CHAPTER III

RESEARCH METHODOLOGY

This chapter elaborates the procedure of the study to find answers of research questions previously stated in Chapter 1. This chapter covers the statement of the problem, research design, site and participants, data collection techniques, and the data analysis.

1.1 Statement of the Problem

The study was intended to investigate the two questions, as follows:

1. What are the benefits of using cooperative learning: STAD technique in junior high school learners' reading comprehension?

2. What are the students' responses toward the use of cooperative learning: STAD method in teaching reading comprehension?

1.2 Research Design

This study applied both qualitative and quantitative research designs taking on characteristics of a case study. It is usually used to comprehend a phenomenon in depth (Creswell, 2007, cited in Liamputtong, 2011). Besides, according to Creswell (2003), case study can be based on any mixture of qualitative and quantitative evidence. In addition, Yin (1993 cited in Bassey 1999) argues that case study is a flexible form for studying a social phenomenon within its natural context.

Furthermore, this study has similar characteristics to a case study because of several reasons. First, it attempted to describe and interpret a particular phenomenon in the classroom. As stated by Stake (2008, cited in Hood, 2009) that in case study approach, a case can be a child, a classroom of children, or an event. Second, like a case study, it was conducted in a particular case where researcher may act as a teacher (Stake, 1995 cited in Emilia, 2009). Moreover, according to Merriam (1988), this study can be classified as an evaluative case study because it involves description, explanation, and judgment. Since the teacher implemented the teaching process to evaluate its value, this study can be classified as qualitative program evaluation (Nunan, 1992, cited in Emilia, 2009).

Meanwhile, since the study aimed at comprehending the participants' perceptions, this research design was an appropriate approach. McMillan and Schumacher (2010) also believe that case study has characteristics to find out an entity and describe it according to participants' points of view. Relating to the definition, this study was conducted to understand and investigate whether the use of cooperative learning: STAD technique can stimulate reading comprehension activity for junior high school learners from their' perspective. Moreover, case study was employed to describe phenomena on the use of STAD technique in reading comprehension activities.

1.3 Site and Participants

This study was undertaken at one of public junior high school in Bandung. It was selected for two reasons. First, it is located near campus, so it is accessible

easily. Second, the researcher had ever done PPL as an English teacher there, so it could enhance feasibility for researcher to negotiate with the object of the study. It is in line with Alwasilah (2011) that it is important for researcher to establish rapport with respondents and site before conducting the study.

The participants of this study were a class of eight grader students in the school. The class was chosen since they have been learning recount text. All participants were between 13-14 years of age. They were 36 students in the class that considered of 18 females and 18 males.

The researcher as a participant observer taught all students in the class by using STAD technique. To gather data from interview, the researcher asked ten students as sample. The students were taken from high achiever students, middle achiever students, and low achiever students. The levels of students' English proficiency were taken from their previous score.

1.4   Data Collection

The data collection techniques employed in this study were observations, interviews and written document analysis. As states by Gall and Borg (2003) and Merriam (1988) that multiple instruments of collecting data which called triangulation can be used in qualitative case study to enhance the validity of the research. As assert by Calabreses (2006) and Silverman (2006) (cited in Emilia, 2009, p. 198) that triangulation, especially in qualitative study can enhance validity and "trustworthiness" of the research. Further, Merriam (1988) conveys that there are three appropriate techniques of data collection for qualitative case

study research, as follows: (1) observations; (2) interview; and (3) written documents. In addition, quantitative data were collected through quizzes. Each technique of data collection will be described below.

1.4.1 Observation

The observations were conducted five times, from October 9, 2012 to October 23, 2012. The type of observation in this study was participant observation because the researcher also took part as the teacher who implemented STAD technique in teaching reading comprehension of recount text. As explained by Merriam (1988) that in participant observation, the researcher observes what people do and participates in the activities. Each observation lasted for 80 minutes. The lessons were video recorded. The following activities in the class were observed by the researcher to gain data. As stated by McMillan and Schumacher (2010) that participant observation enables the researcher to get participants' perceptions of events and processes expressed in their actions, feelings, thought, and beliefs. In conducting participant observation, "the researcher also wrote observation notes immediately after each session" (van Lier, 1988, cited in Emilia 2009, p. 198).

To assist researcher in taking note during the lessons, an observation sheet used in this instrument, as follows:

Table 3.1
Observed Reading Situation

Activities	Condition	Yes	No	evidence
Class presentations	The students were motivated during the class presentation.			
	The students were engaged in the activity.			
	The students comprehended the reading materials with ease.			
teamwork (reading activity)	The students understood the reading instructions.			
	The students faced some difficulties on accomplishing the task.			
	The students in each team encouraged participation.			
Quiz	The students answer the questions individually.			
Post reading	The students comprehended the material.			

