CHAPTER 3
RESEARCH METHODOLOGY

This Chapter describes the research design and data collection instrument used to determine whether an association exists between two independent variables (motivation and foreign language anxiety) and one dependent variable (speaking performance). This chapter also provides detail of the guidelines that are used to accomplish the research investigation.

3.1 Research Design

The present study tried to explore the extent to which the participants are anxious and motivated, the correlation among these factors, and to ascertain the influence of these factors toward students' speaking performance. The results were obtained through correlation analysis and multiple regression analysis. In addition, mixed methods with embedded design was used to support the quantitative inquiry. Therefore, secondary qualitative data was gathered through semi-structured interview to understand the reasons for the correlational results.

This study involved collecting the data to answer questions concerning the current status of identified variable to provide systematic information about the phenomenon in the research issues (Gay, 1987). The analysis and synthesis of the collected data provided the test of the hypothesis. Therefore, the collection of data required careful selection of the units studied and careful measurement of each variable. Moreover, This study investigated attributive variables, a kind of characteristics that should be possessed by the participants of study before a researcher began her study (Ary et.al, 2010. p.331). This research was also conducted in naturally occurring situation and context without manipulating variables (Nunan & Bailey, 2009).

The independent variables involved in this research are Students' Foreign Language Anxiety (X1) and Students' Motivation (X2) that are predicted to make a change toward Students' Speaking performance (Y) as the dependent variable. The basic procedures used in this research were observing about the variables

studied, investigating the current theory about the issues selected, hypothesizing

an explanation for those observations. Prediction was developed based on the hypotheses by formulating a plan to test the prediction. As soon as the information was collected, it was processed and verified by making conclusions.

The variables issued were isolated and correlated to define the magnitude and frequency of relationships. To determine whether there are any significant correlations among learner anxiety, motivation and language proficiency, Pearson product-moment correlation coefficients for each pair of the learner variables and the students' English speaking proficiencies were calculated. Finally, to determine the best predictor of a students' language achievement among the investigated variables, a multiple linear regression procedure is used to analyze the data.

This research was based on the hard documents, theory interpretations, data populations (questionnaires with a total number of population and sample selection), and data analysis. The analysis and interpretation relied on the quantitative data as the major source of data supported by limited secondary qualitative data through semi-structured interview to legitimize the quantitative inquiry. A further detail of the research methodology is provided in the followings.

3.2 Data Collection

This section comprises detailed information about the setting, subject of the research, instrumentation, data collection and data analysis procedures.

3.2.1 Population, Setting and Sample

The population of the subjects involved in this research was the 2nd grade students in one of Private Vocational High School located in Kiaracondong Bandung West Java. They were all fourth semester students with total number of population were241 students. There were 72 students from two classes taken as sample and chosen purposively in this research. This research used purposive sampling technique which was selective in the sense that the subjects selected were the ones who were involved in the process of teaching and learning and could provide information or data needed for this research. In addition, the subjects in the research site were chosen due to its support and accessibility (Patton, 1980. in

Alwasilah, 2002). Furthermore, since the researcher was one of the teaching staffs

there, the permission to do the research in this Vocational School was obtained.

The population was taken because of its accessibility and the research site was basically chosen because it was open to researcher who wanted to conduct the research there. Participation is voluntary and data are collected from these students throughout the final semester examination.

3.2.2 Questionnaires

At the marrow of the study is a questionnaire-type survey that is the foundational tool for the collection of objective quantitative data. The questionnaire used in this research was composed of two sections. It consisted of questions adapted from Gardner's socio-educational model of motivation, foreign language anxiety, and test anxiety theories. Questionnaire items were adapted to suit the current study. First, the questionnaire items were trimmed. Altogether, the original number of items from these questionnaires is 137: the International AMTB has 104 items and the FLCAS has 33 items. Second, the items from different instruments are generally measured on different scales. The International AMTB is on a 6-point scale and the FLCAS is on a 5-point scale. To make the item format consistent, all of the items were adjusted to be on a 5-point Likert scale.

Recognizing possible problems that one may face in translating research questionnaires (e.g., comparability of parameters and semantic problems). The questionnaire items were translated into Bahasa Indonesia. The translated questionnaire was back translated and evaluated by an expert in English as Foreign Language (EFL) education to ensure accuracy.

