

CHAPTER III

RESEARCH METHODOLOGY

This chapter provides the research methodology of this study which includes research design, research site and samples, data collection techniques, and data analysis.

3.1. Research Design

The present study was conducted under mixed methodology since the process of collecting and analyzing the data was done by using qualitative and quantitative methods. Qualitative methods—such as observations, questionnaire, and interview—were employed to answer the first and the second research question that attempted to investigate the teacher’s rapport building strategies during online learning and the students’ perceptions of these strategies. Meanwhile, quantitative approach—specifically correlational study—was carried out to answer the third research question which focused on finding out the correlation between the two dimensions of teacher-student rapport and the students’ writing performances.

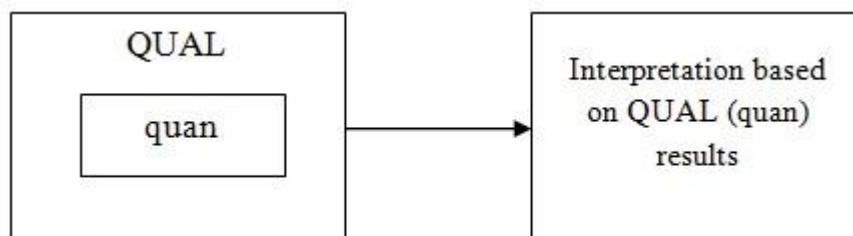
Correlational study was a non-experimental research method which sought a relationship or association between two variables, namely: independent variable (IV) and dependent variable (DV). In this study, the IVs were two dimensions of rapport, namely: teacher connectedness and students’ anxiety when interacting with the teacher. Meanwhile, the DV was students’ writing performance. Correlational study, unlike experimental study that examined a cause-effect relationship and controlled or manipulated the variables, only focused on whether the relationship between two variables existed or not. If it did, then how strong or significant was it? And was it positive or negative? The answer for these questions would be discussed in Data Analysis section. Furthermore, correlational study only focused on the end result without taking into account the process of how and why these variables could have, for example, a significantly positive or negative relationship. Then, since this study aimed at finding out the correlation between two dimensions of rapport and the

students' writing performance, correlational study was chosen especially to seek the answer for the third research question.

As there were three different approaches to mixed methodology which included concurrent, sequential, and conversion (Creswell et al., 2006), this study employed concurrent embedded design. Concurrent design was chosen as the process of collecting both types of data—qualitative and quantitative—was done during the same timeframe. Even though the data collecting process was not held at the exact same time or simultaneously, the period of one instrument being distributed to another was not long; the data collecting process was not carried out in different phase or stage as well. Next, since the present study was mainly a qualitative study yet the data set was not sufficient to answer the proposed three research questions to the point it required a different type of data—in this case, quantitative data—embedded design was selected. Figure 3.1 below was the illustration of the research design of the present study:

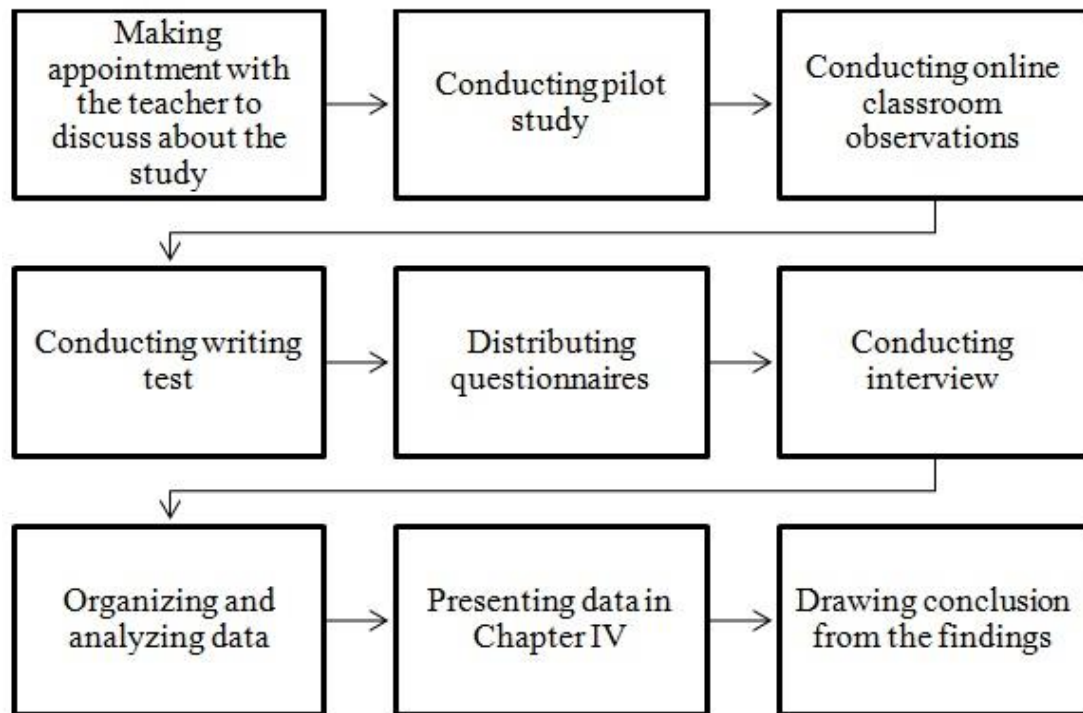
Figure 3.1

Research Design Illustration



(Creswell, Plano, Gutmann, & Hanson, 2006, p. 68)

