**IMPROVING STUDENTS’ READING COMPREHENSION THROUGH GRAPHIC ORGANIZERS**

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**Abstract**

*The objective of this research is to find out the use of graphic organizer technique in improving students’ reading comprehension. The population was the tenth grade students of SMA Negeri 1 Dampal Selatan. The researcher used quasi experimental design. The research samples were XF as the experimental group which consisted of 38 students and XC as the control group which consisted of 37 students. The test was administered twice; pre-test and post-test. The data were analyzed statistically in order to find out the significant achievement of the students in the pre-test and the post-test. By selecting the 0.05 level of significance and 50 degree of freedom (d.f. 38+37-2=73), the researcher computed the data and found that the t-counted (4.316) was greater than the t-table (1.999).In conclusion, the use of graphic organizers technique can improve the students’ reading comprehension.*

*Keywords: Improving, Reading Comprehension, Graphic Organizers Technique.*

**INTRODUCTION**

Reading is one of the main skills in learning the language. Commonly people read to get necessary information, but reading can also be an activity entertaining people. The information can be obtained in a number of sources such as books, newspapers, or magazines. Reading as a means of information can help people broaden their knowledge.

Reading is important to develop science such as in the fields of economics, politics, sports and others. Reading may also increase the ability of brain and foster the ability to write. In other words, reading can help improve other language skills.

In connection with the important role of reading as mentioned above, the aim of teaching reading in this level (tenth grade) is to enable students to understand and comprehend a short English text as recount, narrative, and procedure in daily life. In learning reading comprehension, the students are expected to be able to get meaning of the text.

Based on the researcher’s preliminary observation, the researcher found some problems. Firstly, most students fell difficult to understand the text without using a dictionary. Secondly, a lot of students have difficulties in finding the main idea from the text. Thirdly, lots of students get difficulty to answer the question with correct sentences based on the information given in the text. To help students in solving the problems, the researcher applied graphic organizers technique.

One of the important strategies to overcome the problem in teaching reading comprehension is Graphic Organizers. Graphic organizers are visual displays that help students to organize and remember new information. They involve drawing or writing down ideas and making connections. They combine words, phrase and arrows to map knowledge. They include diagrams, tables, columns, and webs. In addition to this, Smith (2010:161) argues, “Graphic organizers are excellent for teaching students about relationships in a text. They help break down the whole text into manageable pieces. They also show the relationship of those pieces to each other.”Through the use of graphic organizers, students can understand text which helps them learn to read academic text and to read non academic text.

Through reading the students try to understand the text, get main idea of the text or get the point of the reading materials. The use of technique graphic organizers can help the students anticipate and organize new information and indicate to the students what information from a lesson would be important.

**METHOD**

 In this research, the researcher used quasi-experimental research design. The researcher improved students’ reading of narrative text through graphic organizers. There were two groups in this design. The first group was experimental who got pre-test, treatment and post-test. The second one was control where the researcher only gave pre-test and post-test. These two groups were given the same pre-test and post-test. The design of this research is proposed by Gay, Mills, and Airasian(2006:353).

**Pretest-Posttest Design**

|  |  |  |  |
| --- | --- | --- | --- |
| GroupsExperimental Group (E)Control Group (C) | Pretest*O1**O3* | Independent Variable*X**\_* | Posttest*O2**O4* |

The diagram above shows that there are two groups as the sample of the research. One is an experimental group and another is a control group. The treatment was given to the experimental group. The result of pretest and posttest of the control and the experimental group were compared to find out the significant difference after the application of treatment.

 The population of this research was the tenth grade students of SMA Negeri 1 Dampal Selatan. They consisted of six parallel classes which were homogeneous. Referring to the population, the researcher chose the sample by applying cluster sampling technique. X C and X F as the sample of this research. According to the teacher, both classes have the same level of ability in English. X C consisted of 37 students while X F consisted of 38 students. Thus, there are 75 students as the sample.

 The researcher used dependent and independent variable. Related to the title, the dependent variable is reading skill and the independent variable is graphic organizers technique. The researcher used pretest and posttest in collecting data. The pretest was employed before the treatment in order to find out the students’ reading skill. The posttest was given after the treatment in order to measure the students’ progress after being taught with graphic organizers technique. The treatment was used to improve the students’ reading skill. The researcher conducted treatment to the experimental group for eight meetings. The total meeting would be ten meetings. The treatment was done twice a week. In order to assess the students’ work, the researcher used scoring system as follows.

