

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter discusses the method used by the writer in the research to find out the answer of the research question stated in chapter I. This chapter explains the research design, population and samples, data collections and data analysis

#### **3.1 Research Design**

This study implemented Collaborative Learning as a model. It is expected to improve the students' motivation to speak English. In order to achieve this objective, the study applies an experimental method. To observe a clear meaning of the facts that the writer has gained, the experimental method is applied as the operational framework of this study. Leedy (1980) suggests that experimental method deals with the phenomenon of cause and effect. The steps of experimental study are planning, analyzing, and interpreting the data.

The pre-test – post-test control group design of quasi-experimental design is applied in this study. Campbell and Stanley state that quasi-experimental design begins with a given effect and seek the experimental factor that brought it about (1966). It means that the researcher took two classes as the subjects of the study and decided one class as the control group and the other as the experimental group.

As the design of this study, the class members in experimental group are organized into small groups of four then they held a dialogue. This study used self-selection formed-group, where students chose their own group members.

Houston (1985:132) argues that performance is the expression of learning that comes about through the involvement of motivation.

### **3.2 Population and Sample**

Walizer and Wienir (1978:426) propose that research population consist of all of the units about which researcher would like to make scientific statement. The research sample is the part of the research population which is actually observed. This research study was conducted at SLTPN 1 Subang-Kuningan. The research population was the first grade students consist of three classes of 95 students.

Quota sample of purposive sampling was used in this study. It is a sample procedure which desires to have certain number of elements that some characteristics in a sample (Walizer & Wienir, 1978). In this study, two classes were selected randomly by lottery method as the sample of this study. One class was determined as control group, and the other was decided as the experimental class getting the treatment of Collaborative Learning.

### **3.3 Instrument**

The writer administered questionnaires to collect the data of motivation variable from the respondents and conducted observation to identify the students' participation in Speaking class. The questionnaires desired to find out the data about the students' motivation to speak English in speaking class through Collaborative Learning.

The questionnaires as the measuring device were constructed in order to identify the level of students' motivation to speak English. The questionnaires consisted of 23 items in the form of Likert Scale with answer choices: *Sangat Setuju* (Strongly Agree), *Setuju* (Agree), *Ragu-Ragu* (Uncertain), *Tidak Setuju* (Disagree), and *Sangat Tidak Setuju* (Strongly Disagree). Likert scale is used to measure attitude, belief, and opinion of an individual or group of people about social phenomenon (Sugiyono, 2002, in Haryanti, 2007).

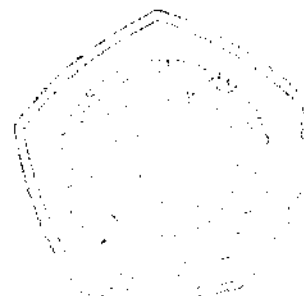
Each statement in the questionnaires consists of values 1-5, the highest one is assigned at 5 and 1 is noticed as the lowest score. The values of all students' motivation to speak English and the collaborative learning aspects were summed up and the total high score reflected the high motivation and the high collaborative learning aspect level. It is described in the tables below.

**Table 3.1**  
**The Scoring System of Questionnaire**

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Positive	1	2	3	4	5
Negative	5	4	3	2	1

The motivation questionnaire contained 23 questions which is divided into four sub-aspects, i.e. Initiation, Direction, Intensity, and Persistence. The factors were drawn based on the indicators to measure students' learning motivation that is proposed by Houston (1985:6).

The detail of instrument is illustrated as follow:



**Table 3.2**  
**Questionnaire of Motivational Aspects**

No	Aspects	Sub-Aspects	Item Number	Type
1	Initiation	Showing any interest in Speaking Class	13,21	Positive
		Having any competence in speaking English	22	Positive
2	Direction	Having any intrinsic motivation	1,6,12	Positive
			8,9	Negative
		Having any extrinsic motivation	2,3,4, 17,20	Negative
3	Intensity	Frequency of speaking English	23	Positive
		Speaking English only at Speaking test	5	Negative
		Speaking English only at familiar theme	7	Negative
4	Persistence	Having any extra time to learn Speaking	10	Positive
		Having any passion in learning Speaking	18	Positive
			11	Negative
		Having good mark in Speaking	14	Positive
		Having preparation before learning Speaking	16	Negative
		Trying to increase speaking ability	19	Positive
<b>Total</b>			<b>23</b>	

In his *Motivation*, Houston presents that when people speak of motivation, four factors which initiate and direct behavior, and those that determined the intensity and the persistence of the behavior were involved. Initiation can be assumed as the shift from the absence of activity to the performance of that activity. In addition, motivation pulls the students up and going, it energizes students, and it defines the direction or nature of the resulting behavior. Intensity confirms the intense of our effort to speak English. The final factor is persistence

which demonstrates how long the students keep trying to speak English and their struggle to make their speaking better.

