

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

Chapter II has accommodated literature reviews related to teacher-student rapport and English speaking performance. This chapter will provide research methodology of this research which includes research design, research participants, data collection techniques, and data analysis, as elaborated below.

#### **3.1 Research Design**

This study employed mixed method research design since this study combined the elements (viewpoints, data collection, and analysis) of quantitative and qualitative research approaches in order to find better research results than if using quantitative or qualitative only. The type of mixed method research implemented in this study was the sequential explanatory model because the quantitative method (phase 1) was implemented first and the qualitative method (phase 2) was administered to follow up the result discovered by the quantitative method and elaborated it more (Creswell & Plano Clark, 2011). Regarding this, phase 1 and phase 2 were organized to answer the different research questions as elaborated below.

##### **3.1.1 The Quantitative Method (Phase 1)**

The quantitative method was performed to examine the research question 1, which concerned on the correlation between teacher-student rapport and student's English speaking performance. The type of quantitative method applied was correlational study administered to test statistical relationships between variables (Hamied & Malik, 2016) and to determine whether they show any consistent pattern of relationship (Gravetter & Forzano, 2016).

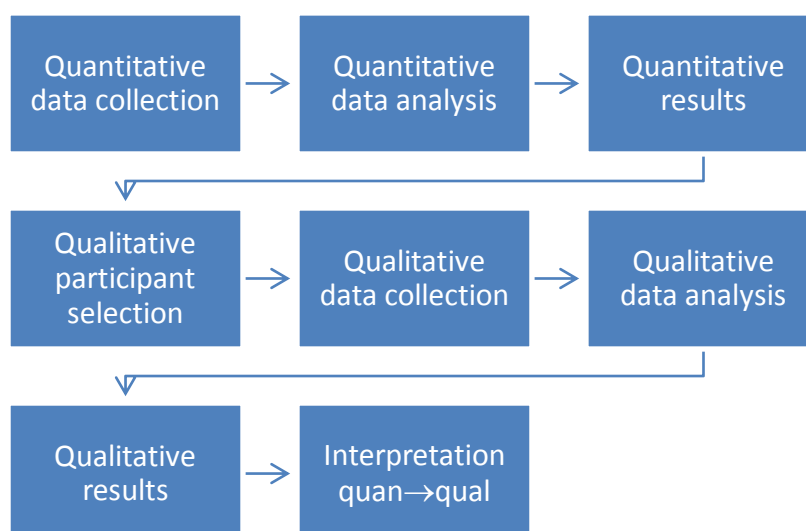
##### **3.1.2 The Qualitative Method (Phase 2)**

This phase was performed when the phase 1 had been completely administered and resulted that there is a significant correlation between teacher-student rapport

and students' speaking performance. The qualitative method (phase 2) was implemented to support the results gotten from the quantitative method implementation (Ivankova, Creswell, & Stick, 2006). In this research, the qualitative method was performed to elaborate more the results discovered in research question 1 investigation in terms of the related aspects of teacher-student rapport and students' speaking performance and to answer the second research question which aimed to discovered teacher's strategies in building rapport in an ELT context.

This phase considered case study research design since it deeply explored the holistic and meaningful characteristics of real-life events (Yin, 2009). The behavior of the research participants in this study cannot be manipulated and this study also purposed to investigate "how" and "why" questions, specifically "how" teacher-student rapport and students' speaking performance and "why" the English teacher being researched is competent in building positive rapport by exploring the teacher's strategies to build rapport in English speaking class (Yin in Baxter & Jack, 2008).

In line with the explanation above, overall, the research design of this study was drawn in a figure below.



**Figure 3.1 The Sequential Explanatory Model of Mixed Method**

### 3.2 Research Site and Participants

The present study was conducted in one public school in Batang Hari, Jambi. This research site was considered since the burning issue elaborated in the background of the study was happened in the context of senior high school in Indonesia and the study which explored the correlation between teacher-student rapport and students' English speaking performance had not been investigated yet in this site.

The participants of the present study were distinguished based on each research question. There were 112 eleventh grade students in the second semester involved to examine the first research question in the quantitative phase, four eleventh grade students to investigate the first research question in the quantitative phase as the volunteers taken from 112 students involved in the quantitative phase, and an English teacher to answer the second research question since this phase employed case study research design.

The students in the eleventh grade were expected to be available to be research participants because English was not a new subject for them because they had taken this subject before, so that they have been being interacting with their English teacher since they were in the tenth grade and the second semester of eleventh grade. The 112 students are all eleventh grade students taught by an English teacher involved in this study. The English teacher was different from the majority of English teachers in Indonesia. She was selected to join a teacher exchange program in New Zealand several years ago and she is very famous in her regency as the most friendly and cheerful English teacher. She decided to ask their Indonesian students to call her nickname instead of calling her as "Ibu"/"Ms.,"/ "Mrs.,"/ "Ma'am" like other teachers did.

