Chapter Three

Methodology

In this chapter the researcher explained the kind of research method that the researcher used in this research. This chapter includes the research design, research population, sample, sampling technique, data gathering, data collection procedure, and data analysis. The researcher gives the explanation in each part of this chapter for clarity reasons.

Research Design

In this research, the researcher used the quantitative correlational design. The researcher used quantitative correlational design because the quantitative correlational design could help the researcher to process the data and answer the research questions in this research. In this research, the data obtained is in large quantities. According to Cresswell (2012) "A correlation is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently." In this research, the researcher has two variables to investigate the degree of association, the first is teachers' teaching method and the second is students' classroom participation. This research aims to know the correlation between teachers' teaching methods and students' classroom participation in the process of learning English. According to Cresswell (2012), "in correlational design, investigators use the correlation statistical test to describe and measure the degree of association or relationship between two or more variables or sets of score" (p.21). To indicate the correlation between those

variables, the researcher used the statistical procedure or correlation analysis. Based on those statements, the quantitative correlational design was the appropriate research design to be applied in this research

Research Setting

The research was conducted at the English Language Education Department at one of private university in Yogyakarta. There were some considerations to choose the private university as the place to conduct the research. The English Language Education Department in that private university has a good quality in the teaching and learning curriculum and also has "A" accreditation for the English Language Education Department major. The researcher believes that if the English Education Department in that private university already has "A" accreditation, it means that the students have greatly qualify to be respondents to help the researcher complete the research. Another reason is because the students at that English Education Department have already learned the different kinds of methods to teach English. By having the knowledge regarding teaching methods, they can help the researcher to achieve valid data. If the students that become respondents have no knowledge about English teaching methods, the researcher would be afraid that the data would be invalid or inaccurate, because all of the information that the researcher need will be based on the students' experience.

Research Population and Sample

This part will explain about population and also samples that will be involve in this research.

Population. The population in this research was students at the English Education Department at a private university in Yogyakarta, specifically students from batch 2015. The total number of students of batch 2015 is 118 active students. The researcher got this number from the administration office. The reason why the researcher chose the students of batch 2015 is because the researcher believes that they have had a lot of exposure about teaching methods and batch 2015 is the the more senior and experienced batch compared to the junior batches.

Sample. The total number of active students of batch 2015 is 118 students. Based on Cohen and Morrison (2011), if the population of batch 2015 consists of 118 students, then the confidence level is 95% and the minimum of the confidence interval is 5%, which means that the researcher should distribute the questionnaire at least to 91 respondents from the total population of the English Education Department.

The sampling technique that applied in this research is the systematic random sampling. According to Cohen and Morrison (2011) in systematic random sampling everybody who is included in the population has an equal chance to be chosen as a respondent and the researcher can choose it randomly. In this research there are 4 classes for batch 2015 as a population, and the researcher only needed

3 classes as respondents. Then, the researcher chose 3 classes from those 4 classes as respondents by using a lottery.

Data Collection Method

    Instrument. For the instrument in this research the researcher used questionnaire as an instrument for collecting the data. Wilson and McLean stated that "The questionnaire is a widely used and 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 straight forward to be analyzed" (Cited in Cohen, Manion & Morrison (2011). Questionnaires helped the researcher to manage the answers from the respondents.

    Questionnaire. In this research the questionnaire was divided into two parts. The first one is the questionnaire for teachers' teaching method. The researcher had adapted 7 questions from Afrin (2014). Then, the researcher had adapted 2 questions from Ghofur (2015). Additionally, the researcher also adapted 4 questions from Tidke (2008) and 1 question from Hadi (2013).

    The reason why the researcher adapted the questionnaire from those references was because each item of the questions is about teachers' teaching methods in the classroom and it can help the researcher to get the answer for the research question number one about the English teaching methods with 14 questions about teachers' teaching methods.

    For the students' participation questionnaire, the researcher had adapted 5 questions from Coates (2010), 5 questions from Hart, Stewart and Jimerson

(2011) and 2 questions from Willig, Swedo and Ortiz, (1987). The total number of items for the questions is 12 questions for this part.

