CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter presents the finding of this study and elaborates the discussion for the finding. It is intended to answer the problems of the study. In finding, the researcher describes the process of calculating and presenting result of the data whereas in the discussion the researcher will deduce the finding.

A. RESEARCH FINDING

The researcher did the research and obtained the complete data from all the research instruments included test and questionaire. To gain the objectives of the research, the researcher had analyzed the data systematically and accurately. The data was then analyzed in order to draw conclusion about the objective of the study. The Researcher described the findings in this chapter into three parts. They would be described as follow:

- The first part shows the description the implementation of utilizing student worksheet for constructivism learning in teaching English at SMP Praja Mukti Surabaya. It describes activity during teaching and learning process in the class when the researcher was doing this research.

- The second part shows the description of the effectiveness of the study. This part is aimed to present the students' achivement before and after receiving the treatment, and significant different of achivement on both group based on the result of statistical calculation of t-test.

- The third part is the result of students' responses toward the utilizing student worksheet for constructivism learning.

Each part would be described as follows:

1. **Description of Teacher's Activities in Implementing The Utilizing Student Worksheet for Constructivism Learning in English Teaching**

   The researcher did this research at SMP Praja Mukti Surabaya. It was done in three meetings, on May 15th 2013 and July May 18th 2013. Each meeting had ninety minutes. The Researcher took students of VIII B and students of VIII F as the subject in this research. The treatment was given in students of VIII F as experimental group by implementing the utilizing student worksheet for constructivism learning in teaching English. While the controlled group, researcher did not give any interruption in teaching process. They were taught using traditional method by English classroom teacher as usual. The treatments were carried for 2 meeting for 90 minutes per lesson. During this period, the first treatment and second treatment were distinguished based on the subject matter. It was undertaken through the following descriptions:

   a. Implementation of Utilizing Student Worksheet for Constructivism Learning in English Teaching in Experimental Group

      The first treatment was held on the second day of the research. It was on May 16th2013.at this point the researcher implemented the utilizing

student worksheet for constructivism learning in teaching past continuous tense. The researcher used 5E model since the 5E model is an instructional model based on the constructivist approach to learning, which says that learners build or construct new ideas on top of their old ideas.

The Treatment started with "Engage" activity considering the connections between past and present learning experiences. It began by giving picture puzzle and having students to work in pair to discus and arrange the puzzle in the correct order of time. It was done in order the students to identify the use of target language.

Then, the researcher "Explore" the students' mind by taking student to the real life virtually through series of comic in the student worksheet. The comic strip was intended to give learning situation and represent the *real world* complexity.

Next, the researcher got the students to "Explain" the concepts they had explored. It was done by arranging sentence puzzle into the correct structure (the puzzles used the target language). Student had opportunities to verbalize their conceptual understanding. In this phase sometimes *error* occurs. This phase also provided opportunities for teachers to introduce formal terms, definitions, and explanations for concepts, and clarified the *error*.

After that, the researcher "Elaborate" students' conceptual understanding and allowed them to practice skills and behaviors. It was

done by doing learning tasks in the student worksheet. Through this, the learners developed deeper and broader understanding of major concepts, obtained more information about areas of interest, and refined their ideas.

Finally, the researcher "Evaluate" students' understanding. It was done by asking the student to make portfolio (the form existed in the student worksheet) about their progress on the whole lesson. By reporting students' finding and summary, the researcher could provide good feedback. (for detail information, see lesson plan 1 in appendix 1)

The second treatment was held on May 16th2013. In this time the researcher implemented the use of student worksheet for constructivism learning in teaching recount text. So was in teaching past continuous tense, 5E model of teaching was still an appropriate approach to be implemented in constructivism learning.

The Researcher started the second meeting by "Engage" student to the topic. The Researcher showed picture and gave Stimulate question according to the photograph. It was done to activate students' *previous knowledge* in knowledge construction process. *Previous knowledge* takes part in Meaningful learning. It occurs through rethinking old ideas and coming to new conclusions about new ideas which conflict with our old ideas.

After that, the researcher "Explore" students' thinking to set the concept of learning and make them to build up the concept by their own. It

was done by giving student a set of jumbled story. Student worked in group. Then, they arranged the story into the correct order. The Researcher wrote part of recount text paragraph on the board and asked student to put the correct story in the correct position.