Referring to Figure 3.1 above, it could be seen that the present study included quantitative approaches and data to answer a research question within a largely qualitative study. For this reason, concurrent mixed design was selected. Furthermore, Figure 3.2 below would illustrate the research procedures of the present study:

Figure 3.2*Research Procedure Illustration*

Referring to Figure 3.2 above, the steps that the researcher had been through to conduct the current study were:

1. Making appointment with the teacher

Before conducting the study, the researcher made an appointment with the teacher to explain the purposes of this study. The teacher later on became one of the participants in this study as well.

2. Conducting pilot study

Pilot study or pilot test was a small scale version or a trial run of a research as a preparation for the actual research (Polit et al., 2001). By doing this, a researcher could identify the items in the instruments that might not make sense or understandable enough to participants; point out some problems with the instruments that might lead to biased answers (Practical tools for international development, 2014); and check the validity and reliability of the instruments as well as the raters' agreement

when assessing students' performances or works. Furthermore, as pilot study was a small version of the actual research, a sample size of 10-20% from the actual sample size is reasonable number of participants to consider enrolling in the pilot test (Baker, 1994). In the present study, the pilot test was conducted once with only 15 students involved.

3. Conducting online classroom observation

Due to some circumstances, online classroom observation was only held two times and shortly after the appointment with the teacher. The first online observation was conducted a day after the appointment and the second one was held two days after the first online observation.

4. Conducting writing test

Once the results from the pilot study came out and it showed that there was no need to revise or delete any items from the instruments, writing test was carried out. The students were asked to make two different descriptive texts in two different online meetings. The teacher provided the students with written feedback on both texts but the process was not observable since it was done outside online classes. The student were also given enough time—until midnight of the same day—to finish the draft text if they could not submit the task before the online class ended; and two days to submit the revised text.

5. Distributing questionnaires

Teacher's rapport building strategies questionnaire was distributed to the teacher; meanwhile the students received two questionnaires, which were: Student-Instructor Relationship Scale (SIRS) and students' perception of teacher's rapport building strategies. The elaboration about these instruments could be seen in data collection section.

6. Conducting interviews

Interviews were held after all the participants completed the questionnaires. Both the teacher and the students were interviewed through video call. Due to some circumstances, there were only three

students that involved during interview. The elaboration about this instrument could be seen in data collection section.

7. Organizing and analyzing data

Organizing and analyzing the data were done after the researcher had finished collecting the data needed for the study. The elaboration about how the data was analyzed could be seen in data analysis section.

8. Presenting the data in Chapter IV

After the collected data had been analyzed, it would be presented in chapter IV along with some relevant theories and previous studies.

9. Drawing conclusions from the findings

Conclusions were then drawn from the findings as the last step of the research. The result would be presented in Chapter V.

3.2. Research Site and Samples

There were two main reasons why this site and samples were chosen; first, it related to the teacher's working experience; and second, the same teacher also taught the first grade students. The reason why these students were specifically chosen was because the researcher wanted to make sure that there was no rapport that previously might have been established between the teacher and the students before conducting the study.

Larger sample size would more likely to produce significance (Hatch & Farhady, 1982). For this reason, they stated the minimum sample size was 30 participants. Then as for this study, 70 students became the samples. Furthermore, three teachers were also involved; while one teacher was the subject of the study, the other two only helped with scoring. This needed to be done to make sure the writing scores given were reliable and valid.

3.3. Data Collection

This section will discuss the instruments that were used to collect the data and are arranged by following the order of the research questions. To answer the first and second research question which regarded teacher's strategies in building rapport and students' perception on this matter; online observation, a questionnaire for both teacher and students, and interviews to the teacher and students were conducted. As for the third question, the data was collected from a questionnaire entitled Student Instructor Relationship Scale (SIRS) and writing scores which were collected through a test.

