 6 | DN | 80 | -7.91 | 62.57 |
| 7 | DR | 70 | 2.09 | 4.37 |
| 8 | FP | 80 | 7.91 | 62.57 |
| 9 | FR | 70 | 2.09 | 4.37 |
| 10 | HR | 70 | 2.09 | 4.37 |
| 11 | IP | 75 | -2.91 | 8.47 |
| 12 | JA | 65 | 7.09 | 50.27 |
| 13 | JH | 85 | -12.91 | 166.67 |
| 14 | KS | 90 | -17.91 | 320.77 |
| 15 | LS | 75 | -2.91 | 8.47 |
| 16 | MR | 60 | 12.09 | 166.7 |
| 17 | ML | 70 | 2.09 | 4.37 |
| 18 | MJ | 75 | -2.91 | 8.47 |
| 19 | MA | 80 | 7.91 | 62.57 |
| 20 | NL | 80 | 7.91 | 62.57 |
| 21 | NA | 65 | 12.09 | 62.57 |
| 22 | PH | 75 | -2.91 | 8.47 |
| 23 | RA | 60 | 12.09 | 166.67 |
| 24 | RY | 80 | 7.91 | 62.57 |
| 25 | SF | 80 | 7.91 | 62.57 |
| 26 | ST | 80 | 7.91 | 62.57 |
| 27 | SH | 85 | -12.91 | 166.67 |
| 28 | SH | 75 | -2.91 | 8.47 |
| 29 | SR | 60 | 12.09 | 166.67 |
| 30 | SA | 70 | 2.09 | 4.37 |
| 31 | SL | 70 | 2.09 | 4.37 |
| 32 | TP | 90 | -17.91 | 320.77 |
| 33 | TL | 80 | 7.91 | 62.57 |
| 34 | UR | 70 | 2.09 | 4.37 |
| 35 | WF | 75 | -2.91 | 8.47 |
| 36 | WN | 70 | 2.09 | 4.37 |
|  | **Σ**  | 2595 |  | Σ Ya2= 3318,82 |
|  | **Mean**  | **72.09** |  |  |

From the table above, the results are known as follows:

 Average (Ma) = 72.09

Deviasi (ΣYa2) = 3318,82

Number of respondents (na) = 36

 5. Post Test of Control Group

The writer applying for tenth grade of Hotel Acomodation II students , SMK 1 Cinangka as an experimental group which consists of 36 students.

Table 4.4

Post Test Score of Control Group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO  | Nama Siswa | Post Test | Yb | Yb2 |
| 1 | AG | 75 | -10.41 | 108.37 |
| 2 | AO | 70 | -5.41 | 29.27 |
| 3 | AK | 50 | 14.59 | 212.87 |
| 4 | AP | 60 | 4.59 | 21.07 |
| 5 | AF | 70 | -5.41 | 29.27 |
| 6 | AS | 50 | 14.59 | 212.87 |
| 7 | DY | 70 | -5.41 | 29.27 |
| 8 | DA | 60 | 4.59 | 21.07 |
| 9 | DP | 60 | 4.59 | 21.07 |
| 10 | ECP | 75 | -10.41 | 108.37 |
| 11 | EM | 55 | 9.59 | 91.97 |
| 12 | ER | 70 | -5.41 | -5.41 |
| 13 | EA | 65 | -0.41 | 0.17 |
| 14 | FR | 60 | 4.59 | 21.07 |
| 15 | FPI | 75 | -10.41 | 108.37 |
| 16 | HD | 70 | -5.41 | 29.27 |
| 17 | IA | 40 | 24.59 | 604.67 |
| 18 | KT | 50 | 14.59 | 212.87 |
| 19 | LF | 70 | -5.41 | 29.27 |
| 20 | MA | 70 | -5.41 | 29.27 |
| 21 | MY | 75 | -10.41 | 108.37 |
| 22 | MAF | 65 | -0.41 | 0.17 |
| 23 | NR | 60 | 4.59 | 21.07 |
| 24 | RS | 70 | -5.41 | 29.27 |
| 25 | RO | 65 | -0.41 | 0.17 |
| 26 | RM | 50 | 14.59 | 212.87 |
| 27 | RM | 55 | 9.59 | 91.97 |
| 28 | RA | 75 | -10.41 | 108.37 |
| 29 | SK | 75 | -10.41 | 108.37 |
| 30 | SH | 60 | 4.59 | 21.07 |
| 31 | SI | 70 | -5.41 | 29.27 |
| 32 | SA | 65 | -0.41 | 0.17 |
| 33 | SJ | 50 | 14.59 | 212.87 |
| 34 | WY | 80 | -15.41 | 237.47 |
| 35 | TN | 60 | 4.59 | 21.07 |
| 36 | UW | 70 | -5.41 | 29.27 |
|  | **Σ**  | 2325 |  | Σ Yb2= 2354.12 |
|  | **Mean**  | 64.59 |  |  |

