CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses the methodology used in this study, including statements of the problem, research design, site and respondent, hypothesis, validity and reliability, data collection method, and data analysis.

3.1 Statements of the Problems

The research problem of the study is formulated in the following questions.

1) What is the dominant teaching style of the teacher?
2) Is there any correlation between the teaching styles of the teacher and students' motivation in learning English as Foreign Language?

3.2 Research Design

Since the objectives of this research were to fully understand the teacher's teaching style and investigate whether or not there is a correlation between the teaching style and students' motivation, a mixed method was applied in this study as the research methodology. Creswell (2003) and Gay, Mills, and Airasian (2009) states that mixed method is defined as a procedure for collecting, analyzing, and mixing quantitative and qualitative data in a single study in order to understand a research problem more completely. In mixed method research, a researcher collects both numeric information and text to better answer a study's research question (Heigham & Croker, 2009).

Regarding the quantitative data, this study collected and analyzed the data obtained from the questionnaires. In this research, the questionnaires were applied to analyze the independent variables, teacher teaching style, and the dependent variable, students' motivation, in which the results of these questionnaires were used to identify the degree of relationship between them. While, regarding the qualitative data, this research collected and analyzed data gained from classroom observations, documents and semi-structured interview to get detail information about the teacher's teaching style.

3.3   Research Site and Participants

This study was conducted at a senior high school in Bandung. The participants involved in this study were eleventh-grade students and an EFL teacher. The research site and participants were chosen using purposive sampling. The teacher was chosen since he was one of the best teachers at the school. The teacher holds two classes, but only a class, which involves 30 students, was randomly selected. The data were collected by using questionnaires (teaching style inventory and motivation test battery), interview guide, documents (lesson plans), and 5-meetings observation.

Since, there was a correlation statistical test conducted in this study, some points were considered in order to ensure the validity of the result, such as a sample size and normality test. Regarding the number of the sample, Creswell (2012) and Fraenkel, Wallen, and Hyun (2012) explain that to establish a connection, there should be at least 30 participants in the correlational study. It showed that the number of samples in this study had fulfilled the requirement. In addition, related to normality test, the sampling distribution was approximately a normal distribution.

3.4   Research Hypothesis

The hypothesis is defined as a prediction towards the problem of the relation between two or more variables. There are two kinds of hypothesis; null hypothesis (H_0) and the alternative hypothesis (H_a). The null hypothesis states that there is no relationship between variables observed, while the alternative hypothesis states the opposite (Hatch & Farhady, 1982). The hypotheses of this study were defined as follows.

H_0: There is no correlation between teacher's teaching style and students' motivation

H_a: There is a correlation between teacher's teaching style and students' motivation

Regarding this study, when there was a correlation between teacher's teaching style and students' motivation, the alternative hypothesis was accepted and the null hypothesis was rejected.

3.5   Validity and Reliability

3.5.1   Validity

A test is valid if the test measures what it purposes to measure (Gay et al., 2009) or in other words, it can be said that on a valid test, the test items will be closely related to the test's intended focus. When we conduct a test, we conduct the test for a purpose, and our tools must help us achieve that purpose. Therefore, it is said that validity is "the most fundamental consideration in developing and evaluating tests" (Gay et al., 2009, p. 160).

Since the instruments of this study were based on experts' theory, the validity of the instrument involves internal validity non-test. Construct validity by using expert judgment was applied. In this case, the expert judgment was applied to assess its content validity by reviewing how well items represented the intended content area.

3.5.2   Reliability

Validity and reliability are two important things in developing a test instrument. Validity is important, and reliability is needed (Arikunto, 2012). Reliability of test instrument is applied to see the accuracy of the instrument (Gay et al., 2012). In this study, the reliability testing used *Cronbach's alpha*.

$$r^-\alpha = \frac{kr^-}{1 + (k-1)\,r^-}$$

Where,

r^-á   = Cronbach's alpha reliabilty
k = Number of items in the scale
r^- = The average correlation among others

The SPSS 16.0 application was used to help the researcher finding the reliability. Item can be said reliable if r^-á > r table, while if r^-á < r table, it means that the items are not reliable. The results were as follow.