No.	Category	Number of items
1	Implement Teaching Method	1,2,3,4,5,6,7,8,9,10.11,12,13,14
2	Students' participation	15,16,17,18,19,20,21,22,23,24,25,26

Table 3.1. The category of questionnaires

In the beginning of the questionnaire, the researcher used dichotomous questions for knowing the gender of the respondents. Then, the researcher used rating scales for both parts of the questionnaire. The ratings for this questionnaire are:

1. Tidak Pernah → Never
2. Jarang → Rarely
3. Kadang-Kadang → Sometimes
4. Sering → Often
5. Sangat Sering → Very Often

Here are scores for each answer:

Answer Categories	SS	S	KK	J	TP
Positive (+)	5	4	3	2	1
Negative (-)	1	2	3	4	5

Table 3.2 Scores for each answer: Teachers Teaching Method and Students' participation

Validity Test

Cohen, Manion and Morrison (2011) stated that "Validity is an important key to effective research. If a piece of research is invalid then it is worthless." (p.179). According to Heale and Twycross (2015) "Validity is defined as the extent to which a concept is accurately measured in a quantitative study". The thing that will be measured accurately here is a questionnaire. The benefit of making a validity test is to get the result from the research more effectively. After the researcher has collected the items for the questionnaire, to measure the validity of questionnaires, the researcher used experts' judgments. The researcher asked for the opinion of 3 experts. Then, after the researcher got the score from the experts' judgments, the researcher counted the validity test using Microsoft Excel by inputting the data and running them through the Aiken Test. The items of the questionnaire are considered valid if the score is over 0.8. If the score is below 0.4 it means that the item is in the low level, if the score is between 0.5 and 0.8 the items are in the moderate level, and if the items are over 0.8 it means that the items are in the high level. If the score of the items are under 0.8 the researcher should delete those items because the researcher cannot use those items as part of the questionnaire.

After the researcher analyzed each items of the questionnaire, the researcher found that from 26 statements, all of the statements were proper to use in this research. It means all of the questions deserved to be distributed. The table of validity of items of the instrument is shown below:

Items	Validitas	Keterangan
Q1	0.89	Tinggi
Q2	0.89	Tinggi
Q3	0.89	Tinggi
Q4	0.89	Tinggi
Q5	1.00	Tinggi
Q6	0.78	Sedang
Q7	0.89	Tinggi
Q8	0.89	Tinggi
Q9	0.89	Tinggi
Q10	0.89	Tinggi
Q11	0.78	Sedang
Q12	0.78	Sedang
Q13	0.89	Tinggi
Q14	1.00	Tinggi
Q15	0.89	Tinggi
Q16	0.78	Sedang
Q17	0.89	Tinggi
Q18	0.89	Tinggi
Q19	0.89	Tinggi
Q20	0.89	Tinggi
Q21	0.89	Tinggi
Q22	1.00	Tinggi

Q23	0.89	Tinggi
Q24	1.00	Tinggi
Q25	0.67	Sedang
Q26	1.00	Tinggi

Table 3.3. Validity test

Reliability Test

According to Cohen, Manion & Morrison (2011) "reliability is essentially a synonym for dependability consistency and replicability over time, over instruments and over groups of respondents" (p.199). The main purpose of a reliability test is to measure the items of questionnaire, and if the items has a high reliability score, it means that all of the items of the questionnaire can be used in this research. Heale and Twycross (2015) said that "Reliability relates to the consistency of a measure. A participant completing an instrument meant to measure motivation should have approximately the same responses each time the test is completed". Another purpose is to look for errors in the items. If one of the items is not in a reliable score and the researcher still use it, it would influence the result of the research. The result could be not valid. Reliability tests can be done using Cronbach's alpha. The researcher used the Cronbach's alpha provided by the SPSS Program. Bryman and Cramer (1990) suggest that the reliability level is acceptable if it is at 0.8, but another opinion says that it is still acceptable if the score is 0.67 or higher (Cited in Cohen, Manion & Morrison (2011). Here are the table guidelines that can be used:

>0.90	Very high reliable
0.90 – 0.80	Highly reliable
0.79 – 0.70	Reliable
0.69 – 0.60	Minimally reliable
>0.60	Unacceptably low realibility

3.4 Cronbach's Alpha

The result form SPSS confirmed that the reliability value of the instrument of the questionnaire was 0.877 based on standardized items. It can be concluded that the entire instrument of the questionnaire had a high reliability. Here is the table of the Cronbach's Alpha.