Regarding the students involved in this research as elaborated above, the descriptive analysis of participant characteristics is necessary to provide an overview of the research participants from the group investigated and to find out the information about participants' background. Such information can be used as the additional material to explain the research results obtained. The processed data about respondents' characteristics would be shown and elaborated below.

### 3.2.1 Students' Characteristics Based on Gender

From the 112 samples involved, 36% (40 students) of this research respondents are male, while the rest of the respondents, as many as 64% of respondents (72 students) are female. This fact showed that the sample involved in this research was dominated by female students.

### 3.2.2 Students' Characteristics Based on Age

Based on the result of this investigation, it could be concluded that from the 112 participants obtained, 92% (103 students) of the research participants attain the age of 16<sup>th</sup> years old. Then, 8% of 112 respondents (9 students) are 15<sup>th</sup> years old. The data showed that the sample involved in this research were dominated by 16<sup>th</sup> years old students. Although they are in the same grade which is eleventh grade of senior high school, there was a year difference between the two age group students, since there were some students who registered formal school earlier than they have to. The data is shown in the following table.

**Table 3.1 Age of Participants**

Age	Frequency	%
16 <sup>th</sup> years old	103	92%
15 <sup>th</sup> years old	9	8%
<b>Total</b>	<b>112</b>	<b>100%</b>

### 3.3 Data Collection Techniques

Since there are two research questions proposed in this study, the elaboration of data collection would be categorized based on each research question. As a brief explanation, a speaking test and a teacher-student rapport scale were given to students for examining the correlation between teacher-student rapport and English speaking performance (the research question 1-phase 1/quantitative), face to face student interviews were established for examining the related aspects of teacher-student rapport and student's speaking performance (the research question 1-phase 2/qualitative), and observation followed by teacher interviews were performed for investigating teacher's strategies in building rapport in ELT

classroom (the research question 2/qualitative). The detail explanation would be discussed below.

### **3.3.1 Data Collection for Examining the Relationship between Teacher-Student Rapport and English Speaking Performance.**

As elaborated previously that there were two phases in examining the research question 1 and the process of collecting data were distinguished based on the quantitative phase and the qualitative phase as follows.

#### **3.3.1.1 The Quantitative Phase (Phase 1)**

As mentioned above, there were two instruments used to answer the first research question (phase 1), namely, a speaking test and a teacher-student rapport scale. The two instruments will be discussed in detail as follows.

#### **A Data Collection for Student-Teacher Rapport**

An instrument developed by Creasey, Jarvis, & Knapcik (2009), the Student-Instructor Relationship Scale (SIRS) was administered to measure teacher-student rapport. This study used 19 items of scale categorized into two dimensions; 11 items for capturing teacher connectedness and 8 items for investigating students' anxiety in their interaction with English teachers. The participants had to consider different rapport qualities with teachers on a 7-point (1 = strongly disagree- 7 = strongly agree). This scale had been used by previous research by Ayodele, Aladenusi, & Akinlana (2014) in order to examine the interrelationships among personality factors, academic emphasis, students-lecturers relationship and academic achievement orientation of Nigerian undergraduates in Southwest Nigeria.

The range of teacher-student rapport (teacher connectedness dimension) was interpreted based on the following range.

1,00 – 1,80	=	Very low
1,81 – 2,60	=	Low
2,61 – 3,40	=	Fairly high
3,41 – 4,20	=	High

4,21 – 5,00 = Very High

Next, the range of teacher-student rapport (anxiety dimension) was interpreted based on the following range.

1,00 – 1,80 = Very low  
 1,81 – 2,60 = Low  
 2,61 – 3,40 = Fairly high  
 3,41 – 4,20 = High  
 4,21 – 5,00 = Very high

In addition, in order to make sure the validity and reliability of this instrument, the pilot study was administered and resulted as elaborated below.

### 1. Validity Testing

The validity scores of rapport instrument indicators were investigated by comparing  $r_{obt}$  to  $r_{table}$ , also known as correcting item-total correlation formula. The test used a two-tailed test with a significance level of 0.05. If  $r_{obt} > r_{table}$ , it means that the measurement is valid, but when  $r_{obt} < r_{table}$ , this means that the instrument was declared invalid. The validity test result will be presented in a table below.