Table 3.1 *The Result of Instrument Reliability Test*

Instrument	N of Item	Cronbach's Alpha
Teaching Style Questionnaire	35	0.869
Motivation Test Battery	20	0.896

It was seen that the Cronbach's Alpha scores were 0.869 for teaching style questionnaire and 0.896 for motivation test battery. The scores of r table were 0.3338 for teaching style questionnaire (N=35) and 0.4438 for motivation test battery (N=20). It showed that r^-á > r table, so it could be inferred that those instruments were reliable.

3.6 Normality Testing

In order to ensure that the data were normally distributed, the researcher conducted a normality testing and the Kolmogorov-Smirnov test was used. Normality testing itself was used to know whether the instrument had normality or not which then showed whether the sample data come from a normally distributed population. The normal distribution of data was computed by using SPSS 16. If the result is non-significant (p < 0.05), it means that the distribution of the sample is significantly different from a normal distribution (probably normal). If the result is significant (p > 0.05) then the distribution is approaching the normal distribution (Field, 2009).

Table 3.2 *Table Normality Using One Sample Kolmogrov Smirnov*
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	6.57288611
Most Extreme Differences	Absolute	.088
	Positive	.088
	Negative	-.073
Kolmogorov-Smirnov Z		.480
Asymp. Sig. (2-tailed)		.975

a. Test distribution is Normal.

The SPSS result of normality test of data which computed by using SPSS 16.0 got p-value 0.975, it was higher than 0.05. It could be concluded that the data were normal.

3.7 Data Collection

In this research, the data were collected by using some instruments, those are questionnaires, including teaching style inventory and motivation test battery, interview guide, documents, and observation sheet.

3.7.1 Teaching Styles Inventory

Teaching Style Inventory Instrument used in this study was adapted from Grasha (1996). The instruments determined the teachers' teaching style and determined if their practices were more conducive to learning or more likely to hinder student learning. Each battery consisted of a set of statements in the scale which should be completed by respondents (Best & Kahn, 1998). These instruments were for both students and the teacher. For the students, the items were written in Bahasa Indonesia, for better understanding (DeRoche & Lahman, 2008). Whereas for the teacher, the items were written in English since the teacher is master in English. With the English items, the teacher has a better understanding, since translation version oftentimes has slightly different meanings on some items (Korb, 2012). The questionnaire contained 35-

items covering five teaching styles: expert, formal authority, personal model, facilitator, and delegator. There were 7 statements which represented each teaching style. The inventory used a five-point Likert Scale, including agree strongly (5), agree (4), unsure (3), disagree (2), and strongly disagree (1).

Table 3.3 *The Distribution of Questions in the Teaching Style Inventory*

No.	Category	Item Number	Constructs
1	Expert	1, 11, 20	Teaching method
		6, 15, 29, 31	Teacher roles, behavior and attitudes
2	Formal Authority	2, 25, 32	Teaching method
		7, 12, 16, 21	Teacher roles, behavior and attitudes
3	Personal Model	8, 13, 17	Teaching method
		3, 22, 26, 33	Teacher roles, behavior and attitudes
4	Facilitator	14, 18, 23	Teaching method
		4, 9, 27, 34	Teacher roles, behavior and attitudes
5	Delegator	5, 10, 30	Teaching method
		24, 19, 28, 35	Teacher roles, behavior and attitudes

Table 3.4 *The Questionnaire Coverage*

No.	Constructs	Question Examples
1	Teaching Method	5. Students typically work on course projects alone with little supervision from me.
		8. Students are encouraged to emulate the example I provide.
		14. Small group discussions are employed to help students develop their ability to think critically.
		17. Examples from my personal experiences often are used to illustrate points about the material.
		20. Lecturing is a significant part of how I teach each of the class sessions.
2	Teacher roles, behavior and attitudes	9. I spend time consulting with students on how to improve their work on individual and/or group projects.
		16. It is my responsibility to define what students must learn and how they should learn it.
		29. Students might describe me as a "storehouse of knowledge" who dispenses the facts, principles, and concepts they need.
		33. Students might describe me as a "coach" who works closely with someone to correct problems in how they think and behave.
		35. I assume the role of a resource person who is available to students whenever they need help.