**Table 1**

 **Scoring System/Guide**

**Scoring Rubric of the True/False**

|  |  |  |
| --- | --- | --- |
| No | Explanation | Score |
| 1 | Right Answer | 1 |
| 2 | Wrong/no Answer | 0 |

**Table 2**

**Scoring Rubric of the Essay Test**

|  |  |  |
| --- | --- | --- |
| No | Explanation | Score |
| 1 | Correct content, Grammar, and Spelling | 3 |
| 2 | Correct answer, Incorrect Grammar, and spelling | 2 |
| 3 | Incorrect Content | 1 |
| 4 | No Answer  | 0 |

To gain the data, the researcher analyzed the students’ standard score in the pretest and the posttest. The researcher applied simple statistical analysis. Firstly, in analyzing the individual score of the students, the researcher used formula suggested by Arikunto (2002:225) as follows:

Ʃ= $\frac{x}{n}$x100

Where:

Ʃ= standard score

x= raw score

n= maximum score

100 =constant score

After computing the mean score of the pre-test and post-test, the researcher used the mean score by using the formula suggested by Arikunto (2010:313) as follows:

1. The formula for experimental group:

M*x* = $\frac{\sum\_{}^{}x}{N}$

1. The formula for control group:

M*y* = $\frac{\sum\_{}^{}y}{N}$

Where: M*x* = Mean Score of Deviation of Experimental Group

 M*y* = Mean Score of Deviation of Control Group

$\sum\_{}^{}x$ = Sum Score of Experimental Group

$\sum\_{}^{}y$= Sum Score of Control Group

N= Number of Students

 Then, the researcher used the square deviation by using the formula as suggested by Arikunto (2010:312) as follows:

1. The formula for experimental group:

 $\sum\_{}^{}x^{2}= \sum\_{}^{}x^{2}-\frac{(\sum\_{}^{}x)^{2}}{N}$

1. The formula for control group:

 $\sum\_{}^{}y^{2}= \sum\_{}^{}y^{2}-\frac{(\sum\_{}^{}y)^{2}}{N}$

In order to find out the significant difference in the mean score of the posttest, a t-test formula was used. The data included in t-test are the mean score of posttest, standard deviation or square root of the mean of the squared deviation scores, and the number of research subject in each group by using the formula proposed by Arikunto (2010 : 311) as follows:

t = $\frac{Mx-My}{\sqrt{\left(\frac{\sum\_{}^{}x^{2}+ \sum\_{}^{}y^{2}}{Nx+Ny-2}\right)\left(\frac{1}{Nx}+ \frac{1}{Ny}\right)}}$