The Attitude/Motivation Test Battery (AMTB) is an instrument operationalizing Gardner's (1985a, 2001b) socio-educational model. A variation of this instrument, the international AMTB, was adopted and adapted in this research. The international AMTB was recently developed to test the generalizability of the socio-educational model in different English as Foreign Language contexts (Gardner, 2006). This scale, building on the original AMTB with certain items adjusted to suit the English as a Foreign Language context, originally investigated students' motivation in learning a foreign language in Croatia, Poland, Romania, and Spain. While the reliability of the international

AMTB has not been reported in any study so far, the AMTB was reported to

demonstrate a reasonable level of overall reliability (.85) (Gardner, 1985b). Since this research was conducted in Indonesia where English is taught as a foreign language, the international AMTB was considered an appropriate instrument. Items in the international AMTB are presented in this fashion: "I wish I could speak many foreign languages perfectly," followed by a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neutral (3), strongly agree (4), to strongly disagree (5).

For the current study, in order to gain a more comprehensive data, anxiety measures in the international AMTB were dropped and substituted with more specific anxiety instruments, FLACS by Horwitz, Horwitz & Cope. (1986). Other research has also suggested using a separate instrument for anxiety when the AMTB was employed (Hashimoto, 2002). A high score of the socio-educational concepts from the international AMTB indicates more favourable attitudes and higher motivation. There are two sub components of attitudes toward the learning situation (evaluation of the language instructors and evaluation of the language course), three sub components of integrativeness (integrative orientation, interest in English, and attitudes toward the English-speaking group), a scale of instrumentality (instrumental orientation), and three sub components of motivation (motivational intensity, desire to learn English, and attitude toward learning the language).

Table 3.1
Constructs and scales of the adapted AMTB

Original Version	Adapted Version
Construct 1: Integrativeness	Subtest 10: Language class anxiety (10 items)
Subtest 1: Integrative orientation (4items)	Subtest 11: Language use anxiety (10 items)
Subtest 2: Interest in foreign languages (10 items)	
Subtest 3: Attitudes toward the target language group (10 items)	
Construct 2: Attitudes toward the Learning Situation	
Subtest 4: Evaluation ofthe language instructors (10 items)	
Subtest 5: Evaluation of the language course (10items)	
Construct 3: Motivation	
Subtest 6: Motivation intensity (10 items)	
Subtest 7: Desire to learn the language (10 items)	
Subtest 8: Attitudes toward learning the language (10 items)	
Construct 4: Instrumental Orientation	
Subtest 9: Instrumental orientation (4 items)	
Construct 5: LanguageAnxiety	

Construct 1: Integrativeness
Subtest 1: Integrative orientation (4items)

Construct 2: Motivation
Subtest 2: Motivation intensity (10 items)
Subtest 3: Desire to learn the language (10 items)
Subtest 4: Attitudes toward learning the language (10 items)

Construct 4:Instrumental Orientation
Subtest 5: Instrumental orientation (4 items)

Construct 5: Foreign Language Anxiety
Subtest 6: Communication Apprehension (11 items)
Subtest 7: Fear of Negative Evaluation (13 items)
Subtest 8: Test Anxiety (9 items)

For the purpose of tailoring the questionnaire to suit the current research context, some constructs and sub components from the AMTB were deleted. This research focus on students' motivation and anxiety in Indonesian context, more specifically the local setting context. Therefore, Parental influence, attitudes toward the learning situation (evaluation of the language instructors and evaluation of the language course) and two sub components from the integrativeness construct were removed. The construct of Language anxiety, including the sub components of English use anxiety (10 items) and English class anxiety (10 items) were deleted, as more specific instruments on language anxiety and test anxiety were used. Horwitz, Horwitz & Cope. (1986:125) designed the Foreign Language Classroom Anxiety Scale (FLCAS) (see Appendix A) as a standard measurement to determine levels of foreign language anxiety. The instrument has been used widely and consistently shows a moderate negative correlation between anxiety and language achievement. The FLCAS is a 33-item instrument that determines the degree to which students feel anxious during language classes by assessing their communication apprehension, test anxiety, and fear of negative evaluation in the foreign language classroom. Each item is a statement followed by a five-point Likert response scale, with which the participants indicate the degree to which they agree or disagree with each of the items. Items on this scale are both positively and negatively worded. When the negatively worded items are scored, the scale is reversed. The total possible score ranges from 33 to 165. with the higher scores indicating higher levels of foreign language anxiety. Considering that keeping all the items would make it impossible to be completed within a 25-30-minute timeframe, items that were termed very similar were trimmed. For example, to measure the sub component of attitude toward learning English, items were phrased like this: "I really enjoy learning English"; "Learning English is really great"; "I love learning English." In addition, some wordings in the questionnaires were refined or added to make the items specific and easy to understand. For example, "foreign language(s)" was changed to "English" to be specific for this research.

