

CHAPTER III

RESEARCH METHOD

3.1 Research Design

The Researcher conducted a study of the comparison of students using screen books and printed books to students perceived learning at six semesters on English department in University of Muhammadiyah Gresik. For 50 students of six semesters in this collague get a lesson using two book formats namely screen book and printed book. There are 23 morning students and 27 evening students. However, generally the use of a printed book is still a bit dominating over that time period.

This study uses comparative design which is part of quantitative research. This research is to find out the difference preference between the afternoon students and the morning students of six semesters in English department towards screen book and printed book.

To get the data the researcher used the questionnaire. The questions of questionnaire is use self report measure to measure student learning in affective area. Chesebro & McCrosskey (2000) stated that the current study shows that the self report is a valid measure of learning.

3.2 Population and Sample

3.2.1 Population

This research is conducted in Univeristy of Muhammadiyah Gresik that located in Gresik. The population of this study is students of six

semester on English major because they are deemed to have experience in receiving learning longer by using two types of book formats.

3.2.2 Sample

In this study, the sample are morning class students and evening class students of six semesters on English department. There are 50 students of six semesters in the academic year 2017- 2018 which became the sample of the research. The number consists of 23 morning students and 27 evening students.

3.2.3 Sampling Technique

Survey conducted in this research to know the subjects used are in accordance with the purpose of the study or not. Sampling technique used is one of the non probability sampling technique / purposive sampling that is judgment sampling. This sampling technique is based on certain considerations in order to obtain samples that have the characteristics or criteria desired by the researcher. Judgment sampling is used because researchers consider the sample to be researched have better information than other research subjects.

The criteria determined by the researcher is the student must have sufficient learning experience in using two book format that is screen book and printed book. That is why, researcher take the six semester students as sample of the research because they have experience studying English language in University of Muhammadiyah Gresik with both

books format in 3 years time. To get students to decide their preferred way of learning, students need experience in that case so that through that experience students can find out and feel the best way to learn for themselves.

3.3 Data Collection

3.3.1 Instrument (Questionnaire)

Instruments used in this study to identify the subjects in this study. Surveys were conducted to find out the students' reading opinions based on experience using two books format. This research was conducted with the help of questionnaires distributed to the students so that they give an opinion about the learning experience using two book formats during learn on English department in University of Muhammadiyah Gresik.

The survey consists of several questions about students' perceptions of the books they use. The types of questions is close questions and open questions that the answer must be taken from a predetermined list (quantitatively) and filling the blank (qualitatively). The instrument included ten questions of close questions and two open questions on which students reported perceived learning. The instrument use 4-point Likert type scale where students rated learning ranging from score of 1 (Not Agree) to a score of 4 (Very Agree).

3.3.2 Procedure of Collecting Data

The procedures used in this study begins by interviewing the students and the teacher about two books format that they used while learning English courses. Then, giving self report measure questionnaire to students who become sample of the research. The sample was previously taken by using purposive sampling. The questions given in paper or traditional format because using paper can minimize lies. Then, if using web-based students tend to ignore and can make it easier for them not to answer honestly. They can have used the results of their friend's questionnaire and it is not allowed.

The advantages of using paper based are students answering questions in the time of the moment. Because this study focuses on what students opinions and feel about the books that they use, the questions which used related to affective learning that asks what students feel and it can be called as self report measure. The question is personal so the possibility is very small to be dishonest in answering it or cheating another participant. Perceived by each individual is different for different reasons. In the other hand, the validity and reliability of self-reports needs to be measured to ensure the instruments are used well. Rovai et al. (2009), in their validation study, provided evidence of the instrument's validity and reliability to measure perceived cognitive, affective, and psychomotor learning in traditional and online settings.

3.4 Homogeneity

This test is to knowing distribution variances in this study. This test is used to determine whether the data on the variable X (screen book) and variable Y (printed book) is homogeneous or not. To know whether or not the influence of independent variables (screen book and printed book) to the dependent variable (perceived learning) then Z test is done through SPSS 17.0 program. The Z test is used in this study because the samples are studied ($N < 30$) (Meredith et al, 1960; 304).

Homogeneous criteria :

If $Z_{\text{arithmetic}} < Z_{\text{table}}$, it means not homogeneous

If $Z_{\text{arithmetic}} > Z_{\text{table}}$, it means homogeneous

3.5 Normality

Normality test is used to determine whether the population data is normally distributed or not. This research is non-parametric statistic where the data used is ordinal data with little sample amount (< 50). Then the data distribution should be abnormal. In this discussion will be used One Sample Kolmogorov-Smirnov test using a significance level of 0.05. Data is otherwise normally distributed if the significance is greater than 5% or 0.05. So the data obtained by researchers have significance less than 5% or 0.05 so it can be said to have abnormal data

3.6 Validity

Validity is a measure that indicates the level of reliability or accuracy of a measuring instrument. Validity shows the degree of accuracy between the actual data occurs on the object with data collected by the researcher. Valid means the instrument can be used to measure what should be measured.

