CHAPTER III

RESEARCH METHODOLOGY

This chapter covers the research methodology that is devoted to the description of research design used in the research in order to find the answer for the research problem which has stated in the first chapter of this paper. The description includes the statement of research problem, research design, data collection, and procedures for analyzing the data.

3.1 Research Problem

This research is implemented to find answer for the following questions:

1.3.1. What are the categories of teacher talk arisen in the English language classroom?

1.3.2. What is the characteristic of interaction that occurs in the classroom as the effect of teacher talk categories?

1.3.3. What are the students' opinions on their teacher talk?

3.2 Research Design

This study was aimed at investigating the interaction in English as a foreign language classroom. The subject of this study was specific to a classroom in which teacher talk and her interaction with the students were observed and defined. Because of this specification and small number of area, this study was categorized as a case study. Zainal (2007, p.1) states that case study enables researcher to specifically examine data from a very limited number of individuals as the subject of the study. This study tried to provide descriptive answer from natural setting of classroom interaction in which there were not any action or treatment to the study. This attempt was in line with the statement that confirmed that case study was an effort to investigate real life

phenomenon occurred in natural setting (Gomm, Martin, & Foster, 2000, p.4, Zainal, 2000)

This study was packed in descriptive form since the data gained of this study, teacher talk and classroom interaction, were then described to search for the type of teacher talk and the characteristics of classroom interaction through observation and videotaping. This kind of form was employed to observe and describe the subject of research without influencing it in any kind of way in order to reach the previously mentioned aim of the research. Before describing the data, it was firstly calculated. However, this attempt of data quantification is not the paramount as Gomm, Martin, & Foster (2000) define that "quantification of data was not a priority. Indeed, qualitative data is treated as superior" (p.4).

For the additional information, this study also revealed the type of classroom interaction in the English as a foreign language classroom by referring to Flanders Interaction Analysis Categories. To answer the first research problem, an observation sheet was used. In finding the students perception on their teacher talk, a questionnaire is given to them. The last research problem was solved by employing stage to stage method. They are were video-taping, coding, categorizing, and analyzing.

3.3 Participant of the Research

The research was held in one of the vocational schools in Bandung. The school itself was selected because it was accessible for the research in term of administration. The participants of this study were a teacher and students of the third grader in which they were studying English twice a week. The class was chosen due to its frequent meeting in a week. This frequent meeting enabled the research to be conducted before the school examination. This class was also selected because the third grader level expectation in the curriculum was intermediate level in which teacher was expected to reach the communicative objective. This academic characteristic was suitable with the purpose of the research that aimed at finding the type of teacher talk and

classroom interaction characteristic. The class when study was held was in the first semester of the academic 2014-2015.

3.4 Data Collection Method

This section is divided into two parts, instrumentation and procedure. Instrumentation is the elaboration of some instruments used to gather data in order to answer the research problems. After utilizing the instruments to collect data, the data were then analyzed by following some procedures. The procedures in analyzing the data will be described subsequent to the elaboration of instrumentation.

In this study Flanders' Interaction Analysis Categories which has 10 categories of teacher talk was employed. Identification of talk, coding, and categorizing were also included in the analysis.

3.4.1 Instrumentation

Some instruments were used to gather data that was aimed to reach questions towards the statement of problems. The questions would then lead to the attainment of the research purposes. The instruments utilized in collecting data were observation sheet, questionnaire, and videotaping that will be presented as follows.

3.4.1.1 Observation Sheet

To answer the first question, researcher made an observation sheet that was checked in every meeting in the classroom to see the appearance of elements of teacher talk suggested by Flanders in Flanders' Interaction Analysis Categories. This observation sheet was developed by adapting the Flanders elements of teacher talk which was then elaborated and then checked if the elements existed or not in the teaching process. In the end of the meeting, the tallies in each category in observation sheet were then counted to see the quantity of teacher talk. Having obtained the quantity of teacher talk, it was then described and interpreted.

