

CHAPTER III

RESEARCH METHODOLOGY

The aim of this study was to analyze students' interaction of 4th graders in an elementary school in northern Bandung. For this reason, this chapter presents the research method and procedures used by the writer. This chapter includes research design, participants of the research, data collection, and data analysis.

A. Research Design

This research employs action research method. Action research is a systematic study to improve educational practice by groups of participants by means of their own practical actions and by means of their own reflection upon the effects of those actions (Ebbutt, 1985 as cited in Hopkins, 2008). The goal of action research is to understand what is happening in our school or classroom and to determine what might improve things in that context (Sagor, 1992).

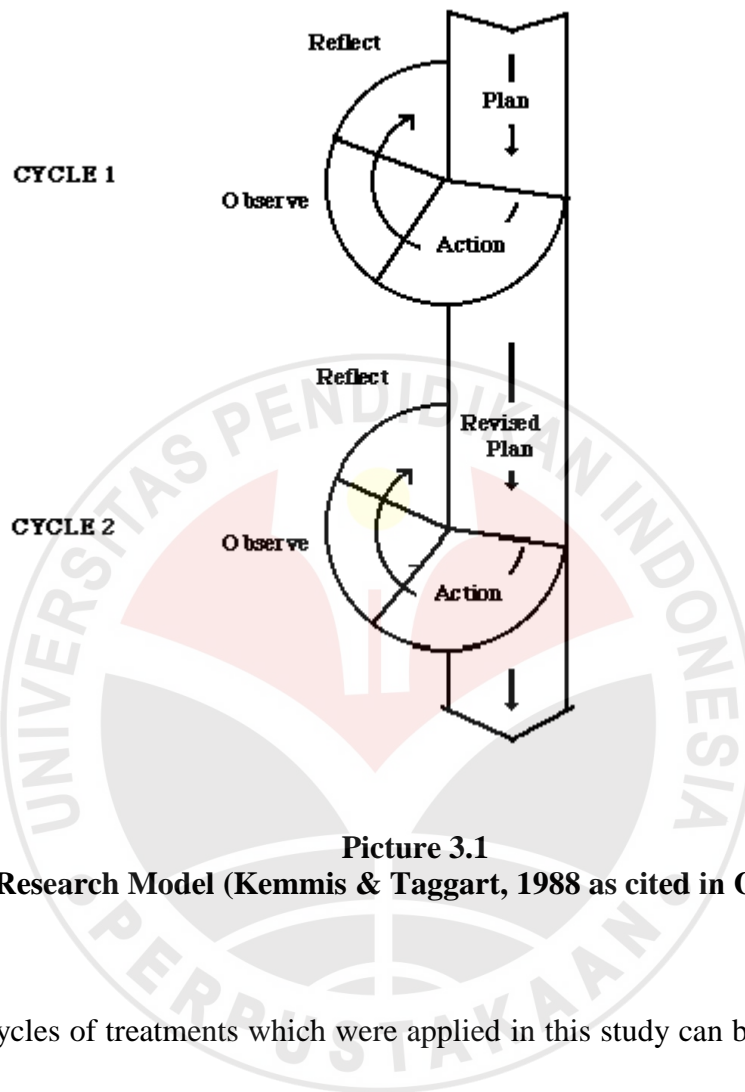
B. Participants

Classroom action research is conducted by teacher researchers to gather information about the ways that their particular school operates, how they teach, and how well their students learn (Mills, 2003 as cited in Hopkins, 2008). Therefore, classroom action research does not involve population and sample, but it involves specific classroom.

This study was conducted in 4th grade class of an elementary school in Northern Bandung which consists of 30 students. Most of the students were hesitant in interacting using English because they were not confident and not interested at all to speak English. They were used to kind of class in which the teachers played dominant role in the interactions and the students were given less roles.

C. Data Collection

In gathering the data, this study used two cycles of treatments adapting from action research model of Kemmis & Taggart (1988) as cited in O'Brien (1998) which can be seen in the following picture:



Picture 3.1
Action Research Model (Kemmis & Taggart, 1988 as cited in O'Brien, 1998)

The two cycles of treatments which were applied in this study can be accessed in the following table.