(Adapted from Cooperative Learning in the Classroom, Johnson, D. W., Johnson, R.T., Holubec, E. J.,1994)

In conducting reading activity, the researcher followed the stages proposed by Slavin (1995), as follows:

a. Class presentation

Teacher started the lesson by telling the pupils about what they were going to learn. The presentation was about the activities of brainstorming ideas, motivations, and concept development. The teacher developed pupils' understanding about recount text. In this stage, the teacher also provided a game in each meeting to introduce some key

words related to the topic given. Teacher also used some pictures to support learners' visual needs.

Moreover, the teacher frequently assisted pupils comprehension by asking some questions related to the material given (see Appendix A), then discussed why an answer correct or incorrect. In terms of motivation, the teacher informed that she will call the members of each team randomly, and the whole group will be rewarded based on the selected member's performance. This aimed to make all students prepared themselves to answer some questions related to the material.

b. Teamwork

After presenting the material, the students were asked to work in group which was composed of four or five students who represent a cross-section of the class in terms of academic performance. Each member of each team had to make sure that all team members are learning to prepare its members to do well on the quizzes. In this activity, the teacher gave two worksheets related to the material given and two answer sheets for each team (see Appendix A). During group work, group members' tasks were aim to master the material and to help their teammates in comprehending the material.

c. Quizzes

In doing quiz, teacher distributed worksheet and gave students adequate time to complete the task. Students were not allowed to work together. In other words, each student must show what they have learned

as individual. After that, teacher informed the quiz score and team score in the next meeting. From the quizzes score, teacher determined the team improvement points by computing the average improvement points of team members.

d. Post reading

This stage was usually used for checking the answer of the questions in the worksheet and summarizing the lesson. In additions, this stage also used for teacher to give reward for each team who were eligible to get certificate.

To investigate pupils' responses toward the implementation of STAD technique, the researcher employed some code, as follows:

Table 3.2
List of students' responses

Learning activities	Students' responses
Class presentation	Enthusiastic: Enth
Teamwork	Attractive: Att
Quiz (includes individual	Reluctant: Rel
improvement scores)	Equal participation :EP
Post reading	Individual accountability: IA
	Confused: conf
	Silent: sil

1.4.2 Interview

To obtain further information related to the research questions, the interview was conducted to ten students who were considered as the samples. It was applied in order to gain in-depth information which could not accessible from observation (Alwasilah, 2011). The interview employed in this study was semi structured interview since it was guided by a list of questions (Merriam, 1988).

The interview was conducted based on the following guideline, as follows:

1. What do you think about English lesson so far?

2. From the four language skills (listening, speaking, reading, and writing), which skill do you like most?

3. Do you like reading lesson? Why?

4. Which one do you prefer, do your task on a team or individually?

5. a. Does STAD technique help you to comprehend the text? How about your team? Do you like working in your team?

   b. Do you find any difficulty in working with your team? If yes, can you mention one of them?

6. What do you think about learning reading comprehension using STAD technique?

7. Do you find any benefits of STAD technique in your reading lesson?

8. What do you think if the teacher does not use STAD technique for the learning activities?

The interview was provided after the observations were conducted. It was delivered in Bahasa Indonesia (see Appendix D) to make the respondents easier to answer the questions and to avoid misunderstanding. The interview was purposed to gather more individual and personal experiences from the participants.

1.4.3 Written Documents

Written documents were used to gather the data in order to answer the research questions. As suggested by Guba and Lincoln (1981, cited in Moleong, 2011) that it is suitable for the researcher to use documents since they were

relevant. The documents were in the forms of syllabus of English lesson, lesson plans, students' worksheets, students' improvement points, and teams' score. To gather the data, the lesson plans, students' score, and teams' score were examined to decide further activities during the observation. The detail of these documents can be seen in Appendix.

1.4.4 Dependent T-test

To investigate the improvement scores of the students' reading comprehension skills, dependent t-test was used to compare the students' base scores and their last quiz scores.

1.5 Data Analysis

After all the data were collected, they were analyzed by descriptive qualitative analysis. In order to gain valid and reliable data, the triangulation was needed (Gall and Borg, 2003). The data were analyzed and interpreted based on the information from observations, interview, and written documents. The analysis from each instrument will be presented in a form of descriptive explanation. It is in line with Miles and Huberman (1985: 54) that "in analyzing data of qualitative research, the analysis is done chiefly with words, not with numbers". In addition, the researcher also employed quantitative data to expand an understanding and to confirm the findings from the other sources (Creswell, 2003). Further, the data were analyzed by using the framework proposed by Slavin, 1995. Besides, to answer the research question of the benefits of STAD technique, the researcher also used some theories proposed by McDonell (1992);

Stahl & VanSickle (1992); Eric (2000); Grundman (2002); Harris and Hanley (2004); Wichadee (2006); Majoka, Daad and Mahmood (2010) (see Chapter II).