Then, the Researcher asked student to "Explain" their answer. They needed to tell what part of paragraph was it. The Researcher also gave stimulate questions to reinforce student understanding and to found more about the target language. This phase also provided opportunities for teachers explain the topic and clarified the error made by students.

After that, researcher "Elaborate" students' conceptual understanding and allows them to practice skills and behaviors. It was done by doing learning tasks in the student worksheet.

On the last phase of the second treatment, the researcher "Evaluate" students' understanding. So was the first meeting, the researcher used portfolio. It is important since the evaluation in constructivist language classroom consists of a portfolio including project requiring whole class performance and originality together with the learner report and evaluate the learning process.

b. Implementation of traditional method in controlled group

Treatment for controlled group was done by the English classroom teacher. It was done by implementing traditional method as usual method in teaching learning process. There were no changes in his teaching and

learning process in the classroom. The researcher did not do anything in the implementation of the treatment in controlled group.

At the first meeting the teacher taught past continuous tense. It was held on May 16th 2013. The second meeting was held on May 18th 2013. The teacher taught recount text in this meeting. In both group, the researcher and teacher taught the same subject matter. The treatment for experimental group and controlled group were done together and at the same week.

2. The Effectiveness of Utilizing Student Worksheet for Constructivism Learning in Teaching English

The aim of this part is to answer the first research question which is whether the utilizing student worksheet for constructivism learning in teaching English at SMP Praja Mukti Surabaya affects the success of English teaching or not. The success criterion in this study was determined by the students' test score before and after receiving the treatment and based on statistical calculation of T-test to see the significant difference. The data was collected from the pre-test and post-test of both of groups. Pre-test was given on the first meeting in both groups in order to measure the students' prior achievement before the treatment. In addition, post-test was distributed at the last meeting to see students' improvement after receiving the treatment.

There were several steps to analyze the data. First, the researcher looked for students' achievement by calculating the score of pre-test and post-test in both group. Then, the researcher measured significant difference of the score from experimental group and controlled group by T-test statistical calculation to find out whether the mean differenced between them were significant or not. Each step would be presented as follows:

a. Student Achievement

To see the student achievement, the researcher conducted pre-test and post-test in both group to get the data. They were compared and calculated to see the improvement of students' score in both group before and after receiving the treatment. The result of pre-test and post-test would be described as follow:
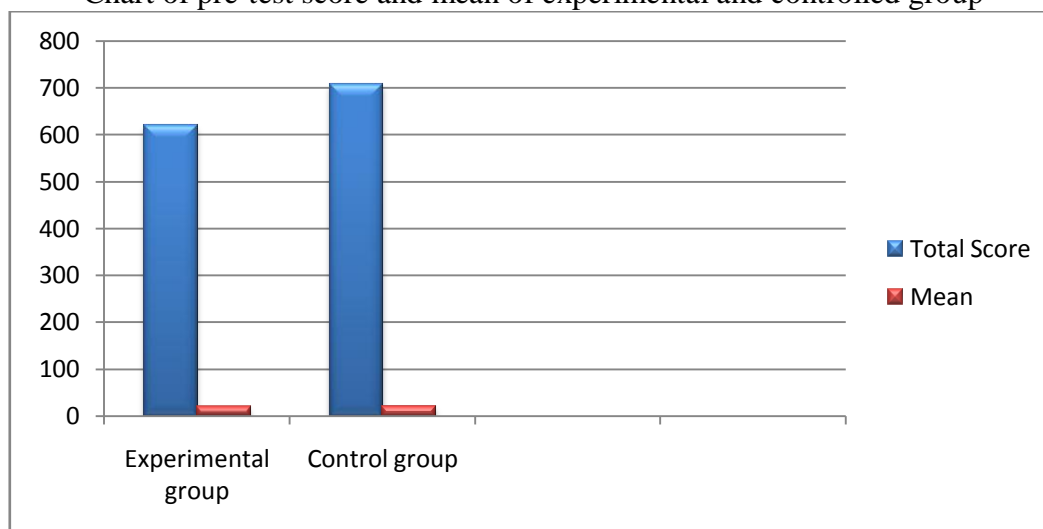
1) Pre-test Score

Pre-test in the experimental and controlled group was given in the first meeting before conducting the treatment. It was attended by 31 students. Data was collected through pre-test in both groups in order to measure the students' prior achievement before the treatment. The pre-test result was presented in the following table.

