Chapter Three

Research Methodology

This chapter presents the research methodology. This chapter divided into six parts. There are research design, research setting, research population and sample, instrument of the research, data collection procedure, and data analysis.

Research Design

This research used quantitative research method. The researcher chose this research method because this research method was suitable to answer the research questions of this research. Creswell (2012) stated that in the quantitative research method, the researcher identifies the problem of the research based on trends in the field or a need to clarify why something happened. It means that through quantitative research method, the researcher can find the trends that can answer the first and the second research questions. The researcher discovered the trends of the students' self-talk strategy to answer the first research question, and the researcher found out the trends of the students' speaking performance in oral presentation at English Language Education Department of a private university in Yogyakarta to answer the second research question.

The method under quantitative research design adopted by the researcher was correlational design. The type of correlational design used in this research was explanatory design. "An explanatory research design is a correlational design in which the researcher is interested in the extent to which two variables (or more) co-vary, that is, where changes in one variable are reflected in changes in the

other" (Creswell, 2012, p. 340). Correlational design was suitable to be applied in this research, because the researcher wanted to know the correlation between the students' positive self-talk strategy and their speaking performance in oral presentation at English Language Education Department in a private university in Yogyakarta. By using this research design, the researcher could know whether there was a relation between students' positive self-talk strategy and their speaking performance in oral presentation or not.

Research Setting

This research was conducted at English Language Education Department (ELED) in a private university in Yogyakarta. The researcher chose English Language Education Department in a private university in Yogyakarta as the research setting because in this place, oral presentation was often used in teaching and learning process. In addition, there were many problems faced by students in oral presentation such as nervous, anxiety or fear to speak in front of other. Moreover, oral presentation was also used as assessment in many subjects. In addition, the researcher was a student at English Language Education Department in a private university in Yogyakarta, so it eased the researcher to do this research.

Research Population and Sample

In this part, the researcher explains population and sample of the research. The researcher mentions the number of population and sample. In addition, the researcher also explains why the researcher chose the population and sample. The explanations are presented below:

Population. The target population of this research was the students of English Language Education Department in a private university in Yogyakarta batch 2015 that the total of the students was 118 students. The researcher decided to choose the students of English Language Education Department batch 2015 because they often used oral presentation in teaching and learning process. In addition, oral presentation was also used to assess their speaking performance. Thus, students batch 2015 was suitable to become the target population.

Sample. Cohen, Manion, and Morrison (2011) defined sample as the smaller group or subset. From 118 students at English Language Education Department in a private university in Yogyakarta batch 2015, only 96 students became the research sample. This calculation is based on the table of random sample size (Cohen, Manion, & Morrison, 2011). From 118 students at English Language Education Department in a private university in Yogyakarta, it was rounded to 120 students as population size. From the table, with the confidence level 95% and confidence interval 5% of 120 students, the sample was 91 students. Thus, 91 was the minimum number of respondents of this research. Finally, there were 96 students batch 2015 becoming the respondents in this research because there were 96 students who have been the respondents of the questionnaire.

The main technique of sampling used in this research was probability sample. According to Cohen, Manion, and Morrison, (2011), "Probability sample is useful to draws randomly from the wider population. The researcher can make generalizations, because it seeks representativeness of the wider population" (p.

153). "The type of probability sample that will be used in this research is simple random sampling. In sample random sampling, each member of the population under study has an equal chance of being selected" (Cohen, Manion, & Morrison, 2011, p. 153). Therefore, all of the students of English Language Education Department in a private university in Yogyakarta batch 2015 got an equal chance to be selected as the respondent.

Instruments of the Research

This research used questionnaires and document of students' score as the instruments. Questionnaire was used to answer about students' positive self-talk strategy. In addition, document of students' speaking score was used to answer students' speaking performance in oral presentation. The detail of instruments used in this research is presented below:

Questionnaire. Questionnaire is a widely used tool, and it is a useful instrument for collecting survey information, providing structured, often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyze (Wilson & McLean as cited in Cohen, Manion, & Morrison, 2011). The type of questionnaire used in this research was structured questionnaire. According to Cohen, Manion, and Morrison (2011), "structured questionnaire is a type of questionnaire that contains closed-ended questions then the questionnaire will need to be piloted and refined so that the final version contains as full a range of possible responses as can be reasonably foreseen" (p. 381). The researcher chose structured

questionnaire because the analysis of data could be done quickly and the data could be processed using computer.