 Where t = Significant Difference between Experimental Class and Control Class

 M*x* = Mean Score of Deviation of Experimental Class

 My = Mean Score of Deviation of Control Class

 $\sum\_{}^{}x^{2}$ = Sum of Square Deviation of Experimental Class

 $\sum\_{}^{}y^{2}$ = Sum of Square Deviation of Control Class

 N*x* = Number of Students in Experimental Class

 N*y* = Number of Students in Control Class

**FINDINGS**

**Table 3**

**The Result of Pre-Test of Experimental Group**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Initials | Obtained Score | Maximum Score | Individual Scores |
| True/False | Essay  |
| 1 | ADE | 8 | 21 | 40 | 72.5 |
| 2 | ALD | 10 | 18 | 40 | 70 |
| 3 | ASW | 7 | 14 | 40 | 52.5 |
| 4 | ASD | 9 | 10 | 40 | 47.5 |
| 5 | AS | 9 | 11 | 40 | 50 |
| 6 | BAS | 8 | 11 | 40 | 47.5 |
| 7 | BA | 8 | 20 | 40 | 70 |
| 8 | BUS | 10 | 17 | 40 | 67.5 |
| 9 | EDS | 8 | 21 | 40 | 72.5 |
| 10 | FB | 7 | 16 | 40 | 57.5 |
| 11 | FIT | 9 | 17 | 40 | 65 |
| 12 | FH | 7 | 12 | 40 | 47.5 |
| 13 | FHR | 9 | 15 | 40 | 40 |
| 14 | FAH | 9 | 16 | 40 | 62.5 |
| 15 | HA | 8 | 16 | 40 | 60 |
| 16 | IRF | 9 | 13 | 40 | 55 |
| 17 | IM | 10 | 20 | 40 | 75 |
| 18 | MI | 8 | 19 | 40 | 67.5 |
| 19 | MRZ | 8 | 10 | 40 | 45 |
| 20 | MSM | 7 | 9 | 40 | 40 |
| 21 | NE | 8 | 13 | 40 | 52.5 |
| 22 | ND | 8 | 18 | 40 | 65 |
| 23 | NRM | 10 | 21 | 40 | 77.5 |
| 24 | NY | 10 | 19 | 40 | 72.5 |
| 25 | RDI | 8 | 20 | 40 | 70 |
| 26 | RF | 9 | 18 | 40 | 67.5 |
| 27 | RH | 8 | 10 | 40 | 45 |
| 28 | RY | 9 | 11 | 40 | 50 |
| 29 | SA | 8 | 14 | 40 | 55 |
| 30 | SH | 7 | 10 | 40 | 42.5 |
| 31 | SR | 9 | 9 | 40 | 45 |
| 32 | SUP | 9 | 14 | 40 | 57.5 |
| 33 | SW | 7 | 9 | 40 | 40 |
| 34 | UA | 10 | 12 | 40 | 55 |
| 35 | ULY | 10 | 19 | 40 | 72.5 |
| 36 | YO | 7 | 14 | 40 | 52.5 |
| 37 | YUL | 10 | 20 | 40 | 75 |
| 38 | ZFR | 8 | 12 | 40 | 50 |
| **Total Score** |  | **2.210** |

To find out the mean score of the experimental group in pre-test, the researcher applied the formula and the mean calculation is as follows:

M*x* =$\frac{\sum\_{}^{}x}{N}$

 = $\frac{2210}{38}$

 = 58.15

The result of computation shows that none of the students got maximum score. The highest score was 31 and the lowest score was 16. The mean score of the experimental group in the pre-test was 58.15. It indicates that the reading comprehension of SMA Negeri 1 Dampal Selatan was quite low before getting the treatment.

From both calculations, the researcher found that the difference between mean score of experimental (58.15) and control group (52.17) was only 5.98. The slight difference indicates that the level of ability between the both groups in pre-test was relatively equal before conducting the treatment. The researcher conducted pre-test on November 14th , 2015.The result of pre-test is presented in the following table

The mean score of the control group in the pre-test is as below:

M*y* = $\frac{\sum\_{}^{}y}{N}$

 M*y* = $\frac{1967,5}{37}$

=53.17

**Table 4**

**The Result of Pre-Test of Control Group**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Initials | Obtained Scores | Maximum Score | Individual Scores |
| True/False | Essay  |
| 1 | AGU | 8 | 11 | 40 | 47.5 |
| 2 | ARI | 9 | 12 | 40 | 52.5 |
| 3 | ARP | 7 | 13 | 40 | 50 |
| 4 | AZA | 9 | 11 | 40 | 50 |
| 5 | CN | 8 | 10 | 40 | 45 |
| 6 | FAH | 7 | 13 | 40 | 50 |
| 7 | FAI | 9 | 10 | 40 | 47.5 |
| 8 | HAS | 8 | 17 | 40 | 62.5 |
| 9 | HED | 8 | 7 | 40 | 37.5 |
| 10 | IQM | 9 | 16 | 40 | 62.5 |
| 11 | MEL | 7 | 11 | 40 | 45 |
| 12 | MKB | 10 | 16 | 40 | 65 |
| 13 | MOH | 8 | 11 | 40 | 47.5 |
| 14 | MOA | 9 | 12 | 40 | 52.5 |
| 15 | MU | 8 | 10 | 40 | 45 |
| 16 | MUT | 8 | 16 | 40 | 60 |
| ‘17 | NA | 9 | 13 | 40 | 55 |
| 18 | NAD | 7 | 19 | 40 | 65 |
| 19 | NIH | 10 | 16 | 40 | 65 |
| 20 | NO | 8 | 13 | 40 | 52.5 |
| 21 | NRD | 9 | 18 | 40 | 67.5 |
| 22 | NRI | 8 | 11 | 40 | 47.5 |
| 23 | NUA | 7 | 13 | 40 | 50 |
| 24 | RAH | 8 | 15 | 40 | 57.5 |
| 25 | RAJ | 8 | 13 | 40 | 52.5 |
| 26 | RAS | 9 | 15 | 40 | 60 |
| 27 | RFD | 8 | 9 | 40 | 42.5 |
| 28 | RHN | 7 | 16 | 40 | 57.5 |
| 29 | RI | 9 | 12 | 40 | 52.5 |
| 30 | RIS | 10 | 15 | 40 | 62.5 |
| 31 | SIS | 8 | 11 | 40 | 47.5 |
| 32 | SRI | 7 | 14 | 40 | 52.5 |
| 33 | UW | 8 | 12 | 40 | 50 |
| 34 | WAF | 8 | 14 | 40 | 55 |
| 35 | YUS | 9 | 14 | 40 | 57.5 |
| 36 | ZU | 7 | 12 | 40 | 47.5 |
| 37 | ZUL | 8 | 12 | 40 | 50 |
|  **Total Score** | **1967.5** |
| **Table 5****The Result of Post-Test of Experimental Group** |
| No | Initials | Obtained Scores | Maximum Score | Individual Scores |
| True/False | Essay  |
| 1 | ADE | 10 | 23 | 40 | 82.5 |
| 2 | ALD | 10 | 14 | 40 | 85 |
| 3 | ASW | 8 | 20 | 40 | 70 |
| 4 | ASD | 9 | 12 | 40 | 52.5 |
| 5 | AS | 10 | 18 | 40 | 70 |
| 6 | BAS | 8 | 16 | 40 | 60 |
| 7 | BA | 10 | 21 | 40 | 77.5 |
| 8 | BUS | 10 | 24 | 40 | 85 |
| 9 | EDS | 10 | 25 | 40 | 87.5 |
| 10 | FB | 10 | 17 | 40 | 67.5 |
| 11 | FIT | 10 | 20 | 40 | 75 |
| 12 | FH | 8 | 16 | 40 | 65 |
| 13 | FHR | 10 | 20 | 40 | 75 |
| 14 | FAH | 10 | 20 | 40 | 75 |
| 15 | HA | 9 | 17 | 40 | 65 |
| 16 | IRF | 10 | 22 | 40 | 80 |
| 17 | IM | 10 | 25 | 40 | 87.5 |
| 18 | MI | 10 | 26 | 40 | 90 |
| 19 | MRZ | 9 | 23 | 40 | 80 |
| 20 | MSM | 9 | 17 | 40 | 65 |
| 21 | NE | 10 | 25 | 40 | 87.5 |
| 22 | ND | 10 | 17 | 40 | 67.5 |
| 23 | NRM | 10 | 24 | 40 | 85 |
| 24 | NY | 8 | 27 | 40 | 87.5 |
| 25 | RDI | 10 | 25 | 40 | 87.5 |
| 26 | RF | 10 | 24 | 40 | 85 |
| 27 | RH | 10 | 15 | 40 | 62.5 |
| 28 | RY | 8 | 13 | 40 | 52.5 |
| 29 | SA | 9 | 21 | 40 | 75 |
| 30 | SH | 8 | 12 | 40 | 50 |
| 31 | SR | 8 | 15 | 40 | 57.5 |
| 32 | SUP | 9 | 20 | 40 | 72.5 |
| 33 | SW | 8 | 15 | 40 | 57.5 |
| 34 | UA | 10 | 21 | 40 | 77.5 |
| 35 | ULY | 10 | 36 | 40 | 90 |
| 36 | YO | 10 | 21 | 40 | 77.5 |
| 37 | YUL | 10 | 25 | 40 | 87.5 |
| 38 | ZFR | 10 | 16 | 40 | 65 |
| **Total Score** | **2.820** |

The mean score of the experimental group in post-test was computed as follows:

M*x* =$\frac{\sum\_{}^{}x}{N}$

M*x* =$\frac{2820}{38}$

 =74.21

The mean score in post-test of the experimental group was 74.21. It means that there is a significant progress of the mean score of the experimental group from 58.15 in the pre-test to 74.21 in the post test. The researcher gave the post-test to experimental and control groups. The post-test was given to both groups on December 12th , 2015. The result of two groups can be seen in the table above.