Table 4.1
Pre-test score and mean of experimental and controlled group

Group	N	Total score	Mean
Experimental group	31	620	20
Controlled group	31	708	22,83

The result would be described through the following figure.

Figure 4.1
Chart of pre-test score and mean of experimental and controlled group

The chart showed that the sum of the pre-test scores was 620 for the experimental groups and 708 for the controlled groups. While, the mean of the pre-test scores of the experimental group was 20 and the controlled group was 22,83. It means that the students of the both groups had slight difference of ability before the treatments had been given.

The result showed that many students could not achieve the minimum score that is 70. Here, the students faced some problems in writing dialogues. They got difficulty in raising their idea logically. Some of them were poor in grammar and vocabulary. It made them get difficulties in arranging the sentences into the right order.

2) Post-test Score

Post-test was conducted to both of experimental and controlled groups in the same week after receiving the treatment. The purpose of post-test was to know whether there were improvements in the student's achievements of experimental group. The result of the post-test score and mean of the experimental and controlled groups were presented in following table.
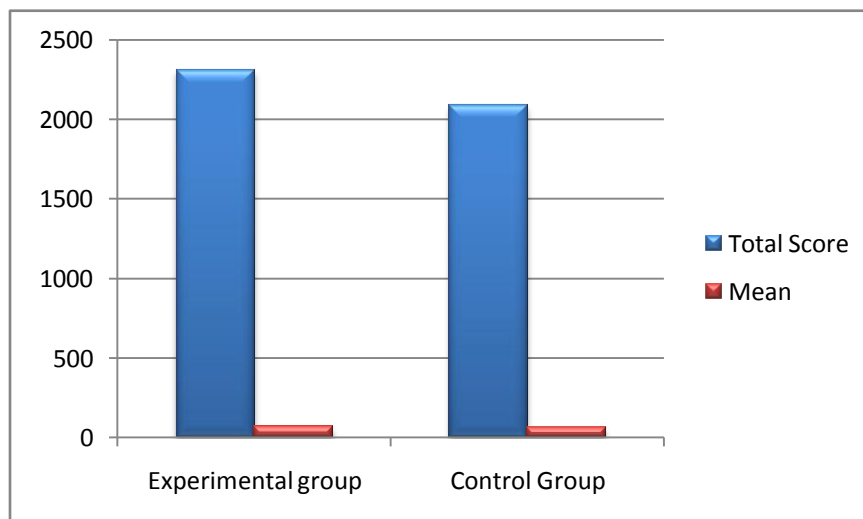
Table 4.2
The post-test score and the means of experimental and controlled groups.

Group	N	Total score	mean
Experimental group	31	2312	75.58065
Controlled group	31	2092	67.48387

The result would be described through the following figure.

Figure 4.2

The post-test score and the means of experimental and controlled groups.

From the result of pre-test and post-test scores of experimental group, we could see that the post-test score was higher than pre-test. It would then be compared with pretest to find out the improvement. The improvement can be seen through the following table.

Table 4.3

The improvement of Experimental and Controlled group

Group	Mean		
	Post-test	Pre-test	Improvement
Experimental group	75.5	20	52.5
Controlled group	67.5	22,8	45

The result was described through the following figure

Figure 4.3
The improvement of Experimental and Controlled group
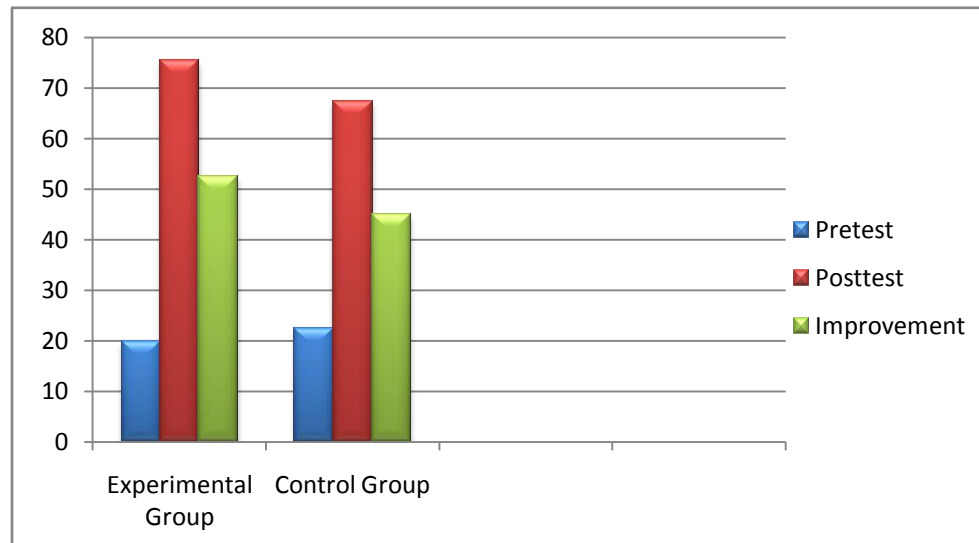
From the table above, it showed that the mean difference of experimental class was higher than control class. The score of experimental group was mean difference 52, whereas controlled group was mean difference 45. It can be concluded that the treatment given by utilizing student worksheet had more influence than Traditional technique.