3.7.2 Motivation Test Battery

The questionnaire consisted of a set of statements in scale which should be completed by respondents; include general information, motivation regarding English teacher evaluation and English course evaluation. The 20 items used in the questionnaire were adapted from Attitude Motivation Test Battery (Gardner, 1985). The items were measured on a 5-point Likert scale (Gao, Zhao & Cheng, 2007). The respondents were required to choose a number on a 5-point Likert scale that best represented their response to the items pertaining to the motivational factors.

Table 3.5 *The Distribution of Questions in the Motivation Test Battery*

No.	Category	Item	Question Example
1	English Teacher Evaluation	1, 2, 3, 4, 5, 11, 12, 13, 14, 15	11. Guru Bahasa Inggris saya begitu baik. 12. Semakin sering bertemu dengan guru Bahasa Inggris saya, semakin baik. 13. Guru Bahasa Inggris saya adalah salah satu orang yang menyenangkan. 14. Saya lebih memilih untuk diajar oleh guru Bahasa Inggris saya sekarang daripada guru yang lain. 15. Guru saya memberikan materi dengan cara yang menarik.
2	English Course Evaluation	6, 7, 8, 9, 10, 16, 17, 18, 19, 20	16. Belajar Bahasa Inggris di kelas ini sangat bermanfaat. 17. Kelas Bahasa Inggris ini seru dan menyenangkan. 18. Saya sangat tertarik belajar Bahasa Inggris di kelas ini. 19. Saya sangat suka kelas Bahasa Inggris ini. 20. Saya selalu berpikiran baik tentang kelas Bahasa Inggris yang saya ikuti ini.

3.7.3 Observation Sheet

Observation is defined as gathering information by watching and or listening to events, then recording what occurred (Thomas, 2003). In this study, a non-participant classroom observation was conducted

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(Creswell, 2012). In this case, the observer sat on the back of the classroom to watch and record what happened (Creswell, 2012). During the classroom observations, the researcher made notes based on the guideline. The guideline was developed from Teaching Style Inventory proposed by Grasha (1996) and Motivation Test Battery by Gardner (1985). Moreover, to construct validity for the observations, all classroom activities were recorded using a video recorder, to enable the researcher to watch the classroom observations repeatedly when it was necessary (Creswell, 2012). The classroom observations were conducted a time a week and took 90 minutes for each meeting. There were five meetings of classroom observation in total.

Table 3.6 *The Distribution of Teaching Style Items in the Observation Sheet*

No.	Teacher's Attitude	Roles	Teaching Styles
1.	Gives detailed explanations	Prescriptive adviser	Expert
2.	Questions emphasize basic knowledge and comprehension of concepts	Questioner	
3.	Gives and overview of issues involved with a problem and outlines ways to handle it	Mini-lecturer	
4.	Provides clear expectations and directs feedback to expectations. It tend to be evaluative or summative.	Provider of feedback	Formal Authority
5.	Sets high standards for project or task and believes in correct, acceptable, and standard ways of doing things	Authority holder	
6.	Has clear goals and objectives for task or project		
7.	Teaches by example	Coach	Personal Model
8.	Perceives self as a worthy role model to follow	Role model	
9.	Able to work alongside learner to provide guidance and direction		
10.	Provide feedback that helps learner enhance skills and it tends to be non-evaluative or formative and using descriptive feedback	Provider of feedback	Facilitator
11.	Ask broad questions designed to facilitate creative and critical thinking	Questioner	
12.	Able to engage individuals in a discussion of issues	Discussion facilitator	
13.	Directs responses and questions to immediate needs of the learner	Consultant	Delegator
14.	Willing to delegate tasks and responsibilities		

| 15. | Readily available to provide guidance, give advice, and suggest other resources for help | Resource person |

Table 3.7 *The Distribution of Motivation Items in the Observation Sheet*

No.	Motivation	Notes
1.	Students actively participate in the activities created by the teacher.	Teacher-students interaction
2.	Students pay attention and listen to the teacher.	
3.	Students show their excitement about being in class.	
4.	Students show respect to the teacher through verbal and non-verbal cues.	
5.	Students response promptly and positively to the teacher's request.	
6.	Students follow the teacher's direction without disruption.	Students' behavior
7.	Students discuss the material provided collaboratively.	
8.	Students use the time allocated wisely.	
9.	Students are brave to speak up.	
10.	Students stay in learning space.	