After computing the mean score of the experimental group in post-test, the researcher counted the mean score of the control group in the post-test as below:

M*y* = $\frac{\sum\_{}^{}y}{N}$

M*y* = $\frac{2235}{37}$

 = 60.40

The mean score of the control group in post-test was 60.40. It shows in the table below that the mean score of the control group also increased from 53.17 in the pre-test to 60.40 in the post-test.

**Table 6**

**The Result of Post-Test of Control Group**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Initials | Obtained Scores | Maximum Score | Individual Scores |
| True/False | Essay  |
| 1 | AGU | 8 | 15 | 40 | 57.5 |
| 2 | ARI | 10 | 17 | 40 | 67.5 |
| 3 | ARP | 8 | 15 | 40 | 57.5 |
| 4 | AZA | 7 | 15 | 40 | 55 |
| 5 | CN | 9 | 21 | 40 | 50 |
| 6 | FAH | 8 | 13 | 40 | 52.5 |
| 7 | FAI | 8 | 14 | 40 | 55 |
| 8 | HAS | 10 | 18 | 40 | 70 |
| 9 | HED | 8 | 11 | 40 | 47.5 |
| 10 | IQM | 10 | 10 | 40 | 75 |
| 11 | MEL | 10 | 15 | 40 | 62.5 |
| 12 | MKB | 9 | 11 | 40 | 50 |
| 13 | MOH | 10 | 13 | 40 | 57.5 |
| 14 | MOA | 8 | 16 | 40 | 60 |
| 15 | MU | 9 | 9 | 40 | 45 |
| 16 | MUT | 10 | 18 | 40 | 70 |
| 17 | NA | 10 | 14 | 40 | 60 |
| 18 | NAD | 10 | 20 | 40 | 75 |
| 19 | NIH | 10 | 18 | 40 | 70 |
| 20 | NO | 8 | 20 | 40 | 70 |
| 21 | NRD | 10 | 21 | 40 | 77.5 |
| 22 | NRI | 9 | 11 | 40 | 50 |
| 23 | NUA | 9 | 19 | 40 | 70 |
| 24 | RAH | 10 | 17 | 40 | 67.5 |
| 25 | RAJ | 8 | 12 | 40 | 50 |
| 26 | RAS | 10 | 16 | 40 | 65 |
| 27 | RFD | 9 | 13 | 40 | 55 |
| 28 | RHN | 10 | 17 | 40 | 72.5 |
| 29 | RI | 8 | 19 | 40 | 67.5 |
| 30 | RIS | 8 | 10 | 40 | 45 |
| 31 | SIS | 9 | 12 | 40 | 52.5 |
| 32 | SRI | 10 | 11 | 40 | 52.5 |
| 33 | UW | 8 | 15 | 40 | 57.5 |
| 34 | WAF | 10 | 18 | 40 | 70 |
| 35 | YUS | 9 | 14 | 40 | 57.5 |
| 36 | ZU | 10 | 13 | 40 | 57.5 |
| 37 | ZUL | 10 | 14 | 40 | 60 |
| **Total Score** | **2.235** |