Table 3.2. *The validity of the questionaires*

	r_{count}	r_{table}	Validity
Motivation			
item 1	.343**	0.2319	Valid
item 2	.494**	0.2319	Valid
item 3	.501**	0.2319	Valid
item 4	.394**	0.2319	Valid
item 5	.458**	0.2319	Valid
item 6	.668**	0.2319	Valid
item 7	.703**	0.2319	Valid
item 8	.768**	0.2319	Valid
item 9	.581**	0.2319	Valid
item 10	.670**	0.2319	Valid
item 11	.774**	0.2319	Valid
item 12	.701**	0.2319	Valid
item 13	.625**	0.2319	Valid
item 14	.647**	0.2319	Valid
item 15	.378**	0.2319	Valid
item 16	.364**	0.2319	Valid
item 17	.567**	0.2319	Valid
item 18	.806**	0.2319	Valid
item 19	.530**	0.2319	Valid
item 20	.691**	0.2319	Valid
item 21	.837**	0.2319	Valid
item 22	.581**	0.2319	Valid
item 23	.663**	0.2319	Valid
item 24	.750**	0.2319	Valid
item 25	.381**	0.2319	Valid
item 26	.724**	0.2319	Valid
item 27	.346**	0.2319	Valid
item 28	.636**	0.2319	Valid
Anxiety			
item 1	.646**	0.2319	Valid
item 2	.458**	0.2319	Valid
item 3	.685**	0.2319	Valid
item 4	.541**	0.2319	Valid
item 5	.381**	0.2319	Valid
item 6	.444**	0.2319	Valid
item 7	.303**	0.2319	Valid
item 8	.601**	0.2319	Valid
item 9	.486**	0.2319	Valid
item 10	.433**	0.2319	Valid
item 11	.331**	0.2319	Valid
item 12	.635**	0.2319	Valid
item 13	.731**	0.2319	Valid
item 14	.345**	0.2319	Valid
item 15	.322**	0.2319	Valid
item 16	.615**	0.2319	Valid
item 17	.699**	0.2319	Valid
item 18	.674**	0.2319	Valid
item 19	.367**	0.2319	Valid
item 20	.542**	0.2319	Valid
item 21	.599**	0.2319	Valid
item 22	.487**	0.2319	Valid
item 23	.504**	0.2319	Valid
item 24	-.454**	0.2319	Valid
item 25	.420**	0.2319	Valid
item 26	.612**	0.2319	Valid
item 27	.684**	0.2319	Valid
item 28	.659**	0.2319	Valid
item 29	.354**	0.2319	Valid
item 30	.621**	0.2319	Valid
item 31	.559**	0.2319	Valid
item 32	.645**	0.2319	Valid
item 33	.544**	0.2319	Valid

To ensure the validity of the questionnaires used in this study, Pearson correlation between the individual items and the total score was computed. The result in table 3.2 shows that all of the item questionnaires are valid.

Table 3.3. *The reliability of the questionaires*

Factors	*Range of α-value*	
	Anxiety	Motivation
Individual item	.930 - .934	.923 - .929
Overall	.934	.929

The overall reliability of the questionnaire was measured by calculating Cronbach's Alpha (α) using SPSS. It was found that the overall coefficient was .934 for anxiety and .929 for motivation while the individual item reliability range was found .930 - .934 for anxiety items and .923 - .929 for motivation items. All of the values are highly appreciating due to having acceptable range.