From the table above, the results are known as follows:

Average (Ma) = 64.59

Deviasi (Σ Yb2) = 2354.12

Number of respondents (na) = 36

6. Post Test Data Analysis

After getting treatments, both of the groups got the post test. It is used to findthe result of the experiment. The post test was calculated with t-test formula. The steps are as follows:

1. The score of experimental group (A)

Na = 36

ΣYac = 3318,82

Ma = $\frac{ΣFa}{Na }$

=$\frac{2595}{36}$

= 72,09

1. The score of control group (B)

Nb = 36

ΣYb2 = 2354.12

Mb = $\frac{ΣFb}{Nb}$

= $\frac{2325}{36}$

= 64,59

1. The difference of ratee between the two group

*to* =$\frac{Ma-Mb}{\sqrt{\left(\frac{Σya2+Σyb2}{na+nb-2}\right)\left(\frac{1}{na}+\frac{1}{nb}\right)}}$

*to=*$\frac{72.09-64.59}{\sqrt{\left(\frac{3318,82+2354}{36+36-2}\right)\left(\frac{1}{36}+\frac{1}{36}\right)}}$

*to=* $\frac{7.5}{\sqrt{\left(\frac{5672.94}{70}\right)\left(\frac{70}{1224}\right)}}$

*to=* $\frac{7.5}{\sqrt{\left(81.04\right)\left(0.05\right)}}$

*to=* $\frac{7.5}{\sqrt{4.05}}$

*to=*$\frac{7.5}{2.01}$

*to=* 3.73

From the calculation above, the writer concludes that the score of mean post test between experimental group and control group is any difference, because the mean of pre test of experimental group (72,09) is higher than the mean of post test of control group (64.59) where Ma > Mb. The calculation result of t-test = 3,73 with Df = na+ nb – 2, Df = 70, level of signification 5% and t-table = 1,99. The result of t-test is 3,73>1,99. So, arithmetical t-test is greater than t-table. Based on the result, it means that there is a significant difference of post test scores between experimental group and control group.

1. **The Hypothesis Test**

As calculated above, the score post test of t-test was 3,73 while the t table was 1.99. So, the score post test of t-test was higher than the t table. Based on the study hypothesis rule, If the score of t-test was equal to or higher than the score of t-table , the null hypothesis (Ho) would be rejected and the alternative hypothesis ( Ha) would be accepted. Conversely, If the score of t-test was smaller than the value of t-table , the null hypothesis (Ho ) would be accepted and the alternative hypothesis (Ha) would be rejected. The followings were the null hypothesis (Ho) and the alternative hypothesis (Ha) of this study.

1. Null hypothesis (Ho ): using rosetta stone software is not effective as media in teaching students’ listening skill to the tenth grade students of SMKN 1 Cinangka

2. Alternative hypothesis (Ha): using rosetta stone software is effective as media in teaching students’ listening skill to the tenth grade students of SMKN 1 Cinangka.

So, it could be inferred that this study agreed that using rosetta stone software was effective as media in teaching students’ listening skill to the tenth grade students of SMKN 1 Cinangka.

**C.Discussion**

This research aims to know the effectiveness of Rosetta Stone software as media in teaching student’ listening skill at tenth grade students of SMK N 1 Cinangka.Before the writer doing the study, first the writer did pre test,The result of pre test between experimental group and control groupis not so different, because the mean of pre test of experimental group (50,98) is higher than or similar with the mean of pre test of control group (49,44) where Ma ≥ Mb; both the groups have equal ability.

After giving students the treatments,the writer did post test,The result of the research obtained from both of the experimental group and the control group was analyzed by using the t-test formula,it shows that t-test = 3,73 with Df = na+ nb – 2, Df = 70, level of signification 5% and t-table = 1,99. The result of t-test is 3,73>1,99,, it means that there is a significantdifferences in learning outcomes of listening skills between experiment group and control group.

The results of study showed that the mean posttest of listening skillsof experimental group is higher than the posttest results of control group students (72.09 > 64.49). From the mean data obtained, it can be seen that there are significant differences in listening learning at tenth grade students of SMK N 1 Cinangka between those taught by using Rosetta Stone media and those who don't taught by using Rosetta Stone media.

Giving treatment or treatment using Rosetta mediaStone at each meeting in the experimental class produced posttest data which is different from the control class. The use of Rosetta Stone media is one of the learning strategies that is fun, because students are invited to learnwith media that is easy to understand and in simple language but the contains aspects that are appropriate to the learning objectives, as attached in the lesson plan (RPP).

Teaching students’ listening by using Rosetta Stone media contains contextual approach that makes students more active and enthusiastic. This is a fun learning strategy, because students are invited to learn with fun media. This can encourage students to be active in learning and make students more enthusiastic in learning. Thus it can be said that the listening learning of tenth garde students of SMK N 1 Cinangka using Rosetta Stone media is more effective than without using Rosetta Stone media.