**Table 7**

**Deviation Score of Pre-Test and Post-Test of Experimental Group**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Initials | Pre-Test (O1) | Post-Test(O2) | Deviation (D) (O2-O1) | Deviation -(D2) |
| 1 | ADE | 72.5 | 82.5 | +10 | 100 |
| 2 | ALD | 70 | 85 | +15 | 225 |
| 3 | ASW | 52.5 | 70 | +15.5 | 240.25 |
| 4 | ASD | 47.5 | 52.5 | +5 | 25 |
| 5 | AS | 50 | 70 | +20 | 400 |
| 6 | BAS | 47.5 | 60 | +12.5 | 156.25 |
| 7 | BA | 70 | 77.5 | +7.5 | 56.25 |
| 8 | BUS | 67.5 | 85 | +17.5 | 306.25 |
| 9 | EDS | 72.5 | 87.5 | +15 | 225 |
| 10 | FB | 57.5 | 67.5 | +10 | 100 |
| 11 | FIT | 65 | 75 | +10 | 100 |
| 12 | FH | 47.5 | 65 | +17.5 | 306.25 |
| 13 | FHR | 40 | 75 | +35 | 1.225 |
| 14 | FAH | 62.5 | 75 | +12.5 | 156.25 |
| 15 | HA | 60 | 65 | +5 | 25 |
| 16 | IRF | 55 | 80 | +33 | 1.089 |
| 17 | IM | 75 | 87.5 | +12.5 | 156.25 |
| 18 | MI | 67.5 | 90 | +22.5 | 506.25 |
| 19 | MRZ | 45 | 80 | +35 | 1.225 |
| 20 | MSM | 40 | 65 | +25 | 625 |
| 21 | NE | 52.5 | 87.5 | +35 | 1.225 |
| 22 | ND | 65 | 67.5 | +2.5 | 6.25 |
| 23 | NRM | 77.5 | 85 | +7.5 | 56.25 |
| 24 | NY | 72.5 | 87.5 | +15 | 225 |
| 25 | RDI | 70 | 87.5 | +17.5 | 306.25 |
| 26 | RF | 67.5 | 85 | +17.5 | 306.25 |
| 27 | RH | 45 | 62.5 | +17.5 | 306.25 |
| 28 | RY | 50 | 52.5 | +2.5 | 6.25 |
| 29 | SA | 55 | 75 | +20 | 400 |
| 30 | SH | 42.5 | 50 | +7.5 | 56.25 |
| 31 | SR | 45 | 57.5 | +12.5 | 156.25 |
| 32 | SUP | 57.5 | 72.5 | +15 | 225 |
| 33 | SW | 40 | 57.5 | +17.5 | 306.25 |
| 34 | UA | 55 | 77.5 | +22.5 | 506.25 |
| 35 | ULY | 72.5 | 90 | +17.5 | 306.25 |
| 36 | YO | 52.5 | 77.5 | +25 | 625 |
| 37 | YUL | 75 | 87.5 | +12.5 | 156.25 |
| 38 | ZFR | 50 | 65 | +15 | 225 |
| **Total Score** | **616** | **12.648** |
|  |

The students’ deviation score in pre-test and post-test of the experimental group and the control group can be seen in the following table above:

Nx= 38 M*x* = $\frac{\sum\_{}^{}x}{N}$

 = $\frac{616}{38}$

 = 16.21

The mean score of deviation of pre-test and post-test of the experimental group is 16.21.

Based on the table, the researcher computed the mean score of deviation of pre-test and post-test experimental group by using the formula proposed by Arikunto (2010:313).