3.3.1. Online Classroom Observation

Online classroom observation was conducted twice to see the actual implementation of teacher's strategies in building rapport with the students during writing process. An observational sheet which was developed by Satriani (2020) was used and adapted in this study as the basic guideline to identify rapport indicators or strategies implemented by the teacher during online learning. This observational sheet was actually created and developed based on rapport building strategies proposed by Harmer (2007) and Boynton and Boynton (2005) namely recognizing students and respecting students. However, some strategies proposed by Murphy and Rodríguez-Manzanares (2012) were added later on as the current study focused on teacher's strategies in building rapport with the students during online learning. These strategies include: supporting and monitoring; availability, accessibility, and responsiveness; tone of interactions; and non-academic interactions. This instrument was only served as the guidance for the researcher to identify some possible rapport building strategies implemented by the teacher during teaching writing in online class. Hence, there might be new strategies discovered during the online observations.

During online classroom observations, some new teacher's rapport building strategies that were not included in the sheet were identified. These strategies included: not interrupting students when they were speaking, listening to students attentively, being aware of the challenges that the students face during online learning which was shown by listening to the students' concerns about the course and

understanding their feelings without invalidating them, and spending extra time to explain the lesson that the students found difficult to comprehend. These strategies were classified based on rapport building strategies proposed by Murphy and Rodríguez-Manzanares (2012).

There were also some findings that might not be relevant with the focus of the current study—which was students’ writing performance—but still reflected rapport indicator. These strategies included: praising students as an appreciation for sharing their opinions and providing oral feedback when needed. Moving on to the content of the online classroom observation sheet, Table 3.1 will provide the possible and observable strategies that might be implemented by teachers in establishing rapport during online learning.

Table 3.1

Teacher’s Rapport Building Strategies in Online Observation Sheet

Teacher’s rapport building strategies	Total of checklist
Recognizing students	4 items
Supporting and monitoring students	3 items
Availability, accessibility, and responsiveness	1 item
Respecting students	8 items
Tone of interactions	2 items
Non-academic interactions	3 items
Total	21 items

As it can be seen from Table 3.1 above, there are six categories of teacher’s rapport building strategies in the online classroom observational sheet, namely: recognizing students; supporting and monitoring students; availability, accessibility, and responsiveness; respecting students; tone of interactions; and non-academic interactions. The elaboration and the examples of these strategies could be found in Chapter II while the sheet can be found in Appendices.

Other than discovering some teacher’s rapport building strategies that were not included in the observational sheet; the data from online classroom observations also showed some other findings. It was discovered that online learning also affected the way the teacher established rapport, delivered the lesson, and monitored the

students. These aspects were limited in terms of implementation in online learning, but the teacher seemed to figure out how to make use of Zoom features well so learning process could be maximized. For example: the teacher divided the students into several small groups consisting of five or six by using a feature called breakout room on Zoom and joined each group to monitor and help the students during writing process.

3.3.2. Teacher's Rapport Building Strategies Questionnaire

This instrument aimed at finding out the strategies carried out by teachers in building rapport with their students during online learning. It contained 26 close-ended items with one open-ended item that required the respondent to reply with a short or long answer depending on his or her experience. The questionnaire was not translated into Bahasa Indonesia and distributed through Google Form.

The teacher questionnaire used in this study was originally created by Sherif (2020) who adapted and developed the questionnaire contents or items based on the teacher behavior checklist proposed by Gremler and Gwinner (2008). This specific questionnaire was chosen since Sherif's study also focused on teacher's strategies in establishing rapport with the students; it also attempted to explore the students' perception of those strategies. However, several items were edited as the current study focused on investigating teacher's rapport building strategies in the context of online learning. In addition, the items were classified into certain categories proposed by Murphy and Rodríguez-Manzanares (2012) for ease of presentation and discussion later in chapter IV. The categories can be seen in Table 3.2 below:

Table 3.2

Teacher's Rapport Building Strategies in Teacher's Questionnaire

Teacher's rapport building strategies	Total item	Item Number
Recognizing students	2 items	Item 13 and 21
Supporting and monitoring students	9 items	Item 1, 2, 4, 10, 14, 16, 23, 24, and 25
Availability, accessibility, and responsiveness	1 item	Item 19

Respecting students	5 items	Item 3, 7, 9, 15, and 20
Tone of interactions	2 items	Item 6 and 8
Non-academic interactions	7 items	Item 5, 11, 12, 17, 18, 22, and 26
Total	26 items	

As it can be seen in Table 3.2 above, there were six possible categories of teacher's rapport building strategies that might be implemented by the teacher during online learning, namely: recognizing students (e.g. calling students by their names); supporting and monitoring students (e.g. providing feedback); availability, accessibility, and responsiveness (e.g. informing the students that the teacher could be reached out outside online classes); respecting students (e.g. listening to students); tone of interactions (e.g. using friendly tone when talking); and non-academic interactions (e.g. having small talk with the students). As has been stated previously, there are 26 close-ended items and one open-ended item in this instrument. The respondent was asked to rate the statements on a scale of 1 to 5 (1 being strongly disagree and 5 being strongly agree) in the close-ended items and respond in a short or long answer regarding other rapport strategies that possibly had done by the teacher but were not mentioned in the questionnaire. The teacher's responses for this item were maintaining communication with the students especially outside online classes, monitoring students' progress both inside and outside online classes, providing written feedback, giving students enough time to write and revise, and trying to get to know the students personally. Lastly, the form and the teacher's responses can be seen in Appendices.