Table 3.8 *The Distribution of Elements of the Classroom Identified as Motivating*

No.	Motivation
1.	The teacher shows his enthusiasm in teaching
2.	The material is relevant to the lesson's objective
3.	The teaching-learning process in the classroom is well prepared
4.	The teacher provides many opportunities for students to practice
5.	The Students are actively participated in the teaching-learning process
6.	Variety and novelty are present in the assignments and classroom techniques
7.	The students have good rapport with the teacher and the teacher is approachable
8.	Course material is made real, concrete and understandable

3.7.4   Documents

Through documentation, the data related to the study were collected. Nawawi (1991) states that "documentation method is a method of collecting data conducted by classifying the written materials related to the problem of the study and used for obtaining the data by some variables such as magazine and books as the data" (p. 95). Another definition of documentation is also described by Ary (2000) who states that documentation is collecting kinds of document, including written form, physical or visual materials that classified into three types: personal document, official document and popular culture document (Ary, 2000).

The personal document is related to the individual, such as autobiographies and diaries. The official document is related to organizational reports such as files and memos. Popular culture document is books, films, and videos.

In this study, the documentats included lesson plans which functionally completed the research findings. The lesson plan itself is categorized as an official document. In this study, the lesson plans were used to identify the teaching method employed by the teacher in the classroom. The information about the teaching method completed the findings from other instruments regarding the first research question.

3.7.5 Interview Guide

Dawson (2010) states that interview can be used to get specific information that can be compared and contrasted with other information from other data collecting techniques. For the reasons, a semi-structured interview with open-ended questions was employed to get deeper information that supported the data gained from the questionnaires and the classroom observations. By using semi-structured interview, the researcher got deeper information by asking new questions during the interview, despite the guiding questions (Hatch, 2002). In addition, open-ended questions were used so that the respondents could answer the questions in their own way (Cohen, 2005). The questions were divided into two categories: general questions and specific questions about the teacher believe of his teaching style.

The respondent of the interview was an EFL teacher. The interview was conducted in a mixed language, English and the teacher's first language, Bahasa Indonesia, for better understanding and also to make the teacher free in expressing their ideas (DeRoche & Lahman, 2008). The process of interview was recorded to avoid the loss of the data. Gay et al. (2009) and Hancock and Algozzine (2006) state that audio tapes are the

best way to record the interview, since it is convenient, reliable, and still the original data is available at any time.

Table 3.9 *The Distribution of Items in the Interview*

No	Questions	
	General Questions	
1.	Do you hold any position in this school?	These are general
2.	How many times have you taught this class?	information about the
3.	Have you taught in other schools previously? Please, tell me your teaching experience.	teacher. This information gives a brief description of
4.	How many workshops and seminar have you joined? What are they?	the teacher background. These will be useful for
5.	On a rating scale of 1 to 5, where a 1 indicates *I do not enjoy teaching* and a 5 indicates *I really enjoy teaching*, rate the extent to which you like teaching?	the analysis process.
	Teaching Questions	
6.	What are three assumptions you make about teaching and learning?	These questions will inform whether the
7.	What teaching style means for you?	teacher is aware of his or
8.	Do you know your teaching style? Explain.	her teaching style. Grasha
9.	Is it need for a teacher to know his or her teaching styles?	(2002) states that knowledge of style could
10	Is the occurrence of your teaching styles similar to a different class? Is it actually need to change?	help the teacher in some ways.
11.	What factors influence your teaching style?	
12.	Please rank your teaching style based on Grasha's.	

3.8   Data Analysis

As mentioned before, the data were derived from questionnaires, observations, documents and interview. All the data gained were analyzed in order to answer the research questions.

3.8.1   Teaching Styles Inventory

After the teaching style inventory instrument was distributed to both students and teacher, the number of returned instruments was checked to make sure that the number of the returned instruments were the same as the given instruments. The response from both teacher and students were then uploaded into different computer files. The data were checked several

times to make sure they did not contain incorrectly entered values. This stage was important since incorrect values can affect the results (Dörnyei & Taguchi, 2010). After the responses were entered and checked, they were classified into five categories of teaching style: expert, formal authority, personal model, facilitator, and delegator.