**Table 8**

**Deviation Score of Pre-Test and Post-Test of Control Group**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Initials | Pre-Test (O1) | Post-Test(O2) | Deviation (D) (O2-O1) | Deviation  -(D2) |
| 1 | AGU | 47.5 | 57.5 | +10 | 100 |
| 2 | ARI | 52.5 | 67.5 | +15 | 225 |
| 3 | ARP | 50 | 57.5 | +7.5 | 56.25 |
| 4 | AZA | 50 | 55 | +5 | 25 |
| 5 | CN | 45 | 50 | +5 | 25 |
| 6 | FAH | 50 | 52.5 | +2.5 | 6.25 |
| 7 | FAI | 47.5 | 55 | +7.5 | 56.25 |
| 8 | HAS | 62.5 | 70 | +7.5 | 56.25 |
| 9 | HED | 37.5 | 47.5 | +10 | 100 |
| 10 | IQM | 62.5 | 75 | +12.5 | 156.25 |
| 11 | MEL | 45 | 62.5 | +17.5 | 306.25 |
| 12 | MKB | 65 | 50 | -15 | 225 |
| 13 | MOH | 47.5 | 57.5 | +10 | 100 |
| 14 | MOA | 52.5 | 60 | +7.5 | 56.25 |
| 15 | MU | 45 | 45 | 0 | 0 |
| 16 | MUT | 60 | 70 | +10 | 100 |
| 17 | NA | 55 | 60 | +5 | 25 |
| 18 | NAD | 65 | 75 | +10 | 100 |
| 19 | NIH | 65 | 70 | +5 | 25 |
| 20 | NO | 52.5 | 70 | +17.5 | 306.25 |
| 21 | NRD | 67.5 | 77.5 | +10 | 100 |
| 22 | NRI | 47.5 | 50 | +2.5 | 6.25 |
| 23 | NUA | 50 | 70 | +20 | 400 |
| 24 | RAH | 57.5 | 67.5 | +10 | 100 |
| 25 | RAJ | 52.5 | 50 | -2.5 | 6.25 |
| 26 | RAS | 60 | 65 | +5 | 25 |
| 27 | RFD | 42.5 | 55 | +12.5 | 156.25 |
| 28 | RHN | 57.5 | 72.5 | +15 | 225 |
| 29 | RI | 52.5 | 67.5 | +15 | 225 |
| 30 | RIS | 62.5 | 45 | -17.5 | 306.25 |
| 31 | SIS | 47.5 | 52.5 | +5 | 25 |
| 32 | SRI | 52.5 | 52.5 | 0 | 0 |
| 33 | UW | 50 | 57.5 | +7.5 | 56.25 |
| 34 | WAF | 55 | 70 | +15 | 225 |
| 35 | YUS | 57.5 | 57.5 | 0 | 0 |
| 36 | ZU | 47.5 | 57.5 | +10 | 100 |
| 37 | ZUL | 50 | 60 | +10 | 100 |
| **Total Score** | **337.5** | **4112.5** |

The mean score of deviation of pre-test and post-test of the control group was calculated as follows:

Ny =37 M*y* = $\frac{\sum\_{}^{}y}{N}$

 = $\frac{337.5}{37}$

 = 9.12

The mean score of deviation of pre-test and post-test of control group is 9.12.

The sum of square deviation around the means of experimental and control group can be computed in the following ways:

1. The sum of squared deviation of the experimental group.

 $\sum\_{}^{}x^{2}= \sum\_{}^{}x^{2}-\frac{(\sum\_{}^{}x)^{2}}{N}$

 = 12.648 - $\frac{(616)^{2}}{38}$

 = 12.648 – $\frac{379.456}{38}$

 =12.648 – 9.985

 =2.663

1. The sum of squared deviation of the control group.

 $\sum\_{}^{}y^{2}= \sum\_{}^{}y^{2}-\frac{(\sum\_{}^{}y)^{2}}{N}$

= 4112.5 - $\frac{(337.5)^{2}}{37}$

 = 4112.5 – $\frac{113.906}{37}$

 =4112.5 – 3076.5

 =1.036

The researcher computed the t-counted in order to find out the significant difference between the experimental and control group. The researcher used the formula by Arikunto (2010:313) is as follows:

t = $\frac{Mx-My}{\sqrt{\left(\frac{\sum\_{}^{}x^{2}+ \sum\_{}^{}y^{2}}{Nx+Ny-2}\right)\left(\frac{1}{Nx}+ \frac{1}{Ny}\right)}}$

t = $\frac{16.21-9.12}{\sqrt{\left(\frac{2.663+1.036}{38+37-2}\right)\left(\frac{1}{38}+ \frac{1}{37}\right)}}$

t **=** $\frac{7.09}{\sqrt{\left(\frac{3699}{73}\right)\left(\frac{37+38}{1406}\right)}}$

t **=** $\frac{7.09}{\sqrt{\left(\frac{3699}{73}\right)\left(\frac{75}{1406}\right)}}$

t = $\frac{7.09}{\sqrt{\left(50.671\right)\left(0.0533\right)}}$

t = $\frac{7.09}{\sqrt{2.700}}$

t = $\frac{7.09}{1.643}$

 **t = 4.316**

To prove that the hypothesis of the research was accepted or rejected, the researcher needed to test it based on the result of the data analysis. If the t-counted is higher than the t-table, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. It means that the treatment used by researcher is significantly effective to improve students’ reading comprehension.