3.3.3. Student's Perception Questionnaire

This instrument was a close-ended questionnaire and had a purpose to explore the students' perception of the teacher's strategies in establishing rapport during online learning. For this reason, each item in this instrument indicated a rapport building strategy done by the teacher. Additionally, the instrument was translated into

Indonesian and delivered to the respondents via Google Form. The questionnaire form could be seen in appendices section.

The student's perception questionnaire used in the current study was also originally created and developed by Sherif (2020). Hence, it followed almost the same structure as the teacher's questionnaire (e.g. the item order and its focus on rapport building strategies implemented by teacher during online learning). One minor difference would be on the phrasing of the statements as it would target the students instead of the teacher; while some major distinctions would be on the scale descriptor and the total number of items in the questionnaire. As for the scale descriptor, the students were asked to rate each item on a scale of 1 to 5 with 1 being least important while 5 being most important.

Furthermore, each item in this questionnaire had also been proven valid through pilot test. Likewise, the reliability of the instrument was also reliable and consistent. Table 3.3 (validity test result) and Figure 3.3 (reliability test result) below serves the result:

Table 3.3

Validity Test of the Students' Perception Questionnaire

Item number	<i>r</i> value	<i>r</i> table	Interpretation
1.	.584	.532	Valid
2.	.647	.532	Valid
3.	.796	.532	Valid
4.	.672	.532	Valid
5.	.811	.532	Valid
6.	.81	.532	Valid
7.	.708	.532	Valid
8.	.706	.532	Valid
9.	.637	.532	Valid
10.	.625	.532	Valid
11.	.754	.532	Valid
12.	.712	.532	Valid
13.	.735	.532	Valid
14.	.812	.532	Valid

15.	.561	.532	Valid
16.	.778	.532	Valid
17.	.617	.532	Valid
18.	.649	.532	Valid
19.	.802	.532	Valid
20.	.742	.532	Valid

For an item to be considered valid, the r value of the said item should be bigger than the r table. The r table obtained in the present study was .532 since the students that involved in pilot study were 15 students. Then, since the r value of all the items were bigger than the r table, it was safe to say that the items were valid. Moving on to the reliability test result of this questionnaire, Figure 3.3 below would serve the computation result:

Figure 3.3

Reliability test of students' perception of teacher's strategies in building rapport questionnaire

Cronbach's Alpha	N of Items
.833	20

For a test to be considered reliable and consistent, the obtained Cronbach's alpha value needed to at least bigger than 0.4 (Arikunto, 2002). Then looking at the calculation result in figure 3.3 above—which was 0.833—it could be concluded that all items (20 items in total) in this instrument was reliable and consistent.

3.3.4. Interview

The purpose of interview in this study was to gather in-depth information regarding the teacher's strategies in establishing rapport with the students during online learning as well as students' perceptions of these strategies. This instrument was also used to support and validate the findings from online classroom observations and questionnaires, particularly teacher questionnaire and student's perception

questionnaire. Hence, the questions in the interview—both teacher and students—were similar with the items on the online classroom observational sheet and the questionnaires that were mentioned previously.

The researcher had already prepared a set of predetermined questions before conducting the interview; there were 25 questions for the teacher and 20 for the students. The interviews were recorded and conducted through a video call on WhatsApp since direct meeting was not suggested due to Covid-19 outbreak and safety reasons. Additionally, individual interviews were held instead of group interview.

Furthermore, a semi structured interview was selected in the present study. This type of interview was chosen since it still had an open-ended nature in which it defined the issue under the investigation, but also provided the researchers with some opportunities to discuss the issue in more detail by allowing them to add, delete, or improvise the set of predetermined questions based on the participant's responses (Fox, 2009). Semi structured interview also allowed the respondents to freely share their experiences and opinions.

3.3.5. Teacher-Student Rapport Questionnaire

Student Instructor Relationship Scale (SIRS) which was developed by Creasey et al. (2009) was a close-ended questionnaire that had a purpose to measure two dimensions of teacher- student rapport namely teacher connectedness and student's anxiety when interacting with the teacher during online learning. This instrument was particularly conducted to find out the correlation between teacher-student rapport and students' writing performance.

In SIRS, the students had to assess each item through a 7-point Likert scale (1 being strongly disagree; while 7 being strongly agree). In total, there were 36 items in this questionnaire. However, this study would only use the items particularly the ones that were related to the two teacher-student rapport dimensions; teacher connectedness and student's anxiety when interacting with the teacher. As for the teacher connectedness dimension, there were 11 items in total. On the other hand,

student's anxiety when interacting with teacher dimension had 8 items in total. Thus, there were 19 items in this questionnaire. Table 3.4 below would provide which items that belonged to teacher connectedness dimension and student's anxiety when interacting with teacher dimension.

