CHAPTER IV
RESEARCH FINDING AND DISCUSSION

1. Research Finding

The data of this research was collected by using the test instrument. The test had 30 items which contained the word of the material in the seven grade of junior high school. I tested the instrument whether it was valid and reliable or not. If the instrument was valid and reliable, so it was appropriate used to collect the data in this research. The data of this research was collected by using test. The data was multiple choice form. The students were asked to choose the correct answer by crossing the letter a, b, c, or d in front of the choices. The outcome of the validity and reliability can be explained as follow:

a. Testing the Validity of the Test

In the testing of validity test, I used the analysis toward the test answered by the students in try out class. In fact, from the total of 60 items given to the students, there were 30 items invalid, and 30 items valid. It can be seen in the table result of validity test. The invalid number are 3, 6, 7, 9, 10, 13, 15, 17, 18, 19, 20, 22, 23, 25, 26, 29 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 46, 47, 52, and number 59. Those items were not valid because most of the students can not answer the question well. Also the valid number are, 3, 6, 7, 9, 10, 13, 15, 17, 18, 19, 20, 22, 23, 25, 26, 29, 30, 32, 33, 37, 38, 39, 40, 41, 42, 43, 46, 47, 52, and number 59. The valid items because the question is easily to students understand so they can answer it correctly.
I have put the result of calculation validity testing showed in appendix 8 and appendix 9.

b. Reliability Testing

Reliability testing was concept that an instrument is reality accurate to be used in collecting the data. It is intended to examine the reliable or unreliable of research instrument (see appendix 10). The formula that was used in the reliability testing was the KR: 21 formulas, as follows:

\[
\Gamma_{11} = \left[ \frac{K}{K-1} \right] \left[ 1 + \frac{M (K - M)}{Kvt} \right]
\]

Using the formula of reliability testing above, found that the value of reliability testing or \( r_{11} = 0.79113 \) shown in appendix 10. Therefore, I compared the value of \( r_{list} \), in product moment for the respondents (n) = 21. In fact, it was found that \( t_{list} \) value was 67.209.

2. The Description of the data

a. The Data Description of The Pre Test Data

Before the treatment was applied, I gave the pre-test for the students. The description of pre-test data as follows (see appendix 11, appendix 12, and appendix 13): the students’ lowest score is 10, the students’ higest score is 22, the range of class interval (R) is 12, the amount of class interval (K) is 5.3626, the wide of class interval (P) is 2.4, the mean of score is 15.76, the standard deviation is 3.95.
The result of the students’ score in post test can be seen in the following table below:

<table>
<thead>
<tr>
<th>No</th>
<th>The class interval</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10 – 12</td>
<td>6</td>
<td>29 %</td>
</tr>
<tr>
<td>2.</td>
<td>13 – 15</td>
<td>3</td>
<td>14 %</td>
</tr>
<tr>
<td>3.</td>
<td>16 – 18</td>
<td>5</td>
<td>24 %</td>
</tr>
<tr>
<td>4.</td>
<td>18 – 21</td>
<td>6</td>
<td>29 %</td>
</tr>
<tr>
<td>5.</td>
<td>22 – 24</td>
<td>1</td>
<td>4 %</td>
</tr>
<tr>
<td></td>
<td>SUM</td>
<td>21</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Table 1. The Students’ Score in Post Test.

The data providing below are the students’ score in pre-test vocabulary can be seen that the students’ score in the pre-test data could be distributed into 5 classes of interval, namely score 10 – 12 are 6 students or 29 %, score from 13 – 15 are 3 students or 14 %, score 16 – 18 are 5 students or 24 %, score 18 – 21 are 6 students or 29 %, score 22 – 24 are 1 students or 4 %.

The data above also can be seen in the following polygon graphic.

Figure 2. Graphic Polygon of Pre-Test Description
From these intervals can be concluded that most of the students’ score in the pre-test are score from 10 higher to 22.

b. The Data Description of Post-Test Data

In this point, I would like to present the data of the post-test. Post-test data was given after the treatment. The description of the post-test data will be analyzed after I counting the scores of the students’ in the post-test data and analyzing the data as follows (see appendix 14, appendix 15 and appendix 16):

The students’ lowest score is 17, the students’ higher score is 29, the range of class interval (R) is 12, the amount of class interval (K) is 5.3626, the wide of class interval (P) is 2.4, the mean of score is 22.38, the standard deviation is 2.93.

The result of the students’ score in post test can be seen in the following table below:

<table>
<thead>
<tr>
<th>No</th>
<th>The class interval</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>17 – 19</td>
<td>3</td>
<td>14 %</td>
</tr>
<tr>
<td>2.</td>
<td>20 – 22</td>
<td>9</td>
<td>43 %</td>
</tr>
<tr>
<td>3.</td>
<td>23 – 25</td>
<td>7</td>
<td>33 %</td>
</tr>
<tr>
<td>4.</td>
<td>26 – 28</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>5.</td>
<td>29 – 31</td>
<td>1</td>
<td>5 %</td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>21</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Table 2. The Students’ Score in Post-Test.

