CHAPTER 3

METHOD OF DATA COLLECTION AND ANALYSIS

3.1 Research Design

The author used quantitative research methods. Quantitative methods can also be interpreted as research methods based on certain populations or sample studies, data collection using research instruments, and quantitative/statistical data analysis to test predetermined hypotheses (Creswell & Creswell, 2003).

3.2 Method of Data Collection

Dissemination of questionnaires through google Forms using a Likert Scale. This survey is a quantitative survey distributing questionnaires because this research focuses on testing theory by measuring research variables numerically and analysing data using statistical methods.

3.2.1 Participants

1. Population

The population provides an accurate picture of various events, but large numbers, large areas, and large fluctuations require much money and time (Sugiyono, 2012). The population of this research is customers in *Brilliant Les Privat* and *Athena Study Center* Semarang. It consists of 40 customers.

2. Sample

In this research, the writer used purposive sampling. Purposive sampling refers to a group of non-probability sampling techniques in which units are selected because they have characteristics that the researcher needs in the sample. In other words, units are selected on purpose in purposive sampling (Ames et al., 2019). The characteristics of the sample in this research are the students that have heard and joined the *Brilliant Les Privat* and *Athena Study Center* in Semarang. Therefore, the researcher would judge the sample based on this criterion in order to find out the influence of word-of-mouth on purchase intention.

3.2.2 Instrument

The instrument used to collect data is an online survey. The survey is a data collection technique that asks respondents a series of questions contained in the questionnaire. This study attempts to replicate Junior's study (2019). The independent variable in this study is the WOM and the dependent variable is the purchase intention. The writer modified Junior's questionnaire to fit the situation of this study. The questionnaires used Likert scale for each of the question items. The responses later would be converted into numbers, 1 - 4. The most favourable answer was converted into 4, and the least favourable into 1.

The measurement uses a Likert scale to ask each respondent's opinion on a statement (Mulyadi, 2019). On a Likert scale, respondents ticked the boxes.

Strongly Disagree (SD) = 1

Disagree (D) = 2

Agree (A) = 3

Strongly Agree (SA) = 4

3.2.3 Procedure

In carrying out the quantitative data collection procedure, the author would make a list of questions via a google form; the questionnaire distributed online to 40 *Brilliant Les Privat* and *Athena Study Center* customers via WhatsApp, after getting the results of the questionnaire and the data that has been filled with respondents. Then, the writer analysed the results of the questionnaire.

3.3 Validity and Reliability Test

The instrument used to measure the variables in this study was developed by previous researchers, testing the validity and reliability of the questionnaire. This means that the effectiveness and reliability of each research tool have been thoroughly tested in the real world.

3.3.1 Validity Test

The validity test aims to determine the validity of the questionnaire used by researchers to measure and obtain research data from respondents. In this study, the

validity test of the instrument used the Pearson Correlation or it could also be called the Pearson Product Moment, which basically correlated the scores of each item with the total score obtained from distributing questionnaires. Researchers calculated with the help of the SPSS 25.

Validation test for each question item is carried out by calculating the Pearson Correlation between the item scores and the total score. The r table value for a significance level of 0.05 is 0.312.

Table 3.1

The Result of Validity Word of Mouth (WOM) Test of 20 Items

Items	Rxy	Rtabel	Description
1.	0.423	> 0.312	Valid
2.	0.338	> 0.312	Valid
3.	0.459	> 0.312	Valid
4.	0.199	> 0.312	Invalid
5.	0.552	> 0.312	Valid
6.	0.533	> 0.312	Valid
7.	0.466	> 0.312	Valid
8.	0.37	> 0.312	Valid
9.	0.497	> 0.312	Valid
10.	0.547	> 0.312	Valid
11.	0.485	> 0.312	Valid
12.	0.450	> 0.312	Valid

13.	0.115	> 0.312	Invalid
14.	0.264	> 0.312	Invalid
15.	0.15	> 0.312	Invalid
16.	0.4	> 0.312	valid
17.	0.322	> 0.312	valid
18.	0.324	> 0.312	valid
19.	0.378	> 0.312	valid
20.	0.267	> 0.312	Invalid

Table 3.2

The Result of Validity Purchase Intention Test of 20 Items

Items	Rxy	Rtabel	Description
1.	0.523	> 0.312	Valid
2.	0.371	> 0.312	Valid
3.	0.220	> 0.312	Invalid
4.	0.421	> 0.312	Valid
5.	0.311	> 0.312	Invalid
6.	0.711	> 0.312	Valid
7.	0.101	> 0.312	Invalid
8.	0.552	> 0.312	Valid
9.	0.320	> 0.312	Valid
10.	0.692	> 0.312	Valid

11.	0.492	> 0.312	Valid
12.	0.210	> 0.312	Invalid
13.	0.412	> 0.312	Valid
14.	0.535	> 0.312	Valid
15.	0.483	> 0.312	Valid
16.	0.731	> 0.312	Valid
17.	0.440	> 0.312	Valid
18.	0.434	> 0.312	Valid
19.	0.329	> 0.312	Valid
20.	0.109	> 0.312	Invalid

Based on the results of the validity above, there are 15 valid items and 5 invalid items. The researcher used 15 items distributed to customers via a Google form.

3.3.2 Reliability Test

The reliability test aims to determine the level of consistency of the questionnaire, so that the questionnaire is reliable and the measurement results obtained are relatively consistent at different times. In this study, instrument reliability can be measured using the Cronbach Alpha method.

Below are the results of the reliability test taken from 40 customers from *Brilliant Les Privat* and *Athena Study Cente*r Semarang. According to Sujarweni et al., (2014)

the item is reliable if the scale is measured based on the Cronbach Alpha scale of 0 to 1 with an average of $\alpha > 0.6$.

Table 3.3

Reliability Statistic

Cronbach's Alpha	N of Items
.684	15

The table below shows the overall data from 15 valid items with the average of Cronbach Alpha ($\alpha > 0.6$).

3.4. Method of Data Analysis

After the questionnaire results are collected, the data were processed quantitatively and transcribed by analysing the influence of word of mouth on buying interest in *Brilliant Les Privat* and *Athena Study Center* in Semarang consumers by using SPSS version 25. Data analysis in this study uses Pearson's correlation. It is used to forecast future demand based on historical data, or to determine the effect of one or more independent variables (Y) on a dependent variable (X).