While to test the validity of the questionnaire is done by calculating the value of correlation between data on each question with a total score using the formula of correlation technique product moment pearson. The calculation of product moment correlation.

Testing the validity of using a measuring instrument in the form of a computer program is SPSS (Statistical Package for the Social Science) for windows 16, and if a measuring tool has a significant correlation between the score of the item to the total score then said tool scores are valid (Ghozali, 2006). To determine the valid and deceased item numbers, it should be consulted with the product moment r table.

The criteria of the validity test are:

- If $r_{\text{arithmetic}} > r_{\text{table}}$, then the questionnaire item is valid.
- If $r_{\text{arithmetic}} < r_{\text{table}}$, then it can be said the item questionnaire is invalid

3.7 Reliability

Reliability is a set of measurements or a set of measuring tools that have consistency when measurements made with the measuring instrument are

repeated. Reliability relates to degree of consistency and data stability. A questionnaire is said to be reliable or reliable if one's answer to the question is consistent or stable over time (Ghozali, 2006).

The way used to test the reliability of the questionnaire in this study is to use the formula coefficient Alpha Cronbach (Saiffudin Azwar, 2000). To know the questionnaire is reliable will be done reliability testing questionnaire with the help of computer program SPSS.

Criteria assessment reliability test is:

- If the coefficient of Alpha is greater than the level of significance 60% or 0.6 then the questionnaire is reliable.
- If the coefficient of Alpha is smaller than the level of significance 60% or 0.6 then the questionnaire is not reliable.

3.8 Data Analysis

3.8.1 Likert Scale

Likert Scale according to Djaali (2008) is a scale that can be used to measure attitudes, opinions, and perceptions of a person or group of people about a phenomenon or phenomenon of education. The Likert scale is a psychometric scale commonly used in questionnaires, and is the most widely used scale in research surveys. The scale itself is one of meaning, simply facilitating, is tiered measures.

The scale of the assessment, for example, is a scale for judging something of a multilevel choice, eg 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The

Likert scale is also a tool for measuring (collecting data by " Measure-weigh ") whose" item "(the item points) contains (provides) a tiered choice. In this research, the researcher use 4 Likert scale because the subject is limited. With Likert Scale, the variables to be measured are translated into variable indicators. Then the indicator is used as a starting point to arrange the items of the instrument that can be a question or statement. In this study, researcher using statments form which is the answer in predetermine list and questions form. The answer of each instrument item using the Likert Scale has a gradation from very positive to very negative. Frequency Analysis (Proportion) is used to analyze questions or statements agree and disagree.

This study measures students' reading preferences on screen books and printed books between morning and afternoon classes with a total of 50 students. Then, need to look for objective criteria of each question, it is necessary to find the value of interval and its range with the formulation as follows :

High Scores (X)	: Number of Highest Score X Questions = n
	: $5 \times 4 = n$
	: $n/n \times 100\% = 100\%$
Lowest Score	: Number of Lowest Score X Questions
	: $5 \times 1 = 5$
	: $5/20 \times 100\% = 25\%$
Range (R)	: High Scores - Lowest Score
	: $100\% - 25\%$
	: 75%

Category	: 2
Interval	: $R/K = 75\%/2 = 37,5\%$
Standart Range	: $100\% - 37,5\% = 62,5\%$
Objective Criteria	:
• GOOD	: If the percentage of total respondents answers has value $> 62,5\%$
• NOT GOOD	: If the percentage of total respondents answers has a value of $< 62,5\%$

3.9 Hypothesis Test

3.9.1 Wilcoxon

Wilcoxon test is almost the same as the Sign Test but the magnitude of the difference between the positive and negative values calculated, and used to test the comparative hypothesis of 2 paired samples if the data population ordinal. If the paired sample is larger than 25, then its distribution is considered to be close to the normal distribution. For that used Z as Statistical test.

Test Criteria:

If P value $<$ of 0.05 means there is no significant difference

If P value $>$ of 0.05 means there is a significant difference

Hypothesis Criteria :

H₁ : There is significant difference of preference between the

afternoon students and the morning students at sixth semesters on English department in the University of Muhammadiyah Gresik towards screen book or printed book

H₀ : There is no significant difference of preference between the afternoon students and the morning students at sixth semesters on English department in the University of Muhammadiyah Gresik towards screen book or printed book