The result of the students’ score in post-test can be seen of the interval frequency of post-test data above, the students score in the post-test data can be
distributed in 6 interval classes namely; score 17 - 19 is 3 students or 14 %, score 20 - 22 is 9 students or 43 %, score 23 - 25 is 7 students or 33 %, score 26 - 28 is 1 student or 5 %, and score 29 - 31 is 1 student or 5 %.

The data above also can be seen in the following polygon graphic:

![Figure 3. Graphic Polygon of Post-test Description](image)

By looking at the polygon graphic above it can be seen the data finding in post-test can be defined as the students’ ability in vocabulary is categorized as high level it proved by the post-test result. In addition, by comparing the result of the students’ ability in pre-test and post-test, there is significant of result. In this case, the students’ ability in post-test is higher that the students’ ability in pre-test. So, it can conclude by giving the treatment of “Tom And Jerry Comic”, the students’ ability in vocabulary can be improved significantly. In other words, Tom and Jerry comic is useful in improving the students’ ability in vocabulary.

3. **The Analysis of The Data**

   a. **Homogeneity Testing**

   The homogeneity testing is intended to know whether the students’ ability in mastering vocabulary before and after giving the experiment of treatment in homogeneous or not.
In the analyzing the homogeneity testing of the data, I used Bartlett method formula. Based on analyzing of the homogeneity testing (see appendix 18), it is found some values as follows.

a. The variance value of pre-test ($s_1$) = 3.95
b. The variance value of post-test ($s_2$) = 2.93
c. $\sum (n_1-1) = 40$
d. $\sum (dk). \log s_1 = 42.04$
e. The variance value of pre-test and post-test ($s$) = 3.47
f. $\log s^2 = 1.05$
g. The value of $B = 42$
h. $X^2_{\text{count}} = 0.092$

Based on the result of analysis above (appendix 18), it is found that $X^2_{\text{count}} = 0.092$ to determine whether the analysis of the data comparison is homogeneous or not, the value of $X^2_{\text{count}}$ is consulted with $2-1 = 1$ at the level of significance $\alpha = 0.05$. Therefore I found the value of $X^2_{\text{table}} = 0.433$ And the criteria of analysis is if $X^2_{\text{count}} \leq X^2_{\text{table}}$, the data is homogeneous.

Based on the criteria above, it can be concluded that $X^2_{\text{count}} \leq X^2_{\text{list}}$ or $2.021 \leq 6.76$. It means the variance of both pre-test and post-test data was homogeneous.

b. Hypothesis Verification

The hypothesis of this research is “can Tom and Jerry Comic improve students’ ability in vocabulary”?

As stated before, that in the testing hypothesis, it is used t-testing by using formula as follows:
\begin{align*}
t &= \frac{X_1 - X_2}{\sqrt{\frac{1}{n_1} - \frac{1}{n_2}}} \\
S^2 &= \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}
\end{align*}

Based on the calculation in appendix 17. Found that the values as follows:

\begin{align*}
X_1 &= 15.76 \\
X_2 &= 22.38 \\
S_1 &= 3.95 \\
S_2 &= 2.93 \\
N_1 &= 21 \\
N_2 &= 21 \\
S &= 3.47 \\
t_{\text{count}} &= 6.76
\end{align*}
The signification data can be seen in the table below:

<table>
<thead>
<tr>
<th>N</th>
<th>DF</th>
<th>tcount</th>
<th>tlist</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>40</td>
<td>6.76</td>
<td>2.021</td>
</tr>
</tbody>
</table>

**Table 3. Significant data**

Notes:
- **N**: The number of sample
- **DF**: Degree of freedom = \((n_1+n_2-2) = (21+21-2)\)
- **tcount**: The value obtained from the computation result of t testing analysis
- **tlist**: The value obtained by taking at the table of t-distribution on the level of significance \(\alpha = 0.05\)

Those values above are applied in T-testing formula. Before applying those values in T-testing formula, it must be calculated the standard of deviation in both pre-test and post-test data. The calculation procedures as a result of standard of deviation that is 3.47 (see appendix 18). After finding the result of standard deviation, and then the last step is counting the T-testing.

Based on the calculation above found that the value of \(t_{count}\) is 6.76 in the level significance \(\alpha = 0.05\) whereas \(t_{list}\) is 2.021. The value is obtain from a statistic table of t distribution for 21 students at the level significance therefore it could be stated that the result of \(t_{count}\) is \(\leq t_{list}\) or 6.76 \(\leq 2.021\). On the other word, it can be proved that the students’ ability in vocabulary is improving significantly by using “Tom and Jerry Comic”.