1.5.1 Observation

The data gathered from observation were recorded using observation sheets, teacher's field notes, and video-recording. In analyzing the data, the video was applied to get deeper understanding of the class activities. In this case, the video was transcribed to capture the real situation in the class, and to support the data from teacher's field notes and observation sheets. Afterwards, data from those instruments were interpreted and categorized to answer the research questions.

1.5.2 Interview

In analyzing data, the interview recording was replayed. The researcher transcribed the interview so that the data can be categorized. Finally, the data were interpreted into some main issues according to the research questions.

1.5.3 Written Documents

The data were in the forms of lesson plans of each meeting, students' worksheets, students' improvement points, and teams' score. There are several steps to analyze data from written documents, as follows:

1. Reading all written documents

2. Selecting the documents related to research questions

3. Incorporating selected documents

4. Analyzing the data based on the following criteria.

In implementing STAD technique, quiz score sheet was employed as one of written documents. It was very informative to support the data to investigate the benefits of STAD technique in the learning process. The sheet can be seen in the following table:

Table 3.3

Quiz Score Sheet

Team's name: _____

Team members	Base score	Quiz score	Improvement score
Total team score:			
Team average:			
Team award:			

(Slavin, 1995: 81)

To calculate team summary sheet the researcher followed the steps proposed by Slavin (1995), as follows:

- Determining pupils' base score which is taken from the students' previous reading score. Below is the instance of determining initial base scores:

Table 3.4
Determining Initial Base Score

Previous Quiz	Initial Base Score
Quiz 1	84
Quiz 2	68
Mid test	71
	Average three test scores
Selvilia's score	223/3 = 74.33
Selvilia's base score	74

- Calculating students' quiz score

- Calculating the students' improvement score based on the certain criteria,

   as follows:

   - The criteria of improvement point

Quiz score	Improvement points
More than 10 points bellow starting score	5
10 points below to 1 points below starting score	10
10 points above starting points	20
More than10 points above starting points	30
Perfect paper (answer sheet is perfect)	30

- Calculating team score

   Team score=total team score/number of team members

- Recognizing Team Accomplishments

   Three levels of awards are given. These are based on average team scores,

   as follows:

Table 3.5

The criteria of awards

Criterion (team average)	Award
15	Good team
20	Great team
25	Super team

(Slavin, 1995: 80)

Bellow is the instance of team summary sheet of group four, as follows:

Team name: group 4

Team members

Name	1st quiz	2nd quiz	3rd quiz	4th quiz
Adli F	20	20	5	S
M. Rifki	20	30	5	30
Arif Al-farizie	5	30	5	30
Niki W.	20	5	30	20
Team Average	**16.25**	**21.25**	**11.25**	**26.7**
Team Award	**Good team**	**Great team**	**-**	**Super team**

1.5.4 Dependent T-test

In analyzing data, this study employed one group pretest-posttest design to investigate students' improvement points. The process of t-test covered two steps of calculations, as follows:

1. Normal Distribution Test

In order to test the distribution normality of the data, Kolmogorov-Smirnov test was employed in this study. The test compares the scores in the sample to a normally distributed set of scores with the same mean and standard deviation (Field, 2005). The test was conducted through SPSS 19 for Windows. In conducting normal distribution test, the researcher used 0.05 (two-tailed test) and stating the hypothesis, as follows:

- H_0 = the score of pretest is normally distributed

- H_A = the score of pretest is not normally distributed

The output data were interpreted by using the criteria proposed by Field (2005). Field (2005) states that if the result is non-significant ($p < 0.05$) it tells us that the distribution of the sample is significantly different from normal distribution (probably normal). However, if the result is significant ($p > 0.05$) then the distribution is not significantly different from normal distribution.

2. Dependent t-test

After getting the t value (t $_{obtained}$), then it was compared with the t critical. If t $_{obtained}$ ≥ t $_{critical}$ at the level of significance (p) = 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_A) is accepted. However, if t $_{obtained}$ < t $_{critical}$, then the null hypothesis is accepted.

1.6 Concluding Remark

This chapter has presented the research method of the study which covers; research design, site and participants, data collection, and data analysis. This study tried to to investigate the benefits of the use of STAD technique in students' reading comprehension, and to discover their responses toward the use of STAD technique in their reading comprehension. Case study was employed as the research design. To gather the data, the researcher used four instruments, which were observation, interview, written documents, and dependent t-test. The further results from this chapter will be described in the next chapter.