Table 3.1
Two Cycles of Treatments

No	Step	Description
1	Planning	Planning was conducted to plan and design treatments which will be conducted in the classroom. The planning resulted in lesson plan for each treatment (See Appendix 3.2).
2	Treatments	Treatments were conducted to supply the students with the necessary English materials for their projects such as adjective, plural and singular, etc. There were two treatments for each cycle. Each treatment focused on English material needed by the students to present their project based on the assessment questions. To see clearly each treatment in the cycles, see Appendix 3.2 .
2	Assessments	Assessments were held for finding out students' interaction improvement progress inside the classroom. The students were asked to discuss in groups of a picture of tourism object and public place in Bandung and to describe it orally. The questions asked are: 1) What is this place? 2) What can you see in this place? 3) What can you do in this place? The questions were asked to each group of students. Each group of students should discuss together to answer the questions. While the students were discussing the answer, the teacher checked on students' interaction inside the groups using Students' Interaction Checklist Sheet (See Appendix 3.1)
4	Reflection	Reflection was conducted to reflect on what has been achieved through previous treatment and what should be done in the next treatment in order to improve students' interaction.

The data was collected through observation method. The instrument employed in observation is Students Interaction Checklist Sheet and videotaping.

1. Observation

Observation was held to find the improvement of students' interaction progress inside the classroom. The observation employed two instruments which are Students' Interaction Checklist Sheet (see **Appendix 3.1**) and videotaping. The students' interaction checklist sheet is adapted from Class Progress Chart and Class Observation Record Sheet by Sophie Ionnaou-Georgiou and Pavlos Pavlou (2003) and The Functional Analysis of Children's Classroom Talk (FACCT) by Kumpulainen and Wray (2002). The Students' Interaction Checklist Sheet includes several types of students' talks which can describe students' interaction based on how often students apply certain speaking strategies (frequency).

Videotaping was employed to gather the main data of the study. Creswell (1994) states that recording audiovisual materials, in this case, videotaping, has some advantages. First, researchers could share directly their research experiences. Second, as supported by Fraenkel and Wallen (1990) videotaping could be replayed for several times in order to check and correct the data. By using videotaping, researcher could assure their data validity. Third, the video could be used in the next relevant research. The videotaping was conducted during the teaching-learning process. Eight sessions videos were videotaped and were carefully transcribed. The transcriptions were coded to collect data related to students' interaction, students' difficulties, and students' strategies in handling the problems.

D. Research Procedures

In conducting the study, there were several steps as the following table shows:

Table 3.2
Research Procedures

No	Steps	Time	Description
1	Identifying problem of the students by conducting preliminary observation and informed interview with the classroom teacher.	Week 1-2 (February, 14th-21th)	The problem is the lack of students' interaction inside the classroom.
2	Designing project	Week 3-6 (February, 28th- March, 20th)	The project is called " 30 Days Around Bandung ". The project requires students to make a mock-up of tourism object and a mock-up of public place in Bandung. At last, they would present their mock-ups in front of audiences including parents, teachers, and invited foreigners at the end semester school celebration. The purpose of this project is to get students explore and introduce their own city, Bandung, to others, especially foreigners.
3	Designing instrument	Week 7-9 (March, 27th-April, 10th)	The instrument used is Students' Interaction Checklist Sheet (See Appendix 3.1)
4	Videotaping eight sessions of learning processes including two meetings of introduction of the project, two meetings of treatments and two meetings of assessments.	Week 10-14 (May, 1st-31st)	The videotaping was held for eight sessions. There was only one month to conduct the project therefore there were only two cycles. It is because the school authority gave limited time and there was demand from school authority that the products should be displayed in the school celebration of end semester.
5	Transcribing video	Week 15-19 (June 1st-30th)	The coding process occurred along transcribing.
6	Comparing cycle 1 and cycle 2	Week 20-25 (July 1st-31st)	The frequency of each students' talk was counted and compared.
7	Analyzing video to find the pattern of students' interaction to find to what extend PBL improves students' interaction	Week 25-29 (August 1st-31st)	The video was analyzed using The Functional Analysis of Children's Classroom Talk (FACCT) by Kumpulainen and Wray (2002).
8	Presenting the result of the study.	Week 29-31 (September, 1st-16th)	The result of the study can be seen in chapter 4.