**Table 3.2 The Validity Test Result of Teacher Connectedness Dimension**

No	Indicator	$r_{obt}$	$r_{table}$	
1	Connectedness 1	0.501	0.186	Valid
2	Connectedness 2	0.572	0.186	Valid
3	Connectedness 3	0.686	0.186	Valid
4	Connectedness 4	0.640	0.186	Valid
5	Connectedness 5	0.582	0.186	Valid
6	Connectedness 6	0.637	0.186	Valid
7	Connectedness 7	0.369	0.186	Valid
8	Connectedness 8	0.400	0.186	Valid
9	Connectedness 9	0.294	0.186	Valid
10	Connectedness 10	0.459	0.186	Valid
11	Connectedness 11	0.468	0.186	Valid

The calculation above showed that each indicator used to measure the teacher connectedness dimension of rapport produced  $r_{cal}$  coefficient greater than  $r_{table}$ , thus it could be concluded that each indicator proposed in this rubric was declared valid, which meant that the indicators could measure what have to be measured. Then, following is the result of validity calculation of anxiety dimension for measuring rapport.

**Table 3.3 The Validity Test Result of Student's Anxiety Dimension**

No	Indicator	$r_{obt}$	$r_{table}$	
1	Anxiety 1	0.265	0.186	Valid
2	Anxiety 2	0.537	0.186	Valid
3	Anxiety 3	0.535	0.186	Valid
4	Anxiety 4	0.543	0.186	Valid
5	Anxiety 5	0.620	0.186	Valid
6	Anxiety 6	0.580	0.186	Valid
7	Anxiety 7	0.564	0.186	Valid
8	Anxiety 8	0.454	0.186	Valid

From that calculation, it could be seen that each indicator used to measure anxiety dimension of rapport produced  $r_{obt}$  coefficient greater than  $r_{table}$ , thus it can be concluded that each indicator proposed in this rubric was declared valid. It reflected that the indicators of the scale used could measure what have to be measured.

## 2. Reliability Testing

Reliability testing for teacher connectedness and anxiety dimension of rapport variable were established by considering Cronbrach's alpha formula. A variable would be reliable if it gives a Cronbrach's alpha value as much as  $> 0.60$  (Ghozali, 2011). The reliability test result in this study could be seen in the table below:

**Table 3.4 The Reliability Test Result of Teacher Connectedness****Dimension**

Cronbach's Alpha	N of Items
.831	11

**Table 3.5 The Reliability Test Result of Student's Anxiety Dimension**

Cronbach's Alpha	N of Items
.798	8

From the table 3.5, it could be concluded that teacher connectedness dimension instrument was declared reliable since the result of calculation produced Cronbrach's alpha value as much as 0,831 and this value is higher than 0,6. Then, from the calculation of anxiety dimension instrument's reliability showed in the table 3.6 above, the value obtained was 0,798 which is also higher than 0,6 which means that the anxiety dimension instrument was reported reliable.

**B Data Collection for Students' Speaking Performance**

Speaking performance can be measured by considering students' score as their achievement on speaking activity. As Koretz (2000) supported that student's scores are reasonable measures of educational output. In this research, students' speaking performance was measured by a speaking test in the form of role play, scored by three English teachers. The respondents were grouped (two students for each group) and performed the script they prepared by themselves. The role play was instructed in the context of "expressions of giving and responding opinions" as the learning content the students had learned, written in the basic competence 4.2 in 2013 curriculum syllabus for senior high school eleventh grade.

Role play was used because it has some benefits in assessing speaking. Firstly, it opens some window of opportunity for students to use discourse that might otherwise be difficult to elicit (Brown, 2001). Besides, it may be more natural than if teacher were involved in speaking activity (Hughes, 2003). In assessing students' speaking performance through role play, the speaking rubric used was Brown's oral proficiency test scoring categories as attached in the



appendix, which provides five score levels for each of six major categories, namely grammar, vocabulary, comprehension, fluency, pronunciation, and task (Brown, 2001). At the end, the scores were converted into the scale score 100 for the sake of calculation. Additionally, the range of students' speaking performance was interpreted based on the following range.

1,00 – 2,20	=	Very bad
2,21 – 3,40	=	Bad
3,41 – 4,60	=	Fairly good
4,61 – 5,80	=	Good
5,81 – 7,00	=	Very good

Since this speaking test would be used as a research instrument, its validity and reliability should be investigated as follows.

### 1. Validity Testing

The validity of speaking test in this research would be investigated firstly by considering content validity. Content validity commonly relies on the judgment of experts in the research area, because there is no statistical test found to determine content validity. By giving the speaking instrument and the speaking rubric used to the expert, the incomprehensible and ambiguous questions or instructions could be revised, and the purposeless questions or instructions can be rejected by the guidance of the assessors (Mohajan, 2017). The process of reviewing the instrument was recorded in a textual guide by an expert who is a lecturer in English Department in a state university in Indonesia, as attached in the appendix of this paper.

Additionally, in determining speaking test validity, the speaking rubric used to measure speaking performance in this research also should be involved by correcting item-total correlation validity testing, by comparing  $r_{cal}$  to  $r_{table}$ . The test used a two-tailed test with a significance level of 0.05. If  $r_{cal} > r_{table}$ , it means that the measurement is valid, but when  $r_{cal} < r_{table}$ , this means that the instrument is declared invalid. The validity test result will be presented in a table below.