5. Discussion
Vocabulary is one of language aspects which can be defined as the word in a certain language. Vocabulary also has important role to develop the four language skills. It is important to develop and must be focused on the students’ ability as a process of teaching language.

Based on the chapter one the objective of my research is to find out whether Tom and Jerry Comic can improve students’ ability in mastering vocabulary. In my research I took the students in seven grade of SMPN 1 Tapa in academic years 2012/2013 in class VII I which consist of 21 students.

In teaching English vocabulary, the teachers have to applied the appropriate media, technique, and good method to improve the students’ vocabulary. It can be motivated, and interest to students in learning vocabulary.

In my research, I used the Tom And Jerry Comic as teaching media that can be improved students’ vocabulary. By using this media students can be motivated to study English and they can be easily to remember and memorize the vocabulary. Moreover, This media has many benefits for students who want to learn English because the vocabulary can be used in writing and everyday conversation.

Previously I gave them Tom and Jerry comic, the first I measured their vocabulary by giving them pre-test. Most of students could not answer the question given in the multiple choices items. The students result in pre-test is still low, there are 29% for the 6 students, 14% for the 3 students and 24% for the 5 students the last 4% for the 1 student it is the score of pre test data form the interval classes. After giving the pre-test, I gave the students three meetings in
treatment. I got some data in identifying students’ skill and knowledge about vocabulary. Then I taught the students about the material that is based on lesson plan, I gave the Tom And Jerry comic to combine the topic. I took Tom And Jerry comic as the media in learning vocabulary, in order to make students’ understand the vocabulary easily, especially some difficult words in general noun, adjective and verb category. So in my research I limited in those vocabularies. In this step I taught the students for three meetings in treatment. Every meeting I gave the students a different tittle of Tom and Jerry Comic for example Fat and Fatter, Make Pumpkin Pies, and Batting Balls of Yarn. In this case I would like to explain my treatment while three meetings in following as:

1) In the first meeting, I made the students in each group than I shared the comic with the title of Fat And Fatter in every group. I explained about the part of speech especially the categories of verb, noun and adjectives based on the example of words and images in the comic. After that I give them instruction to read the comic. Then asked the students to find out the words that referred to the categories of the verb, noun and adjectives in comic based on the picture and bubble word of the comic. At the last I gave them exercise to mention and match the words with the meaning of the vocabulary in the column of students exercise.

   This can help students in understanding the purpose and the story of Fat And Fatter easily.

2) In the second meeting, after seeing the results of treatment before. Then I continued to shared again with the new title of Tom and Jerry Comic is Make
Pumpkin Pies in each group. I explained about the part of speech especially the categories of verb, noun and adjectives based on the example of words and images in the comic. After that asked the students read the comic and gave them exercise to match the words with the suitable word and make a sentences by using their own words in the exercise column. This can help students in understanding the purpose and the story of Make Pumpkin Pies. Finally, I gave instruction to students in every group to presentate the story in front of class. So that, the students became enjoy relax, when they performance the comic story in front of class.

3) In the third meeting, after seeing the results of treatment in the second meeting I continued to shared with the new title of Tom and Jerry Comic that is Batting Balls of Yarn in each group. I asked the students read the comic and find out the words in the categories of the verb, noun and adjectives in comic. This can help students in understanding the purpose and the story of Batting Balls of Yarn. In this session I gave them the exercise that contain with verb, noun and adjective and I gave them instruction to match the words with the suitable word in the exercise paper. Finally, I gave instruction students in every group to presentate the story of Batting Balls of Yarn in front of class.

In fact, from the trerament above, Tom and Jerry Comic was effective in teaching English, because the students’ have more vocabulary than before, they could identify, pronounce and understand the content of comic. They felt relax and enjoy in learning process. The students’ did not felt bored any more.
After giving treatment to them, I gave them the pre-test activity. And also after giving the pre-test I continued to gave them the post test activity. And the last I calculated the students score, I found that the students’ ability in vocabulary was higher than before. It prove by the different of pre test and post test result there are 9 questions of verb that can answer by students, 11 questions of adjective that can answer by students, 10 questions of noun that can answer by students.

Based on the statement above we can compare the results of pre-test and post-test that there are 28 % significantly. In the pre-test for the highest answer is 22, its about 484 or 70% and in the post-test for the highest answer is 29 its about 841 or 98%. So the total of pre-test and post-test answer is 70% - 98%. It proved by the increasing of the result significantly.

Finally the students’ ability were improved mastering vocabulary when I applied Tom and Jerry comic. The students become brave than before and relax in studying English, especially in mastering vocabulary, they were not stress, bored, and anxiety. It was proved by the result of the post-test data besides the students also have highly motivation in improving their vocabulary and knowledge.