Table 3.4

Two Dimensions of SIRS

Teacher-student rapport dimension	Item number
Teacher connectedness	Item 1, 4, 7, 8, 9, 10, 12, 14, 15, 18, and 19.
Students' anxiety	Item 2, 3, 5, 6, 11, 13, 16, and 17.

(Creasey et al., 2009. p. 9-10)

Referring to Table 3.6 above, it could be seen that there were 11 items (item 1, 4, 7, 8, 9, 10, 12, 14, 15, 18, and 19) in teacher connectedness dimension; while there were 9 items (item 2, 3, 5, 6, 11, 13, 16, and 17) in student's anxiety when interacting with teacher dimension. Moving on to the contents of the questionnaire—which included instructions and statements or items—they were translated into Bahasa Indonesia to prevent misunderstanding. The adapted and translated version of SIRS can be found in Appendices section.

Previous studies that used SIRS as the instrument to measure teacher-student rapport showed the reliability of SIRS was 0.89 (see Creasey et al., 2009a) and 0.92 (see Creasey et al., 2009b). As for the present study, the reliability of SIRS which can be seen in figure 3.4 for teacher connectedness dimension and figure 3.5 for student's anxiety when interacting with teacher dimension was 0.917 and 0.856 respectively. These value—as it has that the instrument—were reliable and consistent.

Figure 3.4

Reliability Test of Student Instructor Relationship Scale (Teacher Connectedness Dimension)

Cronbach's Alpha	N of Items
.917	11

Figure 3.5

Reliability Test of Student Instructor Relationship Scale (Student's Anxiety when Interacting with Teacher Dimension)

Cronbach's Alpha	N of Items
.856	8

Moving on to the validity test result, each item of SIRS has been proven to be valid as well as it can be seen in Table 3.5 below.

Table 3.5

Validity Test of Student Instructor Relationship Scale

Item number	<i>r</i> value	<i>r</i> table	Interpretation
1.	.77	.532	Valid
2.	.62	.532	Valid
3.	.84	.532	Valid
4.	.67	.532	Valid
5.	.90	.532	Valid
6.	.71	.532	Valid
7.	.90	.532	Valid
8.	.80	.532	Valid
9.	.77	.532	Valid
10.	.92	.532	Valid

11.	.76	.532	Valid
12.	.78	.532	Valid
13.	.64	.532	Valid
14.	.73	.532	Valid
15.	.59	.532	Valid
16.	.57	.532	Valid
17.	.70	.532	Valid
18.	.82	.532	Valid
19.	.68	.532	Valid

As it has been mentioned previously, for a test—or items in this case—to be considered valid, the computed r value needed to be higher than the predetermined r table. On the contrary, the items would be considered invalid if the obtained r value was smaller than the r table. In this case, the invalid item needed to be dropped or revised. However, as it can be seen, the r values of all 19 items in Table 3.6 above were higher than the r table meaning that these items were valid and safe to use, especially under the same cite. The result of validity and reliability tests could also be accessed in Appendices. Lastly, the questionnaire was distributed via Google Form to the students and has been tested through pilot test as well.

3.3.6. Writing Test

This instrument was carried out to discover the students' writing performance scores since performance was an indirect reflection of one's competence as well as the actual use of one's language knowledge in the actual production (Ana, 2003; Brown & Abeywickrama, 2010). Through online classroom observations, it was revealed that there were several steps which were done by the teacher before collecting the students' written works:

1. Delivering the lesson regarding the text

In the first meeting, the teacher provided the students with some learning materials regarding the text that the students were going to write later in the test. Based on the data from online classroom observation, the students were asked to write descriptive text with certain topic that was determined and

agreed by both the teacher and the students. The teacher also made sure the students understood the material before asking them to make a text.

2. Monitoring the students' progress

The students were divided into several groups of 5 or 6 by the teacher. The teacher then visited each group and spent around 5 minutes to monitor the students' progress. This was done by asking the students what they were going to write one by one. The students were also given enough time to finish their writings. However, the task became homework if they did not finish it before the online class ended. In this case, the students should send it to the teacher via personal chat or email before midnight on the same day. The students' writings that were collected in this online meeting were considered as practice.

3. Providing the students with feedback

The teacher provided the students with oral and written feedback. Oral feedback was done during small group sessions. As for written feedback, the process unfortunately could not be observed as it was done outside online class or office hour.

4. Delivering the lesson regarding the text

In the second meeting, the teacher also delivered another lesson regarding the text. In this meeting, the teacher used the students' texts that had been previously collected from the first meeting as the examples to point out general mistakes that the students made in their writings and inform them how to revise it. The topic of the text was determined by the student this time and the teacher also made sure the students understood the material before asking them to make the second text.