3.2.3 Semi-Structured Interview

Based on the amount of the structure involved, there are three types of interview in research: 1) informal (unstructured), 2) semi-structured, and 3) formal (highly structured or standardized) interview (Fraenkel & Wallen, 2003). The type of interview used in this research was semi-structured interview. This type of interview was chosen because of its fairly open framework which allows a great deal of flexibility in the kind of information to be obtained (Patton, 1990). Furthermore, it allows the researcher to respond to the situation at hand while bringing up information that the researcher might not anticipate, potentially shedding a whole new insight onto a problem (Fraenkel & Wallen, 2003). The language used in interviews with participants was Bahasa Indonesia. Since the researcher conducted interviews with the participants in Bahasa Indonesia, their native language, it was possible for the researcher to catch the linguistic nuances and cultural connotations behind their overt expressions.

3.2.4 Students' Speaking Test

Oller (1979) defines language test as a device that tries to assess how many students have learned a foreign-language course or some parts of course. In this definition, Oller refers to the measurement of how far students master the learning materials and reach the objectives of language course. Ur (1996) also points out that test can also be used to assess for some purpose external to current teaching. She suggests that the techniques of speaking test to test oral proficiency can be conducted by using questions and answers, monologue, making dialogues, role plays and debate. In order to explore students' speaking performance, students were given a monologue-speaking test with partially interactive speaking situation where the audience cannot interrupt the speech (Nazara, 2011. p.29). This type of test was chosen as the research was intended to find out the influence of students' emotional state toward their speaking performance.

The speaking test was assured for its face and content validity. Face validity is concerned if the test appears to test what the name of the test implies (Dick&Hagerty,1971 as cited in Sak,2008,p.18). Furthermore, the test was adjusted to the requirement of the course and students' level of proficiency. Clear instruction was given and the topic and genre was carefully selected to ensure its reliability.

The researcher scored the students' speaking test by using speaking scoring rubric. Analytic speaking scoring schemes were preferred over holistic schemes by many speaking specialists for some reasons. Rubric demonstrates clearly how assignments are evaluated, the evaluation criteria that are established by putting language elements and expectations for assignment (Nakamura & Valens, 2001 as cited in Rahman, 2010). Besides, using rubrics in speaking will reduce grading time. Teachers does not need to think repeatedly to give the score towards the students" speaking ability (Kitao & Kitao,1996). Furthermore, the advantages of using scoring rubric are related to timing, standard credibility, objectivity and consistent grading (Kitao & Kitao, 1996).

Thornberry (2005: 127) proposes two main ways of scoring in spoken test, holistic scoring and analytic scoring. In line with the description above, Madsen

(1983: 167) states that holistic scoring is used to evaluate a wide variety of criteria

simultaneously such as appropriateness, fluency, grammar, vocabulary, and pronunciation. He states that the holistic scoring concentrates on communication while not overlooking the components of speech. In this type of scoring, the rating scale can be adapted for the use of teachers, and teachers can prepare their own scale (Madsen, 1983: 169-170). The scale is applied to achieve the consistency in scoring. For detailed definition of its scale interval can be seen in the table of scoring rubric as follows:

Table 3.4.

The Scoring Rubric of Speaking Performance

Fluency	
Score	Indicator
21-25	Fluent communication
16-20	Good communication
11-15	Satisfactory
6-10	Communication hesitant
0-5	Communication minimal
Vocabulary	
Score	Indicator
21-25	Wholly appropriate
16-20	Few limitation
11-15	Sometimes limited
6-10	Limitation affected the task
0-5	Inadequate for the task
Grammar	
Score	Indicator
21-25	Clear and appropriate use of grammar
16-20	Few inaccurate grammar
11-15	Inaccuracy of grammar do not seriously Impede understanding
6-10	Inaccuracy of grammar do not impede Understanding
0-5	Inaccuracy of grammar makes Understanding almost impossible
Pronunciation	
Score	Indicator
21-25	Clear pronunciation
16-20	Few inaccurate pronunciation
11-15	Inaccuracy of pronunciation do not Seriously impede understanding
6-10	Inaccuracy of pronunciation do not impede Understanding
0-5	Inaccuracy of pronunciation makes understanding almost impossible

Source: Adapted from Thornberry (2005)

In conclusion, there are 3 variables explored in this research. Students' level of anxiety and motivation, are independent variables and students' speaking performance is the dependent variable. Constructs of the three variables used in this research are described in Table 3.5.