To test the significant difference between the two groups, the researcher used the level of significance of 0.05 of two tailed test. The t-table value is obtained in the following way:

Experimental group (Nx) = 38

Control group (Ny) = 37

Degree of freedom (df) = Nx + Ny - 2

 = 38 + 37 - 2

 = 73

 = 73 (between 60 and 120)

Since df (73) with level of significance of 0.05 is not listed on the t-table, the researcher computed by using interpolation formula in order to find out the value of t-table. The computation is as follows:

$$\frac{a}{b}×c$$

Where:

a – the subtraction of the degree of freedom obtained from the students’ number in sample and the degree of freedom whose figure precedes right before the df obtained on the table of critical values of students’ distribution.

b – the subtraction of two degree of freedom whose figure precedes and comes after the degree of freedom obtained on the table of critical values of the students’ distribution.

c – the subtraction of the values of degree of freedom in b.

Level of significance = 0.05

 60 = 2.000

 120 = 1.980

a = 73 – 60 = 13

b = 120 – 60 = 60

c = 2.000 – 1.980 = 0.020

 $\frac{a}{b}×c= \frac{13}{60}×0.020 $

 = 0. 21 $×$ 0.020

 = 0.0043

df (73) = 2.000 – 0.0043

t-table = **1.999**

 Therefore, the value of df (73) is 1.999

The result of data analysis shows that the t-counted (6.504) was higher than the t-table (1.999). It means that the alternative hypothesis (Ha) was accepted. In other word, the use of graphic organizers can improve the reading comprehension of the tenth grade of SMA Negeri 1 Dampal Selatan.

**DISCUSSION**

In this research, the researcher focused on teaching reading with graphic organizer technique that the students study in deciding main idea of the text and the key information or 5W’ and H. The researcher found that there is a difference by teaching reading skill with graphic organizers technique. When the researcher did the preliminary observation, the researcher found that the students had difficulties in understanding an English text; therefore, they were not able to find the main ideas of the text. Furthermore, they could not finish their task punctually because they spent much time to look for the meaning of unfamiliar words in their dictionaries. It occurs because the students did the task by using traditional techniques.

The result of post-test of the experimental and control group shows that there is a significant difference between the mean score of both groups. The mean score of experimental group (74.21) is higher than the mean score of control group (60.40). The difference both scores is (13.81). This significant difference indicates that the graphic organizers technique is effective in teaching reading skill.

The researcher found that some factors also have contributed well to the success of the post-test of experimental group. At the beginning, the researcher explained the technique to the student’s step by step procedure of graphic organizer. The researcher introduces and explains what the graphic organizer is how to find the idea of the text, how to answer the question with the correct sentences based on the information given in the text and how to guess the meaning of unfamiliar word contextually.

The researcher gives the text to the student and guides the students to read the text by using graphic organizers. The researcher divides the students in small groups of 5-6 students. After having the texts, the students were identify the idea of the text. Then the researcher asks them to work by using graphic organizer technique. Graphic organizers could help students to organizers that involve drawing or writing down ideas and making connections.

The researcher restricts the student to use dictionary. The researcher gives the students time limitation for each task and evaluation. It is really important to accustom the students to work punctually. Then, the researcher asks the students to guess the meaning or the idea of the text and unfamiliar words contextually. They are encouraged to understand the test sentence by sentences rather then word by words.

Based on the research finding, the researcher believes that the use of graphic organizers technique can give big contribution to the improvement of students’ reading comprehension. Graphic organizers can lead, guide and enhance students’ comprehension.

**CONCLUSION AND SUGGESTIONS**

 Based on the result of the data analysis, the researcher concludes that the use of graphic organizers can significantly improve the reading comprehension of the tenth grade of SMA Negeri 1 Dampal Selatan. It is proven by the result of the t-counted (4.316) which is grater than the t-table (1.999). In addition, the mean score of the experimental group has improved from 58.15 to 74.21 after the treatment.

 The researcher has some suggestion related to the teaching and learning process. Firstly, the teachers of English should apply appropriate strategy in teaching such as graphic organizers technique. Secondly, the teacher should give some pre-reading activities before asking students to read English text. It is useful to make them interested in learning reading. Last, students should try to use this technique to help them in improving their reading comprehension.

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