5. Monitoring the students' progress

In the second meeting, the teacher also monitored the students' progress in writing by grouping them into small groups and visiting each group for around 5 minutes to have discussion regarding the task. The students' writings that were collected in this online meeting were considered as draft 1.

6. Providing the students with feedback

As has been stated previously, the revision process could not be observed since it was done outside online classes and office hours. However, through interview, it was found that the teacher sent the students the commented versions of their writings. The teacher also asked the students to send him the revised texts—especially the ones from the second meeting—within two days so the teacher and two other teachers could assess and score the written works.

To assess students' writing, an analytic rubric developed by Brown (2004) was used in the present study. This scoring method was selected particularly because it required the raters to score several writing aspects namely organization, content, grammar, vocabulary, and mechanics. Even though the scoring process would take longer compared to solely give an overall score to the students' written works, it was still chosen considering its benefit in reminding the teacher with some writing aspects that otherwise might be ignored or forgotten.

The validity of the writing rubric showed satisfying result; each writing aspect was proven valid through pilot study. Table 3.6 below serves the validity test result:

Table 3.6

Validity Test of Writing Rubric

Indicator	<i>r</i> value	<i>r</i> table	Interpretation
Organization	.85	.532	Valid
Content	.88	.532	Valid
Grammar	.89	.532	Valid
Vocabulary	.91	.532	Valid
Mechanics	.67	.532	Valid

As for the reliability test of the instrument, the focus shifted to the raters' judgment in scoring instead of on the writing rubric. This needed to be done to make sure the writing scores given by the raters were reliable and consistent. Intraclass correlation coefficient (ICC) was then computed through SPSS to find out the agreement value between the raters. Table 3.7 below can be used as a guideline to interpret the reliability value:

Table 3.7*Interpretation of Reliability Value*

Value	Interpretation
< 0.5	Poor
0.5 – 0.75	Moderate
0.75 – 0.9	Good
> 0.9	Excellent

(Adapted from Koo & Li, 2016, p. 158)

As it can be seen from Table 3.7 above, the agreement values which are less than 0.5, between 0.5 and 0.75, between 0.75 and 0.9, and greater than 0.9 are respectively indicative of poor, moderate, good, and excellent reliability. As for the current study, the result of the reliability test through ICC was .972 which also meant the scores given by the raters were reliable and consistent. The result could be seen in Appendices section.

3.4. Data Analysis

3.4.1. Online classroom observation

The steps in analyzing the data from online classroom observations consisted of two main steps as follow:

1. Arranging the data

Since the data regarding the teacher's strategies in building rapport during online learning were written down on the online classroom observational sheet (see Appendices), the first action which was done in this step was to type the notes that were written on the sheets onto Microsoft Word. This was done so it would be easier to group the data later on.

2. Classifying the data

Once the data had been arranged, the classification of the data could be done. The data showed that there were 4 main categories found in this instrument, namely teacher's rapport building strategies during online learning (e.g. calling students by their names and using friendly tone when explaining the lesson), teacher's method in teaching writing (e.g. dividing the students into

small groups and having discussion with each group to monitor the students' progress in writing), new teacher's rapport building strategies (e.g. spending extra time to explain what the students had not understood), and some rapport indicators that were not relevant with the focus of the present study but still reflected teacher-student rapport strategies (e.g. providing students with oral feedback and praising the students). Furthermore, the classification of new strategies was based on the rapport strategies proposed by Murphy and Rodríguez-Manzanares (2012).

3.4.2. Teacher's Rapport Building Strategies Questionnaire

The steps in analyzing the data from teacher's rapport building strategies questionnaire consisted of two main steps as follow:

1. Classifying the responses

The questionnaire was mainly a close-ended type with 5 Likert scales (1 being strongly disagree and 5 being strongly agree) and 1 open-ended question at the end. The responses were then classified based on the scales (i.e. which items got 1 as the response and so on and so forth; meanwhile the response for the open-ended question was automatically grouped into teacher's rapport building strategies during online learning since the item focused on this matter.

2. Matching the findings with the data from the other instruments

This step was done to validate and support the findings from other instruments, especially online classroom observations and teacher interview. The action was easily done since the data from the other two instruments—online classroom observations and teacher interview—was also grouped into several categories of teacher's rapport building strategies during online learning.

3.4.3. Student's Perception Questionnaire

The steps in analyzing the data from student's perception questionnaire consisted of five main steps as follow:

1. Calculating the mean

The purpose of calculating the mean score of each item was to find out the rank of teacher's rapport building strategies during online learning that the students perceived as the most important to the least important. The computation was done by using Microsoft Excel.

2. Listing the strategies based on the rank order

Once the mean score had been calculated, the items were listed based in the rank order. More particularly, 1 was the highest rank and 20 was the lowest rank. The rank order would be revealed in Chapter IV.