For additional information of student's motivation to speak English, the writer constructed Collaborative Learning instrument in order to identify the students' attitude in collaborative way and their knowledge about Collaborative Learning term. The complete details is shown in Table 3.3.

**Table 3.3**  
**Questionnaire of Collaborative Learning Aspect**

No	Aspects	Sub-Aspects	Item Number	Type
1	Speaking act	Speaking English in front of many people	3,5	Positive
			1	Negative
		Speaking English in front of few people	2,4	Negative
2	Learning style	Learning in big class	6	Positive
		Learning in small-group class	7	Negative
		Having group work	8	Positive
3	The way of choosing group member	Choosing group member by own	9	Negative
		Choosing group member by teacher	10	Positive
4	Collaborative Learning understanding	Having knowledge of Collaborative Learning	11	Positive
		Motivated to speak English by Collaborative Learning	12	Positive
		<b>Total</b>	<b>12</b>	

As Table 3.3 shown, the questionnaire consisted of 12 questions that was divided into four sub-aspects. Speaking act was designed to identify the students' attitude

in their Speaking class. Learning style is aimed to identify the students' learning attitude in Speaking class. The next aspect was aimed to measure the students' way of choosing group member. The last aspect was aimed to identify the students' understanding of Collaborative Learning method.

The instrument must be tried out before they are administered to the sample to collect the valid and reliable data. It is expected that the result of the study is valid and reliable by using the valid and reliable data (Arikunto, 2002). The writer conducted the try-out of the questionnaires in order to test the instrument. In this study, the try-out questionnaire was administered on 14<sup>th</sup> April 2008.

Therefore, the questionnaires were administered to the sample twice. Firstly, it was administered as the trying out test and secondly as the main test. The result of the trying out test was analyzed to find out the validity and the reliability of the instruments by using Pearson Product Moment and it was computed by using SPSS (Statistical Product for Service Solution) 12.0 for Window.

Testing the validity was conducted to know whether the instrument measures what should be measured and testing reliability was aimed to identify whether the instrument produce a consistent result if it retested to the similar condition and sample. In the study, class VII-A was chosen as a trial group. The total respondents of the try-out group were 20 respondents. The try-out was aimed to test the validity and reliability of the instrument about the students' motivation to speak English and their Collaborative Learning aspects.

The second instrument is observation. The writer conducted observation in order to observe the students' attitude in speaking class, in this study it was stressed to observe the students' participation in Speaking class. The result of the observation was accumulated to the *direction* aspect in motivation instrument.

### **3.4 The Distribution of Questionnaires**

The pre-questionnaires was administered on 21<sup>st</sup> April 2008 in control group and on 24<sup>th</sup> April 2008 in experimental group. The control group consisted of 32 respondents and there were 31 respondents in experimental group. There were two students who were dropped in control group and one student who was dropped in experimental group in order to equal the number of subject, so each group of the study had 30 respondents. The pre-questionnaires was conducted to get the students' motivation to speak English and measure the Collaborative Learning aspect before the treatment.

On the other hand, the post-questionnaires was administered on 26<sup>th</sup> May 2008 in control group while the experimental group administered it on 29<sup>th</sup> May 2008. The total respondents for the control group were 32 respondents and there were 31 respondents in experimental group. In order to equalize the number of respondents, two students in control group and one student in experimental group were dropped, so each group had 30 respondents. The post-questionnaire was intended to get data to test the research hypothesis.

### 3.5 The Implementation of the Treatment

The treatment was conducted into both control and experimental groups. It was held five times from all of seven meetings. The conventional method was provided to the control group, and the experimental group passed Collaborative Learning method. The treatment was carried out on 17<sup>th</sup> April 2008 to 22<sup>nd</sup> May 2008. The implementation is figured out in Table 3.4.

As shown in Table 3.4, both groups got five topics. The topics followed the rule of main English teacher who taught them. The writer should have to continue the curriculum that had been decided and should be obeyed in order to reach the learning goal that the main English teacher had determined.

**Table 3.4**  
**Teaching Schedule for Control and Experimental Groups**

Control Group			Experimental Group		
No	Date	Material	No	Date	Material
1	17-04-2008	My Family	1	17-04-2008	My Family
2	21-04-2008	Where do you live?	2	21-04-2008	Where do you live?
3	24-04-2008	My Hobby	3	24-04-2008	My Hobby
4	15-05- 2008	Shopping Time	4	15-05- 2008	Shopping Time
5	26-05-2008	What do you want to be?	5	26-05-2008	What do you want to be?