There were fifteen items in the questionnaire of this research. All items of the questionnaire was created by the researcher. The references that the researcher used to construct the questionnaire was based on theories of benefits of positive self-talk strategy from the experts. There were six theories about benefits of positive self-talk strategy mentioned by the experts. From six theories about benefits of positive self-talk strategy, the researcher constructed it into 15 items of questionnaires.

The type of responses used in the questionnaire was rating scale. "A likert scale (named after its deviser, Rensis Likert) provides a range of responses to a given question or statement" (Cohen, Manion, & Morisson, 2011, p. 386). The questionnaire had 4 likert scale (1 = "*tidak pernah*", 2 = "*pernah*", 3 = "*sering*", 4 = "*selalu*"). The indicator for the questionnaire was strategy (what students do). The items of the questionnaires constructed by the researcher were based on existing theories about positive self-talk strategy. The language used in the questionnaire was Indonesian language, because it eased the respondents to understand each statements in the questionnaires.

Documents of Students' speaking score. The second research question in this study is about the students' speaking performance. To answer the second research question, the researcher used the document of students' speaking performance score. The document was taken from Academic Presentation class. The document which was used was taken from the component of undergraduate

thesis proposal defense simulation and panelist. The maximum students' score of this component was thirty-five, and the miminum students' score of this compenent was zero. In this test, the lecturer assesses aspects such as introduction, literature review , method or finding , delivery the content , use the media , response to question , time management , giving question to other friends , and follow ups question . The maximal score for each aspect like introduction, literature review, method or finding, delivery content, use the media, response to question, and follow ups question was four (4). The minimum score for each of them was zero (0). Meanwhile, the maximal score for giving question to their friends was five (5), and minimum score was zero (0). Last, the maximal score for follow ups question was two (2), and the minimum score was zero (0).

Data Collection Procedure

The researcher used questionnaire to answer the first research question. This questionnaires was distributed through Google form on social media (http://bit.ly/2rgKKD3). The researcher distributed the questionnaires to the respondents via social media such as Line and WhatsApp. To contact the respondents, the researcher chat the leader from each class and asked them to add the researcher into their group class in WhatsApp or Line. Then, the reseacher asked them to answer the questionnaire through the link given by the researcher.

Then, the researcher used the documents of students' speaking performance to get the data for answering the second research question. The document was taken from the assessment of oral presentation in one subject named Academic Presentation. The data was taken from this subject, because the

oral presentation was used as one of the speaking assessments. To get the document of students' speaking performance of this subject, the researcher met the lecturer teaching Academic Presentation, and the researcher asked the document of students speaking performance in oral presentation to the lecturer.

Validity and Reliability

In this parts, the researcher explains validity and reliability of the questionnaire used in this research. The researcher explains how to test the validity of the questionnaires in this research and the formula to calculate the validity. Then, the researcher also shows the reliability level. The explanation is presented below:

Validity. Validity is used to check how accurate the instrument. According to Cohen, Manion, and Morrison (2011), "validity is an important key to effective research" (p. 179). In addition, Retnawati (2016) said that validity is determined using experts' agreement. Therefore, the researcher asked three expert judgments to analyze the items of questionnaire in this research.

The questionnaire used in this study was divided into two parts, part A (students' positive self-talk strategy) and part B (the benefits of positive self-talk strategy). Unfortunately, the three experts agreed to only use part A. Two of three expert judgments thought that part B was better not to be used because it was not in accordance with the topic of this research. Thus, only part A used in this research.

Next, the experts judgments gave score to each items of questionnaire. The score scale started from one until four which is 1="not relavant", 2="quite

relevant", 3="relevant", 4="very relevant". After that, the score was used to analyze the validity of the items based on the Aiken Test. The formula of Aiken test is presented below:

$$V = \frac{\sum s}{n(c-1)}$$

V = Validity index of the instruments n = number of raters
s = $r - I_0$ c = numbers of categories
r = score of category $\sum$ = the sum of s for the n raters
I_0 = the lowest score

Validity	**Criteria**
0.4	Low
0.4 – 0.8	Moderate
> 0.8	High

Table 3.1. The criteria of validity (Retnawati, 2016, p. 19):

The criteria of validity was divided into 3. There were low, moderate, and high. If the validity is under 0.4, it means the validity is low. If the validity is between 0.4 to 0.8, it means the validity is moderate. If the validity is more than 0.8, it means the validity is high. The instrument is valid if the score is 0.4 or higher (Retnawati, 2016). Therefore, for the items under 0.4, it cannot be used because the item is not valid. The items used in this research were the items which included in moderate (0.4 – 0.8) and high (more than 0.8). The result of Aiken test is presented in the table below:

Item	R 1	R 2	R 3	S 1	S 2	S 3	∑s	V	Description
1	4	3	4	3	2	3	8	0,88	Moderate validity
2	4	4	4	3	3	3	9	1	High Validity
3	3	3	4	2	2	3	7	0,78	Moderate validity
4	4	4	4	3	3	3	9	1	High Validity
5	4	3	4	3	2	3	8	0,88	Moderate validity
6	4	4	4	3	3	3	9	1	High Validity
7	4	3	4	3	2	3	8	0,88	Moderate validity
8	4	4	4	3	3	3	9	1	High Validity
9	4	3	4	3	2	3	8	0,88	Moderate validity
10	4	3	4	3	2	3	8	0,88	Moderate validity
11	4	3	4	3	2	3	8	0,88	Moderate validity
12	4	4	4	3	3	3	9	1	High Validity
13	4	4	4	3	3	3	9	1	High Validity
14	4	3	4	3	2	3	8	0,88	Moderate validity
15	4	3	4	3	2	3	8	0,88	Moderate validity

Table 3.2. The Result of Aiken Coefficient for Students' Positive Self-Talk Strategy Questionnaire

R = score of category was given by experts

S = score of category was given by researcher minus minimum score

∑s = total sum of S1, S2, and S3

V = Validity index of the instruments

From the result, it can be concluded that there are six items have high validity. They are item number 2, 4, 6, 8, 12, and 13. The rest of items have moderate validity. They are 1, 3, 5, 7, 9, 10, 11, 14, and 15. In conclusion, the researcher used all of the items in this questionnaire because all of the items were valid.

Reliability. According to Cohen, Manion, and Morrison (2011), "reliability is essentially a synonym for dependability, consistency and replicability, over instruments and over groups of respondents" (p. 199). To test the reliability of the instrument, the researcher used SPSS version 22 (Cronbach's Alpha analysis). The criteria of reliability of Crobach's Alpha (Cohen, Manion, & Morrison, 2011, p.640) is presented below:

Cronbach's Alpha	**Criteria**
<0.60	unacceptable low reliability
0.60-0.69	marginally reliable
0.70-0.79	reliable
0.8-0.90	highly reliable
>0.90	very highly reliable

Table 3.3. The criterias of realibility of Crobach's Alpha (Cohen, Manion, & Morrison, 2011, p.640)

Based on the table above, the item is considered valid if the score is 0.70 or higher. If the score is under 0.60, the score is not reliable. If the score is under 0.60, it means the item cannot be used because the item is not reliable. The higher the level of Cronbach's Alpha, the better the item is.

There were 15 items of questionnaire that were distributed to 96 students of English Language Education Department of a private university in Yogyakarta. The reliability of this questionnaire is .957 which inculded in reliable category with interval higher than .90 (> 0.90). It means this questionnaire was highly reliable. The result of reliability of the questionnaire was shown below:

Reliability Statistics	
Cronbach's Alpha	N of Items
,957	15

Table 3.4. The Result of Reliability Test

Item-Total Statistics	
Item	Cronbach's Alpha if Item Deleted
Q1	,956
Q2	,957
Q3	,955
Q4	,954
Q5	,954
Q6	,954
Q7	,954
Q8	,955
Q9	,953
Q10	,953
Q11	,953
Q12	,952
Q13	,954
Q14	,954
Q15	,955

Table 3.5. The Result of Reliability Test Per-Items

The total items of this questionnaires were fifteen items. After the researcher analyzed the items using Cronbach's Alpha test, the researcher found out that all of the items were reliable. Thus, all of the items were used.

Data Analysis

The data analysis used by the researcher were descriptive statistic and inferential statistics. According to Cohen, Manion, and Morrison (2011), descriptive statistics is used to describe and analyze the data that the researcher get. In this research, descriptive statistics was used to answer the first research question about the students' positive self-talk strategy in oral presentation at English Language Education Department of a private university in Yogyakarta. There were three categories for students' positive self-talk strategy which were excellent, fair and low. It was also used to answer the second research question about the students' speaking performance in oral presentation. The categories for students' speaking performance were advanced, intermediate, and low.

The things included in the descriptive statistics was mean. The inferential statistic was also used to answer the third research question which is about the significant correllation between students' positive self-talk strategy and their speaking performance in oral presentation at English Language Education Department of a private university in Yogyakarta.