Table 3.5

The variables of the study

Variabel	Indicators	Instrument
Foreign Language Classroom Anxiety	1. Communication Apprehension 2. Test Anxiety 3. Fear of negative Evaluation	FLCAS Questionnaire
Motivation	1. Motivational Intensity 2. Attitudes toward Learning English 3. Integrative Orientation 4. Desire to Learn English 5. Instrumental Orientation	Adapted AMTB Questionnaire
Speaking performance	1. Fluency 2. Grammatical Accuracy 3. Vocabulary 4. Pronounciation	Oral Test

3.3 Procedures

Students were not told that the affective factors of anxiety and motivation were being studied. The participants were assured that their identity would not be revealed and that their decision to participate (or not) would not affect their class grade. This precaution was taken with the intention ofmaking the students feel comfortable with the entire procedure, to give thema chance to ask any questions, and to reduce any anxiety that could be caused by having to deal with the unexpected.

First, permissionis obtained from the principal of SMK (Vocational School) in the Central Bandung West Java to conduct this research and also to administer the English test and questionnaires on anxiety and motivation. Data collection for the present study was conducted in two weeks. The following table

is the schedule of data collection for this research.

Table 3.6

The Schedule of Data Collection

Time & Date	Duration	Activity
Sunday, May, 8th , 2016	120 minutes	Taking questionnaire data, speaking test Video recording, and taking interview data
Tuesday, May, 10th , 2016	90 minutes	Taking questionnaire data, speaking test Video recording, and taking interview data
Saturday, May, 13th , 2016	90 minutes	Taking questionnaire data, speaking test Video recording, and taking interview data
Monday, May, 16th , 2016	30 minutes	Taking questionnaire data, speaking test Video recording, and taking interview data

3.4 Data Analysis

In supporting the findings from observation, the findings from interview were cited in the analysis following Creswell's (2003. p.197) suggestion to use the wordings from participants to give a detailed descriptive portrait. The wordings from interview were also compared and contrasted with the data from observation, theories and previous studies on language anxiety. As soon as the data has been received, the questionnaires are computed. The total average of each item is categorized as follow.

Table 3.7

Component Level of Questionnaire Responses

Mean Score Range	Component Level
4.21 – 5.00	Extremely high
3.41 – 4.2	High
2.61 – 3.4	Moderate
1.81 – 2.6	Low
1.00 - 1.80	Extremely low

Based on their total score of the questionnaire, the participants are then grouped into three equal categories of 'extremely high', 'high,' 'moderate, 'low', and 'extremely low' based on their scores on each of the three questionnaires. .

Table 3.8
Anxiety Score Range Category

Anxiety Level	**Score Range**
Extremely low	33-59
Low	60-86
Moderate	87-113
High	114-140
Extremely high	141-165

For example, the total possible score on the anxiety scale is 33-165. All the participants who obtained scores between 33 and 59 are considered to have little or no language anxiety and placed in the "extremely low" category. Students who scored between 60 and 86 are considered to experience low levels of anxiety and placed in the "low" category. Students who scored between 87-113are considered to experience moderate levels of anxiety and placed in the "moderate" category while those who scored between 114 and 140 are considered to be highly anxious and those who scored between 141 and 165 are placed in extremely high category.

The students' motivation level is identified by adding up the scores of all the 28 questions items, ranging from 28 up to 140. These scores further assigned to a category of five motivation levels namely extremely low, low, moderate, high, extremely high. The categorization of students' motivation is presented in the following table.

Table 3.9
Motivation Level Category

Motivation Level	**Score Range**
Extremely low	28 – 49
Low	50- 72
Moderate	73 – 95
High	96 – 118
Extremely high	119 – 140

The data from interview were transcribed and analyzed qualitatively. The interview data were analyzed to collaborate and confirm the findings from observation and questionnaire in answering the second and third research question. In analyzing the data, the researcher carried out several steps. First, data

from interview were transcribed. Second, the transcribed data were coded by

following Alwasilah's coding strategy (2002. p.232) by categorizing the data based on the responses given by the teachers. Third, the result of coding was condensed to confirm or contradict the findings obtained from observation and questionnaire.

To determine whether an association exists between two independent variables (motivation and foreign language anxiety) and one dependent variable (speaking performance), Pearson product-moment correlation coefficients for each pair of the learner variables and the students' English speaking proficiencies are calculated. Finally, to determine the best predictor of a students' language achievement among the investigated variables, a multiple linear regression procedure is used to analyze the data.