CHAPTER III
RESEARCH METHOD

This chapter presents and discusses some aspects of the research method. It consists of research design, research setting, population and sample, research instruments, research procedures, techniques of data collection, techniques of data analysis, and data validation.

3.1 Research Design

This research employs a quantitative correlation study design to analyze the perspectives of individuals and present the results in the form of percentages scores on a Likert scale and to know the correlation between students perspective and students achievement using secondary data of 'rapor'. Data gathered using quantitative methods and sources namely Likert item questionnaires. The survey for students consisted of fifteen questions, thirteen of which will use a Likert scale and two will be ranking-style questions. The results of the survey indicate that students view homework as an important aspect of their learning. The surveys are distributed to all students individually in a closed format.

3.2 Research Setting

This researcher conducted the study in Yimi Junior High School 'Full Day School' Gresik. The subjects of this study are the students of Yimi Junior High School 'Full Day School' in the academic year of 2022/2023. The researcher chooses Yimi Junior High School 'Full Day School' as the subject of the research because the students had been received online homework in their learning activities. This research conducted from February, 2023 which counted since the proposal is submitted until the end of the research. Here is the schedule.

Table 3.1 Schedule of the Researcher

No	Task	Date
1	Asking permission to conducting research	1st of February 2023
2	Delivering survey	2nd of February 2023

3.3 Population, Sample and Technique of Sampling

The population comes from all of the students of SMP YIMI 'FDS' Gresik, MTS MAARIF SIDOMUKTI Gresik and UPT SMPN 24 Gresik. The researcher used these two schools because they have very good score in school accreditation. The researcher used the total population. The researcher used the entire population of the students. They are 187 students from SMP YIMI 'FDS' Gresik, 435 students from MTS MAARIF SIDOMUKTI Gresik and 258 students from UPT SMPN 24 Gresik.

3.4 Research Instruments

This research instrument that will be used in this study is closed-ended questionnaire. The questionnaire was developed and modified based on the theories and issues presented in previous research on homework. Huisman (2016). The questionnaire consists of 15 questions, 13 of which use a Likert scale, and 2 are ranking-style questions. The Likert scale is a commonly used method for measuring attitudes, opinions, and perceptions. It allows participants to indicate their level of agreement or disagreement with a statement on a scale of 1 – 5, being "strongly disagree" and 5 being "strongly agree". The ranking-style questions ask participants to rank their level of importance or frequency of certain actions.

The questionnaire has been designed to elicit students' perceptions and opinions on online homework, and will be used to gather data on their views on the importance of online homework, the frequency of online homework, the ease of completing online homework, the helpfulness of online homework, and other related topics. The questionnaire has been pilot-tested to ensure its reliability and validity. The survey will be distributed to all students individually in a closed format.

The way to compute the validity is using product moment correlation by Pearson-moment correlation coefficient (PPMCC) and calculated as below:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

where r is the Pearson's correlation coefficient, n is the number of valid responses, x represents the score of an item, and y represents the total score of each respondent with valid responses; with an assumption that both variables (x and y) are normally distributed. The criteria of interpreting a validity coefficient of an item are presented in Table 1.

Correlation Analysis (Pearson): Total & Each Variable

- If Sig. < 0,05 and Pearson correlation is positive, then it is valid
- If Sig. < 0,05 and Pearson correlation is negative, then it is not valid
- If Sig. > 0,05, then it is not valid (delete the question)

Table 1. Interpretations of validity coefficients [8]

Validity coefficient values	Interpretation
Above 0.35	Very beneficial (Strongly Valid)
0.21-0.35	Likely to be useful
0.11-0.20	Depends on circumstances
Below 0.11	Unlikely to be useful

Validation of research instruments is done by ten respondents. The respondents are from the seventh, eighth and ninth grade of Junior High School. There are three respondents from the seventh grade, three respondents from the eighth grade and four respondents from the ninth grade.The result descriptively is shown in Table 4.1.(appendix 1)

The next is respondents data for validation test uses SPSS version 24. The result is shown on Appendix 2. From Appendix 2 can be seen that all of the items are valid. The Pearson's correlation coefficients and the p-values showed that respondents tend to agree with the statements on the questionnaire.

Based on the result of validity (see appendix 2) of the instrument, the researcher determined the validity of the items is by seeing the significance value. If Sig. < 0,05 and Pearson correlation is negative, then it is not valid. If Sig. < 0,05 and Pearson correlation is positive, then it is valid. If Sig. > 0,05, then it is not valid (delete the question).it is invalid. The significant value is < 0.05, it means that the instrument is valid.

Based on the interpretation of data, the researcher found that 13 items are valid. It means that the 13 items can be used as a research instruments.