Then, the responses frequency and the average of each category were calculated. The data of each category were arranged from the biggest calculation to the least. A teacher may possess each of the teaching styles to varying degrees (Grasha, 1996). The highest score of a teaching style category represented the most dominant style of the teacher in teaching English as a foreign language. At the end, the result of this instrument showed the teacher's teaching style based on both students and teacher's evaluation. The information gained then helped the researcher to answer the first research question.

Moreover, the students' responses to teacher's teaching styles were also correlated to students' motivation using Pearson Product Moment Correlation by assisting of SPSS 16.0. It was conducted in order to answer the second research question.

3.8.2 Motivation Test Battery

The same as Teaching Style Inventory instrument, at first, after questionnaires were distributed to the respondents, the number of returned instruments were checked. After that, the data from the questionnaire were stored in a computer file to make the calculation process easier (Dörnyei & Taguchi, 2010). The data were checked several times. Statistical analysis was then applied to the data in order to describe the students' responses to the questionnaire of motivation. The higher the score, the higher students' motivation in learning English as a foreign language. However, since the motivation test battery was developed to answer the second research question which was the correlation between students' motivation and

teaching style, the data were also then calculated using Pearson Product Moment Correlation. The formula was as follow.

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

where,

r_{xy} = coefficient correlation between X and Y

N = number of pairs of scores

$\sum XY$ = sum of the products of paired scores

$\sum X$ = sum of X scores

$\sum Y$ = sum of Y scores

$\sum X^2$ = sum of squared X scores

$\sum Y^2$ = sum of squared Y scores

However, in this study, the correlation statistical test was applied by using SPSS 16.0. The result of the data was then interpreted by using the following interpretation (Brase & Brase, 2009).

Table 3.10 *Interpretation of Correlation*

R_{XY}	Interpretation
0.70 or higher	Very strong relationship between X and Y.
0.40 to 0.69	Strong relationship between X and Y
0.30 to 0.39	Moderate relationship between X and Y
0.20 to 0.29	Weak relationship between X and Y
0.10 to 0.19	Negligible relationship between X and Y
0	No relationship between X and Y

3.8.3 Observation Sheet

The data from classroom observation were analyzed to support the data from questionnaires and interview. First, the video recorded was transcribed. To check the accuracy, the transcription was then reviewed while also checking the notes from observation sheet. Important information on the observation and or transcription was highlighted. The data were then associated with the result of the questionnaires. It helped the researcher to answer the research questions. The steps applied in this

study in analyzing classroom observation were relevant to the statement proposed by Creswell (2012).

3.8.4 Documents Analysis

The documents, which were lesson plans, were analyzed into several steps proposed by Miles and Huberman cited in Sugiono (2009) and Ary (2010), those are as follows:

a. Coding the data

In the first step, the large amount of data collected were organized in the same classification by reading over and over. It was categorized based on the same unit.

b. Reducing the data

The coding categorized were narrowed to summarize based on the research problem. Then, the important data needed were selected to make a clear representation of the most accurate finding topic. The data were selected to qualify the answer to the research questions.

c. Displaying the data

The most common technique in displaying qualitative data is in the form of a narrative essay, even if so many forms of graphic or table can be used. It is expected that the data are easier to read before drawing a conclusion by displaying data in the form of narrative.

d. Interpreting the data

The last step was making a temporary conclusion after simplifying each connection among categorical of displaying data and explaining the findings which have been verified. The findings and topic discussions were concluded and interpreted to support the answer to research questions.

3.8.5 Interview Guide

After interpreting the result of questionnaires and observation sheet, data analysis of interview was conducted. The tape-recorded interview was transcribed to written language. After transcribing the interview, the transcriptions were then reviewed against the tape for accuracy. After that, a careful reading of the transcript was applied and some statements which represented the perspective related to the research questions were labeled (Gay et al., 2009; Kvale, 1996). In this stage, the information collected was attributed to some theories related to teaching style. The data gained were then interpreted into findings as a descriptive report to support the data from questionnaire and observation. At last the data were triangulated by making a comparison and contrast to enhance the validity of this study.