3.4.1.2 Questionnaire

Questionnaire was given to know more about the students' perception on teacher's talk referred to elements of teacher talk suggested by Flanders' Interaction Analysis Categories. Questionnaire was developed by adjusting the statements with the categories of teacher talk in Flanders' Interaction Analysis Categories. For example, the first and second statements in the questionnaire referred back to the teacher talk category of accepting feelings. Students may decide if they strongly agree, agree, disagree, or strongly disagree with the statements given in the questionnaire by checking it. The check list was then analyzed by using Likert scale. The scale response of Likert scale used in this questionnaire is the level of agreement. Wade (2006) suggested the level of agreement in the Likert-Type scale response anchors which were strongly disagree, disagree, neither agree or disagree (neutral), agree, and strongly agree. The check list questionnaire consisted of 15 statements.

3.4.1.3 Videotaping

After getting the permission from the school to do the observation, the interaction in the classroom started to be recorded to see the real phenomena of teacher and students' interaction and how teacher used her/his talk. The videotaping was held for four meetings of English lesson in the classroom. Each meeting consisted of 2 hours effective learning time (2x45 minutes).

The videotaping helped researcher avoid the missing of classroom interaction. Grbich (Richards, 2003:115) affirmed that the detail of situation would need a super-human memory or in the form of videotape. Therefore, Grbich (Richards, 2003:115) also advised that all verbal talk to be recorded. Though the researcher was recording the classroom interaction, the students and teacher interacted naturally as expected and did not bother the teaching and learning process.

3.4.2 Procedures

The study was aimed at investigating teacher's talk, based on Flanders Interaction Analysis Categories (FIAC), students' perception on their teacher talk, and the type of classroom interaction. Thus, to gain the answers of the research problems, the data that has been obtained was analyzed by following procedure of the study. This procedure consists of the elaboration of observation sheet calculation, videotaping procedure in collecting data of classroom interaction and the analysis procedure of it, and data processing gained from questionnaire.

3.4.2.1 Observation

As it has been described before, type of teacher talk will be observed through an observation. Observation sheet was used to gather data of teacher talk in the classroom by checking the elements of teacher talk that appeared in classroom. After checking all the elements of teacher talk that emerged in the classroom, the observation sheet was then processed by counting the tallies in every column of categories. The calculation of tallies will be then described into words. The observation sheet was checked in every meeting of classroom interaction observation. The observation was held for four meetings.

3.4.2.2 Videotaping

Videotaping was employed to collect data of classroom interaction. The data were analyzed to seek for the characteristic of classroom interaction. Videotaping was done in four meetings of English language lesson. The table below shows the schedule of videotaping based on the meetings of English as foreign language classroom in a school as the place for research to be conducted.

Table 3.1. Classroom Meeting

Meeting	Days	Hour	Duration
1st	Monday	07.45-09.15	90 mins
2nd	Thursday	10.15-11.45	90 mins

3rd	Monday	07.45-09.15	90 mins
4th	Thursday	10.15-11.45	90 mins

In Thursday, the schedule was actually three hours. However, teacher has committed that the last hour is used to be the time for students practicing for the national exam since the students are in their third grade. During the videotaping, students and teacher acted naturally like they were studying as usual in every meeting.

3.4.2.3 Questionnaire

Questionnaire was given to the students to find how they actually perceive their teacher talk which referred back to Flanders' Interaction Analysis Categories (FIAC). Questionnaire was given in the last meeting of research and it was expected that all of the students would come to the class so that it would be supporting more the findings of teacher talk type.

3.5 Data Analysis

After conducting the study based on the procedures, the data has been gained. The data gained were then analyzed by using some steps for each data collection method. The following sub chapters present the elaboration of data analysis of each data that has been gained.

3.5.1 Observation sheet tabulation

The observation sheet, which has been filled with tallies according to the appearance of teacher talk categories suggested by Flanders, was then analyzed by counting the number of tallies in each teacher talk categories. The following table displays the example of tabulation of observation sheet.

Table 3.2. Observation Sheet Tabulation

No.	Categories	Tallies	Percentage

1	Accepting feelings	IIII	
2	Praising and Encouraging		
3	Accepting or using ideas		
4	Asking questions		
5	Lecturing		
6	Giving direction		
7	Authorizing or justifying authority		
8	Students' response		
9	Students' initiation		
10	Silent periods		
	TOTAL		

The percentage of each category was gained by dividing the number of tallies in the category by the total number of tallies in all categories.