Realibility Statistics

$$\alpha = \left[\frac{n}{n-1}\right]\left[1 - \frac{\sum_{i=1}^{n}\sigma_i^2}{\sigma_X^2}\right]$$

where α is a lower-bound estimate of the true reliability, n is the number of items in test X, σX 2 is the observed score variance of test X, and σi 2 is the variance of item i. (Oktavia R., 2018) The criteria of interpreting an internal consistency reliability coefficient of an instrument are presented in Table 2.

Table 2. Interpretations of internal consistency reliability coefficients [8]

Internal consistency reliability coefficient value	Interpretation
Greater than or equal to 0.90	Excellent
0.80-0.90	Good
0.70-0.79	Adequate
Below 0.7	Less Applicable

• If Cronbach's Alpha > 0,6 ◊ the instrument is reliable.

• If Cronbach's Alpha < 0,6 ◊ the instrument is not reliable

Cronbach's alpha for the thirteen items of the instrument is 0.957. See (appendix 3). As the value of Cronbach's alpha has to be above 0.6 for the items to be accepted or reliable for the reasearch purposes then all the items of the instrument are reliable or accepted.

The validation of the teacher made test is done by the curriculum department of the each school. Before delivering the test to the student teacher did the consultation to the curriculum department first for checking the validity and reliability of the test. Every school has their own standard of the test.

The questionnaire will be given to all the students which aim to find out students' on online homework. The first eleven items in the questionnaire will apply five point Likert scale such as 'strongly disagree', 'disagree', 'agree', 'strongly agree', in which participants have to choose on what their responses toward each items. The next three items are based on the following points: 'never', 'rarely', 'sometimes', 'often'. For the teachers' questionnaire, the first and the second items are about the reason and the time in spending homework. The next eight items in the questionnaire will apply five point Likert scale such as 'strongly disagree', 'disagree', 'agree', 'strongly agree', in which participants have to choose on what their responses toward each items. The next two items are about the percentage of homework grade and submission. The next two items are about the homework submission and the last item is about homework policy.

Unlike standardized tests, teacher developed tests have not been tested on sample populations of students and do not allow you to compare your students to a standard. Instead, these tests (also called criterion-reference tests), help test a student s understanding of a particular (and often limited) body of knowledge

The English students achievement (rapor score) is not come from the standardize test because it is teacher made test. The teacher has already known how to make the good test based on the criteria of the school curriculum.

3.5 Research Procedure

the first step is conducting data analysis is to validate the research instruments, which include a questionnaire and students' English achievement scores as obtained from teacher-made tests. The second step is to distribute from questionnaire to the participants using a Google form. The third step is analyzing the data using SPSS 24 and presenting the results in the form of percentages. The final step is to correlate the results of the questionnaire with the students' English achievement scores using correlation test.

Overall the research procedure includes:

1. Validation of research instruments (questionnaire and teacher-made test)
2. Distribution of questionnaire using Google form to participants.
3. Data analysis using SPSS 16 and interpretation of results in percentage
4. Correlate of questionnaire results with students' English achievement scores using t-test.

3.6 Technique of Data Analysis

To analyze the collected data, the reseacher used the following data analysis:

1. **Questionnaire Responses Analysis**

   After delivering questionnaire to the students, the questionnaire respoxes will be calculated into percentage. The researcher using this following formula to make the percentage

$$P = \frac{F}{N} \times 100$$

P = Percentage

F = Number of frequency

N= Number of sample

(Susilowati, 2015, 26)

The Classifications of the students' interest is as follows:

1. Strongly agree
2. Agree
3. Uncertain
4. Disagree
5. Strongly Disagree

3.7. Data Validation

1. The normal distribution

The purpose of this test is to find out whether the data gained from the questionnaire are normal. In analyzing the data, the researcher uses parametic test using T-Test in Statistics Package for the Social Sciences (SPSS) version 24. By interpreting the output data, automatically the researcher knows whether the data are normal and homogenous distributed in the sample or not. The intervals are used to ensure accuracy.

2. Homogeneity Test of Variance

The purpose of this test is to find out whether the data gained from the questionnaire are heterogen. In analyzing the data, the researcher uses non parametic test using Spearman correlation Test in Statistics Package for the Social Sciences (SPSS) version 24. By interpreting the output data, automatically the researcher knows whether the data are not normal and heterogen distributed in the sample or not. The intervals are used to ensure accuracy.

The correlation between the students' perception and English achievement will be analyzed using a correlation test. If the data is normal homogeneous we use Pearson correlation. If the data is not5 homogenous it will use Spearman correlation. The test will be used to determine whether there is a significance differences between the students' perception on online homework and their English achievement. The researcher will use SPSS version 24 to compute descriptive statistics.

The steps for the t-test calculation will include stating the hypothesis and setting the alpha level at 0.05 using two-tailed test.