3. Classifying the items into categories

The items were grouped into the categories of rapport building strategies implemented by the teacher during online learning so it would be easier to see which category that had the most numbers of high ranks.

4. Checking out the predetermined questions for student interview

Since the data from online classroom observation and questionnaires—both teacher questionnaire and student's perception questionnaire—had been collected, it was necessary to check the predetermined questions for the student interview, in case some changes were needed to be done or new questions should also be added to the list especially as a follow-up for certain responses that the students made in the questionnaire. Interview could also be used to confirm or validate the data from the previous instruments.

3.4.4. Interview

The steps in analyzing the data from the interview consisted of two main steps as follow:

1. Transcribing the data

The semi-structured interviews conducted in this study were recorded. The recorded data was then transcribed into words so it was easier to sort and classify the data.

2. Classifying the data

The data were classified into several categories namely: teacher's rapport building strategies during online learning, students' perceptions of these strategies, writing process during online learning, and the challenges the teacher that faced during online learning. The data were presented in Chapter IV in form of interview excerpts.

3. Matching the findings with other instruments

Interview was used to confirm or validate the data from the previous instruments, especially online classroom observations and questionnaires.

3.4.5. Teacher-Student Rapport Questionnaire

The steps in analyzing the data from the interview consisted of two main steps as follow:

1. Calculating the mean scores

As it has been stated previously in Chapter II, there were two dimensions of teacher-student rapport which were being investigated in this study, namely teacher connectedness and student's anxiety when interacting with the teacher. Hence, the calculation of the mean scores was done separately.

2. Interpreting the mean scores

The interpretation of the two dimensions—teacher connectedness and students' anxiety when interacting with the teacher—was different. As for teacher connectedness, high scores in this dimension denoted stronger feelings of connectedness from the students to the teacher; meanwhile, low scores indicated avoidance or an intention to dodge a close relationship with the teacher. On the other side, high scores in students' anxiety when interacting with the teacher dimension indicated generalized anxiety concerning their

relationship with the teacher; meanwhile, low scores meant students perceive their relationship with the teacher as less threatening. More particularly, Table 3.8 and Table 3.9 below would show how the mean scores from the two dimensions were interpreted:

Table 3.8

The Interpretation of the Mean Score of Teacher Connectedness Dimension

No.	Score	Interpretation
1.	1.00 – 2.20	Very low
2.	2.21 – 3.40	Low
3.	3.41 – 4.60	Fairly high
4.	4.61 – 5.80	High
5.	5.81 – 7.00	Very high

(Creasey et al., 2009, p.8)

Referring to Table 3.8 above, it could be seen that when the mean score was more than 3.41 then it meant the feeling of connectedness from the students to the teacher was relatively high. On the other hand, when the score was lower than 3.41—as has been stated previously—it indicated avoidance or an intention to dodge a close relationship with the teacher.

Table 3.9

The Interpretation of the Mean Score of Students' Anxiety when Interacting with Teacher Dimension

No.	Score	Interpretation
1.	1.00 – 2.20	Very low
2.	2.21 – 3.40	Low
3.	3.41 – 4.60	Fairly high
4.	4.61 – 5.80	High
5.	5.81 – 7.00	Very high

(Creasey et al., 2009, p.8)

Referring to Table 3.9 above, the scores between 1.00 and 2.20; between 2.21 and 3.40; between 3.41 and 4.60; between 4.61 and 5.80; and between 5.81 and 7.00 were respectively indicative of very low, low, fairly high, high, and very high. When the mean score fell between 3.41 to 7.00 (fairly high to very

high), then it indicated that the majority of the students had generalized anxiety concerning their relationship with the teacher; on the other hand, when the mean score fell between 1.00 to 3.40 (very low to low), then it meant the majority of the students perceived their relationship with the teacher as less threatening. The calculation result of SIRS—both dimensions—were discussed in Chapter IV.

3.4.6. Students' Writing

The steps in analyzing the data from the interview consisted of two main steps as follow:

1. Assessing or scoring students' writings

To assess students' writing, an analytic rubric developed by Brown (2004) was used. A rubric could be said as analytic if the method of scoring required a separate score for each of aspect (Hughes, 2003). Even though using analytic scoring took a longer time, this scoring method was chosen considering its benefit in reminding the teacher with some writing aspects that otherwise might be ignored or forgotten. The writing aspects that were assessed through this rubric include: organization, content, grammar, vocabulary, and mechanics. As for the writing rubric, it could be seen in the Appendices.

2. Calculating the mean scores for each writing aspect

Once the students' writings had been collected and scored by the three raters involved in this study, the writing average scores for each aspect—organization, content, grammar, vocabulary, and mechanics—were calculated. This was done to find out where the majority of the students' writing performance scores fell.