### 3.6 The Validity Result

To test the instrument validity, the writer used item validity. It was aimed at finding out the validity of each item. The writer used SPSS version 12.0 for Window to analyze the validity of the instrument. The Pearson Product Moment Correlation formula with raw data was used to analyze the validity. Masrun (1979,



cited in Haryanti 2002) assumed that mostly used statistical technique to find out the items validity using correlation technique. He added that the item that had high validity was the one which had positive correlation with the total score and had high correlation. The complete result of instrument validity test is depicted in Table 3.5.

**Table 3.5**  
**The Validity of Students' Motivation to Speak English**

<b>Item Number</b>	<b>Coefficient Correlation (r)</b>	<b>Significance (p) = 0.05</b>	<b>Criteria</b>
1	.701(**)	.001	Accepted
2	.680(**)	.001	Accepted
3	.482(*)	.031	Accepted
4	.636(**)	.003	Accepted
5	.577(**)	.008	Accepted
6	.615(**)	.004	Accepted
7	.476(*)	.034	Accepted
8	.566(**)	.009	Accepted
9	.716(**)	.000	Accepted
10	.278	.235	Rejected
11	.539(*)	.014	Accepted
12	.342	.140	Rejected
13	.581(**)	.007	Accepted
14	.618(**)	.004	Accepted
15	.481(*)	.032	Accepted
16	.704(**)	.001	Accepted
17	.344	.137	Rejected
18	.255	.279	Rejected
19	.544(*)	.013	Accepted
20	.625(**)	.003	Accepted
21	.633(**)	.003	Accepted
22	.458(*)	.042	Accepted
23	.727(**)	.000	Accepted

Based on the data gathered from the try-out of the instrument which was administered to 20 respondents, the writer obtained the validity result as shown in

Table 3.6 which confirms the validity of students' motivation to speak English and Table 3.7 which illustrates the validity of Collaborative Learning aspect (see Appendix II). The validity score from the calculation is compared with the range in Table 3.6.

**Table 3.6**  
**Table of Coefficient Index**

<b>Coefficient Index</b>	<b>Interpretation</b>
0.800 – 1.00	Very high
0.600 – 0.790	High
0.400 – 0.590	Fair
0.200 – 0.390	Low
0.00 – 1.90	Very low

(Arikunto, 1996:258)

Comparing with the table of correlation coefficient index, there were 19 valid items and 4 invalid items i.e. items number 10, 12, 17, and 18 that should be dropped. From the table above, items number 1, 2, 4, 6, 9, 14, 16, 20, 21 and 23 were high, items number 3, 5, 7, 8, 11, 13, 15, 19 and 22 were fair. On the other hand, items number 10, 12, 17 and 18 were low, so they were called the invalid items.

The calculation of validity result of Collaborative Learning aspect confirmed that there were 11 valid items and 1 invalid item. The high items were the item number 2, 3, 4 and 8. Furthermore, the item number 1, 5, 6, 7, 10, 11 and 12 were fair (Table 3.8).

**Table 3.7**  
**The Validity of Collaborative Learning Aspect**

<b>Item Number</b>	<b>Coefficient Correlation (r)</b>	<b>Significance (p) = 0.05</b>	<b>Criteria</b>
1	.524(*)	.018	Accepted
2	.776(**)	.000	Accepted
3	.750(**)	.000	Accepted
4	.630(**)	.003	Accepted
5	.571(**)	.009	Accepted
6	.553(*)	.011	Accepted
7	.470(*)	.036	Accepted
8	.779(**)	.000	Accepted
9	.204	.389	<b>Rejected</b>
10	.511(*)	.021	Accepted
11	.513(*)	.021	Accepted
12	.591(**)	.006	Accepted

### 3.7 The Reliability

The writer used Alpha Coefficient Reliability (Arikunto, 2002: 171) to get the instrument reliability. In addition, Arikunto states that an alpha formula was appropriate formula for the instrument which has scores ranging from 1-3, 1-5, 0-3, etc (rating scale).

The computation of the reliability used SPSS ver.12 for Windows. The results of the students' motivation to speak English indicated that the instrument was reliable at coefficient 0.812. The reliability result is shown in Table 3.8

**Table 3.8**  
**The Reliability of Motivational Aspect**

Cronbach's Alpha	N of Items
.812	12

On the other hand, the computation of the instrument of Collaborative Learning aspect was presented that it was reliable at coefficient 0.887 as shown in Table 3.9 (see appendix II). The values of reliability are referred to the table of coefficient index. It is found that both reliability values are high.

**Table 3.9**  
**The Reliability of Collaborative Learning Aspect**

Cronbach's Alpha	N of Items
.887	23

For the reason that the instrument which was tried out to the respondents was valid and reliable, thus the questionnaire can be used as the instrument in order to obtain the desired data in this study.