3.5.2 Videotaping

Videotaping was used to discover the characteristic of classroom interaction. The videotaping would then be analyzed by following four steps of analysis, named transcribing, coding, constructing the interaction matrix as suggested in FIAC, and analyzing the interaction matrix. The elaboration of the steps is given as follow.

3.5.2.1 Transcribing

After the classroom interaction had been recorded, and then the recording was transcribed. The recorded classroom interaction was transcribed as simple as possible to make the analysis easier. When the teacher talked, the talk was labeled T as teacher talk. When talk was possessed by a student, the talk was labeled by S. The talk of more than one student was labeled Ss.

3.5.2.2 Coding

In analyzing classroom interaction, researcher needed to identify the categories of teacher and learners talk from the transcription. The coding that researcher used was based on the Flanders' Interaction Analysis (FIAC). Below is the coding procedure of classroom interaction. The coding process needed one coder outside the researcher.

Table 3.3. Coding Procedure for FIAC

Category	
G: General	- Whenever there is an element of doubt code to the prevailing balance of teacher. - Rare events should be coded whenever possible. - Categories of 1,2,3, and 9 are expected much less than 5, 6,7, and 8.
1: Accept Feelings	The code is for the situation when teacher response to students' grumbling or statement of happiness to the learning or other things.
2: Praises or Encourages	Code 2 also given when teacher

	repeats students answer.
	• Code more than once if extended praise is given
3: Accepts or Uses Idea of Student/s	• Teacher can respond to students' ideas in a number of ways:
	- Modifying or rephrasing the students' ideas or answers.
	- Applying students' ideas to solve a problem
	- Making inferences from students' ideas or answers.
	- Comparing it with other ideas
	- Summarizing what student has said
	• Code 3 more than once if extended responses given
	• If teacher is making too much abstraction from students' answer or ideas then, code 5 is given.
	• If teacher ignores pupils suggestion and asking for another suggestion then it should be coded as 4.
4: Asks Question	• Questions can be referential or display.
	• If teacher talks bring others into discussion then code 4 is given.
5: Lecture	• The code 5 is given whenever

	teacher:
	- lectures, - expresses opinion, - gives facts, - interjects thoughts and off handed comments included
6 & 7: Gives direction & Criticized or Justifying Authority	- Code 6 is used to indicate close supervision and direction by teacher. - Code 6 is used for statements intended to produce compliance from students. - If teacher gives announcements then code 5 is given instead of code 6. - Questions that is aimed at getting students' compliance is coded as 6 e.g. "Could you turn off the projector?" or "Could anyone help me take my bag?"
8 & 9: Student Response & Student Initiated	- Making a choice between code 8 & 9 should related to the teachers' preceding questions. - Pupil response can be for a closed or open teacher question - Code 8 is highly possible to turn into 9 if the students embellishes or adds voluntary information or

	made and independent judgment about what the teacher has asked or stated. • If there is any doubts use code 8 instead of 9. • Category 9 also used for students making target remarks (resistance to compliance)
10: Silence or Confusion	• Pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the researcher. • Code 10 is also used when students write what the teacher has shown or do written exercises from teacher

Adapted from:

(http://www.hebes.mdx.ac.uk/teaching/Research/PEBL/methpap6.pdf)

To help the researcher in coding the data, there are some rules related to the coding procedure. The following are the rules:

1. If there are more than three categories in 3 second period, it should be noted numerically farther from category 5 (category 10 is an exception).
2. The researcher should avoid including her own point of view.
3. If after 3 seconds, there are no changes in category, then it should be noted with the same category numbers.
4. If the silent period exceeds 3 seconds, then it belongs to category 10.
5. When teacher calls a student by name, it is recorded as category 4.

6. When teacher repeats the student's correct answers, then is noted as category 2 because it functions as encouragement or praises.

7. When teacher listen to a student and accepts his or her ideas to make a discussion, then this belongs to category 3.

8. If teacher says "yes", "ok", "hmm", or "alright", it belongs to category no. 2.

9. When teacher jokes without making any expense on students, researcher records it as category 2. However, if she or he makes joke over students then it should be marked as category no.7.