Reliability Statistics	
Cronbach's Alpha	N of Items
,877	26

Table 3.5 Cronbach's Alpha result

Data Collection Procedure

For some reasons the researcher cannot come to the class to distribute the questionnaires. The researcher used the Google Form application as a tool for collecting the data, then the researcher decided to contact the respondents via social media such as Whatsapp and Line to share the link to the questionnaire to all of the students. The researcher shared an introduction and an instruction in the message that was distributed to the participants. This is so that the participant know what to do with the link of questionnaire. The researcher needs three days to

collect all of the data from July 10th until 12th 2018. After receiving 91 data from the respondents, the researchers analyzed the data using Microsoft Excel and Statistical Package for Social Science (SPSS) 22.0 version.

Data Analysis

This research has two variables, the first variable is teaching method and the second variable is students' participation. The researcher used questionnaire as an instrument to get the data. When the data has been collected, the researcher analyzed the questionnaire responses by using an application called the Statistical Package for Social Sciences (SPSS) and also Microsoft Excel. The data was analyzed using descriptive and inferential statistics. The descriptive statistic is used to answer the research question part one about the teachers' teaching methods in the classroom and the research question part two is about students' classroom participation. According to Cohen, Manion, Morrison (2011) "Descriptive statistics include frequencies, measures of dispersal (standard deviation), measures of central tendency (means, modes, medians); standard deviations, cross tabulations and standardized scores" (p.622). According to Jaggi (2003), it "gives numerical and graphic procedures to summarize a collection of data in a clear and understandable way" (p.2). The researcher used the mean values as the criterion for the result of the research.

According to Cohen *et al* (2011) "inferential statistics, by contrast, strive to make inferences and predictions based on the data gathered." (p. 606). The last research question has an alternative hypothesis (Ha). Ha means that there is a significant correlation between those variables. In the end, the answer of the last

research question would be whether or not there is correlation between teachers'

teaching method and students' participation. The researcher categorized the

teachers' teaching method and students' classroom participation into 3 levels

using Supranto's formula. The formula is written as follows:

$$c = \frac{\text{Max} - \text{Min}}{n \text{ category}}$$

Details:

c : assumption of the number (class size, class width, class range)

n category : number of category

Xn : the maximum value / score

X1 : the minimum value / score

The ranges of teachers' teaching method are classified into three levels.

Here are the categories of teaching methods:

Category	Value
Effective	51.4 - 70
Moderately Effective	32.7 – 51.3
Ineffective	14 – 32.6

Table 3.6 Interval teachers teaching English methods

The range intervals of students' classroom participation level are classified into three levels. For details, here are the intervals of students' participation in the classroom:

Category	Value
High	44.2 – 60.2
Moderate	28.1 – 44.1
Low	12 – 28

Table 3.7 Interval students' participation level

Normality test. Normality tests are conducted to find out about whether or not the data is normal. A normality test is an important thing when doing a measurement in a research. A normality test can use Zskewness score and Zkurtosis in inferential statistic. If the range of the Zskweness score is between -1 to +1 it can be concluded that the data is normal.

Hypothesis testing. Hypothesis testing aims to prove whether or not there is any correlation between teachers' teaching method and students' classroom participation. To find out about the correlation between those variables, the researcher used SPSS and Pearson Product Moment Correlation *(r)*. The hypothesis will be accepted if the (r-value) < 0.05. The following table showed the association range of the correlation.

Coefficient of Correlation (r)	Degree
0.80 – 1.000	Very strong
0.50 – 0.799	Strong
0.40 – 0.599	Moderate
0.20 – 0.399	Low
0.000 – 0.199	Very Low

3.8 Pearson Product Moment table

Sugiyono (2013)

Furthermore, to know the significance correlation using SPSS, according to

Sarwono (2009) if the significant value < 0.05 means there is a significant

correlation. The table categories shown in the table below.

Category	Value
< 0.05	There is a significant correlation

Table 3.9 The significant correlation category

Sarwono (2009)