Overall improvement between pre-test and post-test score of the experimental group was higher than the controlled group. Then the researcher calculated the two meant post-test scores by using t–test formula to know whether the improvement was significant or not.

b. Significant Difference of Achievement between Utilizing Student Worksheet in Teaching English and Traditional Method

After the researcher gave the pre-test, treatments and post-test, then the researcher calculated the different mean of pre-test and post-test score between experimental and controlled groups to know whether the result of utilizing student worksheet in teaching English and traditional method in teaching English was significant or not between both of groups. Then, the result was analyzed using t-test formula. Before it was done, the standard deviation of the two groups was calculated first. It was calculated bellow:

$$SD_X^2 = \sum X^2 - \frac{(\sum X)^2}{N_X}$$

$$= 173888 - \frac{5345344}{31}$$

$$= 1457, 548387$$

$$SD_Y^2 = \sum Y^2 - \frac{(\sum Y)^2}{N_y}$$

$$= 143600 - \frac{4376464}{31}$$

$$= 2423,741935$$

After that, the researcher looked for the significant difference between both groups using t-test formula

$$t = \frac{(\overline{X} - \overline{Y})}{\sqrt{\left(\dfrac{\sum(X - \overline{X})^2 + \sum(Y - \overline{Y})^2}{(N_x - 1) + (N_y - 1)}\right) \times \left(\dfrac{1}{N_x} + \dfrac{1}{N_y}\right)}}$$

$$= \frac{74{,}58064516 - 67{,}48387097}{\sqrt{\left(\dfrac{1457{,}548387 + 2423{,}741193}{(31-1) + (31-1)}\right)\left(\dfrac{1}{31} + \dfrac{1}{31}\right)}}$$

$$= \frac{7{,}096774194}{\sqrt{(64{,}68817204)(0{,}064516129)}}$$

$$= \frac{7{,}096774194}{2{,}042897563}$$

$$= 3{,}474$$

Then, to calculate the t –test the researcher must determine the degrees of freedom first by using formula as bellow:

$$df = 31 = 31 - 2$$

$$= 60$$

With distribution of the standard significant was 0,05 and degree of freedom was 60. So, the result of T-table was (0,05 : 60) = 1,645

Result of the calculation would be presented bellow:

Table 4.4
The result calculation of deviation square and t-test

Group	N	Deviation Square	T-value	T-table
Experimental group	31	1457, 548387	3,474	1,645
Controlled group	31	2423,741935	3,474	1,645

The result of t-value is 3,645 while the t-table is 1,645. It shows that the T-value is bigger than T-table. So, it was clear that there is significant difference between the students who were taught using student worksheet for constructivism learning (experimental groups) and students who were taught by traditional technique (controlled groups). In other words, the treatments utilizing student worksheet for constructivism learning significantly influenced success to English learning.

Looking at the calculation above which stated that t-value is bigger than t-table, then the conclusion null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. It means that between the two variables there are significant differences. The utilizing student worksheet for constructivism learning in teaching English is significant and has been able to prove its effectiveness as learning method. It can be concluded that by the utilizing student worksheet for constructivism leaning in teaching English decisively improved students' success in English learning.