In addition, this research also used class interval. Class interval was used to determine the class width, class size, and class length. Supranto (2006) stated that the election and the number of class interval is not independent because the more of class number, the smaller the class interval and vice versa. The formula to determine class width (Supranto, 2006) is presented below:

$C=\frac{X_n-X_1}{K}$	$C=\frac{4-1}{3}=\frac{3}{3}=1$

C = class width, class size, class length

X_n = maximal value

X_1 = minimal value

K = the number of class

This formula was used for answering the first research question which is about the students' positive self-talk strategy in oral presentation. The class interval for the students' positive self-talk startegy comes from maximal value (4) minus minimum value (1) is three. Then, three divided by 3 is 1. The formula shows that the class interval is 1. From the class interval, the researcher made the category of variables. The categories are presented below:

No	Interval	Categories
1.	3.1 - 4	Excellent
2.	2.1 - 3	Fair
3.	1 - 2	Low

Table 3.6. The categories of students' positive self-talk strategy in oral presentation

The table shows the interval and the categories of students' positive self-talk strategy in oral presentation. If the interval of the students' positive self-talk strategy in oral presentation is 3.1 – 4, it is in excellent category. It is in fair category if the interval is 2.1 – 3. The students' positive self-talk is in low

category if the interval is 1 – 2. Based on the table above, it shows the level of students' positive self-talk strategy in oral presentation.

To answer the first research question, the researcher used questionnaire. There were 15 items about students' positive self-talk strategy in this questionnaire. Indonesian language was used in the questionnaire in order to ease the respondents in understanding the context of each item. There were four points of rating scale which could be chosen by the respondents. According to Cohen, Manion, and Morrison (2011), "rating scales – likert scales provides a range of responses to a given question or statement" (p. 386). The four points of rating scale are presented as follows:

No.	Rating Scale	Score
1.	Always	4
2.	Often	3
3.	Rarely	2
4.	Never	1

Table 3.7. The Response scale of students' positive self-talk strategy in oral presentation.

To answer the second research question, the researcher used another formula. This formula was based on Supranto (2006). The formula is presented below:

$C = \frac{X_n - X_1}{K}$	$C = \frac{34-13}{3} = \frac{21}{3} = 7$

C = class width, class size, class length X_n = maximal value

X_1 = minimal value K = the number of class

This formula was used to know the interval class of the second research question which is about the students' speaking performance. Maximal score for speaking performance in this class is 34, and minimal score for speaking performance in this class is thirteen. Maximal value (34) minus minimum value (13) is 21. This research used three categories (advanced, intermediate, and low) for the students' speaking performance. Hence, 21 divided by three is 7. The class interval for the score of the students' speaking performance is 11.3. From the class interval, the researcher made the category of variables. The categories are presented in the table below:

No	Interval	Categories
1.	29 – 34	Advanced
2.	21 – 28	Intermediate
3.	13 – 20	Low

Table 3.8. The categories of students' speaking performance in oral presentation

The table above shows interval and category of the students' speaking performance in oral presentation. If the interval of the students' speaking performance in oral presentation is 29 – 34, it is in advanced category. If the students' speaking performance in oral presentation is in interval 21 – 28, it is categorized in intermediate category. If the interval of the students' speaking performance in oral presentation is 13 - 20, it is in low category.

The third research question is “Is there any significant correlation between students’ positive self-talk strategy and their speaking performance in oral presentation at English Language Education Department of a private university in Yogyakarta?”. This research answered the third research question by using inferential statistics. “Inferential statistics is a kind of statistics that sustain researcher to make inferences about the wider population” (Cohen, Manion, & Morrison, 2011, p.641). In inferential statistics, there are normality test, linearity test, and Pearsons’ product – moment correlation coefficient (r).

According to Creswell (2012), “correlational design provide an opportunity for you to predict scores and explain the relationship among variables” (p. 338). It means in the correlational design we can see the correlation between two variables. Creswell (2012) stated that there is degree of association in correlational design. Cohen and Manion (as cited in Crewell, 2012, p. 347) divided degree of assosiation into 4, there are:

No	Range	Degree of Association
1.	.20 - .35	Very weak correlation
2.	.36 - .65	Weak correlation
3.	.66 - .85	Strong correlation
4.	.86 and above	Very strong correlation

Table 3.9. Degree of association (Cohen and Manion as cited in Creswell, 2012, p.347)

From the table above, the correlation with range between .20 - .35 has very weak correlation. If the correlation range starts from .36 - .65, it means the correlation is weak. The correlation is strong if the coefficient is between .66 - .85. If the coefficient is more than 0.86, it means the correlation is very strong.