3. Interpreting the mean scores

After the mean scores for each writing aspect—organization, content, grammar, vocabulary, and mechanics—had been calculated, what was left was to interpret the mean scores. Table 3.10 below would show how each

writing aspect of the students' mean score was interpreted in the present study.

Table 3.10

The Interpretation of Students' Writing Mean Score

No.	Score	Interpretation
1.	1.00 – 1.80	Very bad
2.	1.81 – 2.60	Bad
3.	2.61 – 3.40	Fairly good
4.	3.41 – 4.20	Good
5.	4.21 – 5.00	Very good

Referring to Table 3.10 above, the scores between 1.00 and 1.80; between 1.81 and 2.60; between 2.61 and 3.40; between 3.41 and 4.20; and between 4.21 and 5.00 were respectively indicative of very bad, bad, fairly good, good, and very good. In other words, when the mean score of a writing aspect fell between the score of 2.61 to 5.00 (fairly good to very good) then it meant the majority of the students did fairly good on that certain writing aspect. Conversely, when the mean score of a writing aspect fell between the score of 1.00 to 2.60 (very bad to bad) then it meant the majority the students did badly on that certain writing aspect. The students' writing average scores for each category (i.e. organization, content, grammar, vocabulary, and mechanics) from three rates involved would be discussed in Chapter IV. Then as for the detailed data of writing scores from each rater, it could be accessed in Appendices.

3.4.7. Correlation between the Variables

One of the aims of this study was to find out the correlation between two dimensions of teacher-student rapport with the students' writing performance. Hence, correlation computation through SPSS was done. The data that was used for this computation came from SIRS (Student-Instructor Relationship Scale)—which was used to measure the two dimensions of rapport (teacher connectedness and students' anxiety when interacting with the teacher) between the teacher and the students—and writing

performance test. In this section, the steps in analyzing the data consisted of three main steps as follow:

1. Conducting normality test

Before proceeding with the measurement, it was important to find out whether the data was normally distributed or not. This was needed especially to determine the most appropriate correlation measurement. If the data was normally distributed, Pearson product-moment correlation was used. If it was not, Spearman – Brown correlation was used instead. For the data to be considered normal, the p value should be higher than .05 (O'Donoghue, 2010).

2. Calculating the correlation between the variables

As the data of SIRS (both dimensions; teacher connectedness and students' anxiety when interacting with the teacher) and writing performance test were normally distributed, Pearson product-moment was chosen as the formula to measure the correlation coefficient (r) between the variables. The calculation was done by using SPSS. The results of normality test and correlation coefficient computation could be seen in Appendices.

3. Interpreting the result

Once the correlation coefficient (r) was calculated, the next step was to interpret it; whether there was a significant correlation between the variables or not. The correlation between two variables was in strong positive relationship when the r value approached +1.00 and in strong negative relationship when the r value approaches -1.00 (Coolidge, 2000). In these two cases, H_0 was rejected and H_a was accepted. However, if the correlation coefficient approaches 0 (zero), it meant that the relationship between the variables was weak which led to H_0 being accepted and H_a being rejected.

However, the calculation was not over yet; it was also important to make sure the r value was significant. For this reason, testing for the significance of r value must be carried out. To do this, t formula was used to test the null hypothesis; whether the r value was equal to zero or not. Then,

once it has been computed, the result (p value) must be less than .05 to be considered as significant. If it exceeded .05, it meant there was no significant relationship between the variables; either positive or negative. The result of the correlation coefficient calculation along with the elaboration would be presented in Chapter IV.

When a correlation was significantly positive, it meant both variables changed in the same direction; when one variable increased, the other variable also increased. For example, when the level of teacher connectedness increased, so did the students' writing performance. However, this did not necessarily mean the change or the improvement in the dependent variable (students' writing performance) was caused by independent variable. Correlational study did not examine a cause-effect (causation). Hence, the change simply meant the two variables were statistically correlated.

On the other hand, when a correlation was significantly negative, it meant the variables changed in the opposite direction; when one variable increased, the other one decreased. For example, when the level of students' anxiety when interacting with the teacher increased, the students' writing performance decreased. Then as has been stated previously, the change in the dependent variable was not caused by independent variable; it simply meant that the two variables were statistically associated with each other.

Lastly, correlational study focused only on the end result; meaning it did not seek the reason behind or the process of how and why two variables were significantly correlated.

3.5. Concluding Remark

This chapter has elaborated research methodology implemented in the present study which comprised of several main categories such as: research design, research site and samples, research procedure which also included pilot study, data collection which consisted of several subcategories such as: online classroom observation, teacher's rapport building strategies questionnaire, student's perception questionnaire,

teacher and student interview, teacher student rapport questionnaire named Student Instructor Relationship Scale (SIRS), and a writing test. Data analysis followed after data collection was explained. This section elaborated how each instrument was analyzed.