E. Data Analysis

The data taken from students' interaction checklist sheet and videotaping were transcribed and coded. Coding would be applied based on the type of students' talks. Alwasilah (2000) states that coding helps researchers in several ways: (1) it helps the researchers to make phenomenon identification, (2) it helps the researchers to count the frequent of phenomenon existing and (3) it helps the researchers to arrange the categorizations and sub-categorization of the inventions.

Based on the research question, the data analysis would be taken from to what extent group project improves students' interaction, what difficulties which 4A students face along the completion of group project, and what strategies 4A students do to overcome the difficulties.

1. To what extent group project improves students' interaction

To what extent group project improves students' interaction was identified by analyzing the transcripts from videotaping. The video transcripts were coded based on types of students' talks.

Table 3.3
Video Transcript Codes I

Students' Interaction	Categorization			
	Main	Sub-cat.1	Sub-cat.2	Sub-cat.3
Teacher-Student	T			
• Initiate communication with teacher		T1		
a. Ask permission to talk			T1a	
b. Asks simple questions			T1b	
i. For information				T1bi
ii. For approval				T1ba
• Respond to a question or statement		T2		
• Repeat what teacher had been said		T3		
• Demonstrate a phenomenon or an experiment		T4		
• Find out something		T5		
• Express personal experiences		T6		
• Express personal feelings and emotions		T7		
• Provide information		T8		
• Express agreement or disagreement		T9		
• Give reason to support students' ideas		T10		
• Provide ideas or suggestions		T11		
• Create or revise students' talks		T12		
• Use fillers		T13		
• Express imaginative situations		T14		
• Volunteers contributions to class		T15		

• Extend what teacher had been said		T16		
Student-Student	S			
• Initiate communication with students		S1		
a. Asks simple questions			S1a	
i. For information				S1ai
ii. For approval				S1aa
• Respond to a question or statement		S2		
• Repeat what student had been said		S3		
• Demonstrate a phenomenon or an experiment		S4		
• Find out something		S5		
• Express personal experiences		S6		
• Express personal feelings and emotions		S7		
• Provide information		S8		
• Express agreement or disagreement		S9		
• Give reason to support students' ideas		S10		
• Provide ideas or suggestions		S11		
• Create or revise students' talks		S12		
• Use fillers		S13		
• Express imaginative situations		S14		
• Volunteers contributions to group		S15		
• Organize work or learning processess		S16		

2. The difficulties which 4A students face along the completion of group project

The difficulties which 4A students face along the completion of group project were identified by analyzing the transcripts from videotaping. The video transcripts were coded based on types of students' talks.

Table 3.4
Video Transcript Codes II

Students' Interaction	Categorization			
	Main	Sub-cat.1	Sub-cat.2	Sub-cat.3
Teacher-Student	T			
• Express personal experiences		T6		
• Express personal feelings and emotions		T7		
• Express agreement or disagreement		T9		
• Create or revise students' talks		T12		
• Use fillers		T13		
Student-Student	S			
• Express personal experiences		S6		
• Express personal feelings and emotions		S7		
• Express agreement or disagreement		S9		
• Create or revise students' talks		S12		
• Use fillers		S13		

3. The strategies 4A students do to overcome their difficulties

The strategies which 4A students do to overcome their difficulties were identified by analyzing the transcripts from videotaping. The video transcripts were coded based on types of students' talks.

Table 3.5
Video Transcript Codes III

Students' Interaction	Categorization			
	Main	Sub-cat.1	Sub-cat.2	Sub-cat.3
Teacher-Student	T			
• Initiate communication with teacher		T1		
a. Ask permission to talk			T1a	
b. Asks simple questions			T1b	
i. For information				T1ai
ii. For approval				T1aa
• Express agreement or disagreement		T9		
• Create or revise students' talks		T12		
• Use fillers		T13		
Student-Student	S			
• Express agreement or disagreement		S9		
• Organize work or learning processess		S16		