10. When all students respond to the teacher, it belongs to category 8.

3.5.2.3 Constructing interaction matrix from the coded transcription

Before constructing the matrix from the coded data, it has to be organized firstly into numbers as followed:

10 (category numbers)

1st pair

4

2nd pair

6

3rd pair

8

4th pair

2

The first pair showed the first tally on the matrix, and the second pair represents another tally, etc. Then the tallies of the pair were put into the matrix. Matrix was constructed in the form of 10 rows and 10 columns. The row of the

matrix represents the first number of the pair while the column represents the second number in a pair. The following figure is the example of interaction matrix.

Table 3.4. Interaction Matrix

	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4						1				
5										
6								1		
7										
8		1								
9										
10				1						

Adopted from Flanders (1970) as cited in Nurmasithah (2010, p.59)

3.5.2.4 Analyzing the interaction matrix

If the matrix is in complete form, it can be seen that some areas of the matrix will have more tallies than other areas. The area in the matrix shows the characteristic of interaction in the classroom. Here is the division of the interaction characteristics.

Table 3.5. Characteristics of Classroom Interaction

	1	2	3	4	5	6	7	8	9	10
1	TEACHER SUPPORT							STUDENTS'		
2										
3										

4				CONTENT CROSS			
5							
6					TEACHER'S CONTROLL	PARTICIPATION	
7							
8							
9							
10							

Adopted from Flanders (1970) as cited in Nurmasithah (2010, p.59)

3.5.3 Questionnaire tabulation

Questionnaire that had been made was spread to 34 students in the classroom in order to seek for their perception on teacher's talk. After getting back questionnaire from students, it was then tabulated by using *Likert* scale. *Likert* scale in this research was used to measure the perception of students on their teacher's talk. Before giving questionnaire, researcher who wants to use *Likert* scale needs to make the measuring so that there will not any ambiguities in defining the result of the questionnaire. There are some steps of calculation in *Likert* scale. The following is the description of all steps.

a. Scoring the statements

There were 5 responds for each statement that respondents could choose. The table below shows the score for each statement in *Likert* scale.

Table 3.6. *Likert* Scale Statements Scoring

Positive Statements	Negative Statements
Strongly Agree = 5	Strongly Agree = 5

Agree	= 4	Agree	= 4
Neutral	= 3	Neutral	= 3
Disagree	= 2	Disagree	= 2
Strongly disagree = 1		Strongly disagree = 1	

The following is the example of statement in the questionnaire.

Table 3.7. Example of Statement Scoring

No.	Pernyataan	Sangat Setuju	Setuju	Netral	Tidak Setuju	Sangat Tidak Setuju
1	Guru mendengarkan semua keluhan atau perasaan senang siswa terhadap materi pelajaran atau hal lainnya.	5	4	3	2	1

b. Defining the total score for each statement

This instrument was given to 34 students in the classroom, and then it was recapitulated. From the 34 respondents, for example:

Statement 1

Response Strongly Agree (5)   = 25 students

Response Agree (4)   = 8 students

Response Neutral (3)   = 1 students

Response Disagree (2)   = 0 student

Response Strongly Disagree (1)   = 0 student

Below is the way to calculate the score:

Total score of students' response (5) = 5 x 25 = 125

Total score of students' response (4) = 4 x 8 = 32

Total score of students' response (3) = 3 x 1 = 3

Total score of students' response (2) = 2 x 0 = 0

Total score of students' response (1) = 1 x 0 = 0
                                        _____

                             Total =   160

The maximum score of statement no. 1 = 34 x 5 = 170

The lowest score   = 36 x 1 = 36

c. Calculating the central tendency of the score

After getting the score of statement 1, then the central tendency each score is calculated by using the formula suggested by Sudjana Sudjana (1984) as cited in Nitiswari (2012, p. 39). The following is the formula.

$$P = \frac{N}{Fo}$$

P is the percentage that is intended to be found. Fo is the total score of statement and N is the ideal highest value for the statement.

d. Classifying the average percentage

The result that has been obtained from the formula, then is classified to know the criteria of the statement.

Here are the criteria that was suggested by Akdon (2008) in Nitiswari (2012, pp. 39-40). After finding the criteria, interpretation was made based on the criteria resulted from the steps of calculation.

Table 3.8. Criteria of *Likert* Scale Statement

Score of percentage	Interpretation
0 -20 %	Very weak
21-40%	Weak
41-60%	Enough
61-80%	Strong
81-100%	Very strong