**Table 3.6 The Results of Speaking Performance Validity Testing**

No	Indicator	$r_{cal}$	$r_{table}$	Explanation
1	Grammar	0.600	0.186	Valid
2	Vocabulary	0.542	0.186	Valid
3	Comprehension	0.659	0.186	Valid
4	Fluency	0.607	0.186	Valid
5	Pronunciation	0.587	0.186	Valid
6	Task	0.549	0.186	Valid

From the table above, it could be seen that each indicator used to measure the speaking performance variable produced the  $r_{cal}$  coefficient greater than  $r_{table}$ , thus it can be concluded that each indicator proposed in this rubric is declared valid, which means that the indicators could measure what have to be measured.

## 2. Reliability Testing

As statistical theories stated that there are many formulas to measure reliability in terms of measuring instrument stability. The chosen formula should be in accordance with types of scale of the measured variable. In this research, since the measurement to assess speaking was established by more than two raters, the reliability was measured by involving Intra-Class Correlation (ICC) formula (Koo & Mae, 2016). The reliability test result would be shown below.

**Tabel 3.7 Intra-Class Correlation Reliability**

	Intra-class Correlation	Sig. F
Single Measures	0,450	0,000
Average Measures	0,711	0,000

From the table above it can be seen that the result of the reliability test conducted on the speaking performance variable produced a significance value smaller than alpha ( $\alpha = 5\%$ ), which is 0,000 which implied that the speaking performance instrument used in this study is reliable.

### **3.3.1.2 The Qualitative Phase (Phase 2)**

As elaborated previously that an interview was organized to four students (volunteers). The interview was administered in Bahasa Indonesia to avoid failures to understand each question correctly. The interview instrument was developed from the scale and concepts used in phase 1 (the quantitative phase) to several indicators transformed to twenty interview questions. It was reviewed by a scholar in English education field in terms of content and phrases.

### **3.3.2 Data collection for investigating teacher's strategies in building rapport in an ELT context.**

The data was collected through observations (two times), a face to face interview and electronic follow-up interviews with each participant to secure additional information when it is needed to complete the data in detail. The observation indicators and the interview instrument were developed according to related theories (Harmer, 2007; Boynton & Boynton, 2005; Brown, 1994). The instruments had been reviewed by a scholar in English education field in terms of content and phrases.

### **3.4 Data Analysis**

In performing phase 1 (the quantitative phase) to answer research question 1, the collected data from the speaking test and SIRS were analyzed quantitatively using SPSS Statistics 17.0. At the beginning, the test of normality was required to determine which formula to be used for this study, depending on the normality of data obtained. Since the result of normality test showed that data obtained for this study is normal, then the Pearson product-moment correlation would be used (Rasinger, 2013). The normality was checked by administering Kolmogorov-Smirnov test because this study involved a large sample more than 50 students (Lowie & Seton, 2013). After completing the calculation, it was concluded that the data were normally distributed because the Asymp Signification value in the Kolmogorov Smirnov test for each variable is higher than 0.05. The result of normality test is presented as follows.

**Tabel 3.8 The Result of Normality Test**

	N	Kolmogorov Smirnov	Asymp Sig.
Speaking Performance (Teacher 1)	112	1.352	0,052
Speaking Performance (Teacher 2)	112	1.349	0,053
Speaking Performance (Teacher 3)	112	1.348	0,053
Teacher Connectedness	112	0.670	0.670
Anxiety	112	0.978	0.295

After detecting the normality the data and concluding that the data was normally distributed, the correlation coefficient would be calculated using one tailed Pearson product-moment correlation. Since there were two dimensions of rapport, namely, teacher connectedness and students' anxiety while interacting to their English teachers, the correlation calculation between those dimensions and speaking performance was checked separately. The coefficient correlation produced by product-moment correlation ( $r_{obt}$ ) was compared to  $r_{table}$  from the table of critical value of the correlation coefficient with the provision that  $r_{obt} \geq r_{table}$ .

Next, in elaborating the answer of research question 1 more, the data from student interview in phase 2 (the qualitative stage) was elaborated to add information in accordance with the result gotten from phase 1 (the quantitative stage). Then, to answer the third research question, the information about teacher's strategies in building rapport in an ELT context were elaborated, described, and interpreted based on the real data from the interview to the English teacher and the observation notes.

### 3.5 Concluding Remarks

Chapter three has explained research methodology of this research. It covered research design, population and sample, data collection techniques, the validity and reliability test results, and data analysis. The data were collected, processed, and analyzed based on the elaboration in this chapter. Then, the next chapter

would analyze, elaborate, and relate the findings of this study with the relevant theories.