3. **The Students' Responses Toward Utilizing Student Worksheet for Constructivism Learning in Teaching English**

The second research question of this study was about the students' response toward the utilizing student worksheet for constructivism learning. In this research, the researcher used questionnaire to get information from the respondent. It was arranged in the form of rating scale. Students' response was rated in scale of strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD). Respondents indicated their opinion by checking or putting mark on the position on the scale which most represented what they felt Then, the students' response scores were assessed with the following scale:

a. Strongly agree = 5

b. Agree = 4

c. Neutral = 3

d. Disagree = 2

e. Strongly disagree = 1

Then, the every single question was multiplied with score of students' response and was looked for the percentage. After that, the researcher looked for the criterion from the percentage in each item with the following table:

Table 4.5
Student response Criterion

Percentage	Criterion
0% - 20%	Very weak
21% - 40%	weak
41% - 60%	average
61% - 80%	strong
81 – 100%	very strong

The result of student respond was described bellow:

Table 4.6
The percentage of Questionnaire

No	SA (5)		A (4)		N (3)		D (2)		SD (1)		$\sum SRS$	%SRS	Criterion
	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS			
1	11	55	9	36	9	27	2	4	-	-	122	78,9%	Strong
2	19	95	10	40	2	6	-	-	-	-	144	90,9%	Very strong
3	6	30	13	52	10	30	2	4	-	-	116	74%	Strong
4	14	70	13	52	4	12	-	-	-	-	134	74,8%	Very strong
5	16	80	12	48	3	9	-	-	-	-	137	88,4%	Very Strong
6	17	85	11	44	3	9	-	-	-	-	138	89,1%	Very Strong
7	16	80	13	52	2	6	-	-	-	-	138	89,1%	Very Strong
8	14	70	12	48	5	15	-	-	-	-	133	85,8%	Very strong
9	14	70	15	30	2	6	-	-	-	-	106	68,4%	Strong

No	SA (5)		A (4)		N (3)		D (2)		SD (1)		$\sum SRS$	%SRS	Criterion
	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS	$\sum R$	SRS			
10	10	80	8	32	13	39	-	-	-	-	121	78,1%	Strong

After getting the criterian of each item, the researcher presented the data in qualitative presentation to get general category of the students' response. It can be seen as follows:

1. Very strong category : $\dfrac{7}{10} \times 100\% = 70\%$

2. Strong category : $\dfrac{3}{10} \times 100\% = 30\%$

3. Average : $\dfrac{0}{10} \times 100\% = 0\%$

4. Weak category : $\dfrac{0}{10} \times 100\% = 0\%$

5. Very weak category : $\dfrac{0}{10} \times 100\% = 0\%$

From the percentage of each item above, it can be found that there are 70% of statements in questionaire favored with "Very Strong" criterion, and 30% of statements in questionaire were favored with "Strong" criterion. It showed that more than ≥ 50% from general students' response score included in strong or very strong category. It means that the implementation of utilizing student worksheet for constructivism learning which was done by the

researcher was welcomed by students because the most alternative answer is strongly agree (SA). In other words, the result of utilizing student worksheet for constructivism learning in English teaching at SMP Praja Mukti Surabaya is "Positive"

B. DISCUSSION

Based on the data finding above, this study indicates positive result. It was proven by the result of students pre-test which mean 20 increased become 75,5. Also, the calculation of t-test showed that the t-value was 3,474. It was bigger than t table 1,645. However its application had brought some drawbacks too. First of all, constructivism requires too much time. Since the basic principle of it is to create a situation for learner to inquire the possibilities and find the solution by themselves. Therefore, the researcher must provide time her/himself to prepare deliberate planning, and equipment (media, picture, tools, etc). The Researcher considered enough time for student since much more time was spent in inquiry and formulation stages. Furthermore, constructivist method limits the teacher' control over the lesson and gives more responsibility to the students. However, young learners are not able to discuss what they should and want to learn. Also, this method cannot be said to be economical. It is because the implementation required more material and technological device. Lastly, language learning needs some memorization and adaptation. This fact is really ignored by constructivism since constructivism can be stated as a mentalist or

cognitive approach. It rejects behaviorism. Thus, constructivist language teaching method applied in this research could not be as pure as the constructivist learning features required but it is inevitable to be affected by other discipline has been used so far.

The obtained Data from the students' response showed strong response from the respondents. This result was indicated from the 50 students' 76% respondents chose answer SA (strongly agree). Students showed good interest after having treatment. They actively worked in their group and collaborated each other. They confidently said their opinion and were interested to do the student worksheet. There was no problem except the time consuming in inquiry and formulation stages.