

CHAPTER III

METHOD OF THE STUDY

3. 1 Research Approach

The method of this study is quantitative because the data are counted using a statistical test. Quantitative analysis is a method of analyzing data which emphasizes on using and collecting information statistically (Aslam, 1991, p. 35). The writer uses t-test, a parametric statistical test, to answer the hypothesis. A t-test is used to test the significance of differences between means (Butler, 1985, p. 78). In this case, the writer used the t-test to compare the means on the intelligibility for native speaker and non-native speaker pronunciation. Furthermore, the discussion of the result of this study is based on the result of the test.

3. 2 Population and Sample

The population of the study is the students of D3 of English Language at Airlangga University. The writer chooses them because D3 students have more courses on English language proficiency, i.e. not only Listening, Speaking, Reading, Writing, and Structure, but also Pronunciation. Therefore, the writer considers that they should have the ability to comprehend English vowel sounds that associated to the study.

The writer uses the purposive sampling technique to draw the sample. According to Neuman (1991, pp. 203-204), this is an acceptable kind of sampling

for special situation. There are three situations suited to this kind of sampling: First, it is used to select informative and unique cases. Second, it is used to select members of specialized or a difficult-to-reach population. Third, it is used to identify particular types of cases for in-depth investigation.

The purposive sampling technique is done by choosing the respondents based on the following criteria:

1. They are the students of D3 in English Language of Airlangga University (batch of 2006).
2. Their first language is Indonesian.
3. They have passed the class of listening I and they are taking the class of Listening II now.
4. Their last score for the class of Listening I is minimum BC. This is the mid-point score of the grading system at this department.

Based on the criteria above, there are 31 respondents that become the sample of this study. This number is adequate according to the central limit theorem, i.e. the distribution of sample means is approximately normal, provided the samples are above 30 (Butler, 1985, p. 55).

3. 3 Technique of Data Collection

In collecting the data the writer did some steps such as making the recorded list of words, making the questionnaires, and playing the recorded words to the respondents. Further explanation is described as follows:

1. The writer recorded the pronunciation of two different native speakers who are Indonesian and British English speakers. They were asked to pronounce a list of words which consist of English vowel sounds while the writer recorded it. The native speaker is the teacher of EF. He comes from England and had been in Indonesia for six months; meanwhile, the non-native speaker is the Indonesian speaker and she is a student of English Department of Airlangga University.
2. The writer made the questionnaires. The first page is personal information. The second page is a blank space for the respondents to fill out with the words after hearing the recorded English words from the native English speaker and the last page is a blank space for the Indonesian speaker.
3. The writer gave the questionnaires to the respondents and played the recorded words. The steps in giving the questionnaire are as follows:
 - a. The students were put together in a language laboratory in the Faculty of Letters of Airlangga University. It was done after they had finished the final test of Listening II.
 - b. The lecturer of Listening II introduced the writer to the students.
 - c. The writer briefly explained to the students about the research and the objectives of the research.
 - d. The writer shared the questionnaires to the students.
 - e. The students filled out the first page which contains personal information.

- f. The writer played the recorded words from the first speaker who was the native English and asked them to write the words directly after hearing the words because the writer would only played it once.
- g. The writer played the recorded words once from the second speaker who was the Indonesian speaker and asked them also to write it in the next blank spaces.
- h. The writer asked the students to submit the questionnaires and thanked them and also thanked the lecturer for participating in the study.

3. 4 Technique of Data Analysis

After collecting the questionnaires, the writer analyzed the data using a parametric statistical test. The steps in analyzing the data are:

1. Determine the score of each student both toward the English and Indonesian speakers. There were 21 words tested to the respondents. In determining the correct and wrong answers, the writer focused on the vowels because this research only analyzed the vowel sounds. For instance, there are some students who comprehended the word *rice* [raɪs] as [raɪz]; in this case, homophones are considered as correct answer.
2. Count the arithmetic mean for each respondent. In this case, the writer calculated the number of correct answers, then multiplied it with 100, and divided it with 21. Therefore, for example, a respondent who

answered 18 words correctly, would obtain the following mean:

$$\frac{18 \times 100}{21} = 85.71$$

3. Count the significance level of difference between the means of the scores of the English and Indonesian speakers. The calculation is based on t-test value with 95% level of confidence.
4. Divide the levels of difficulties into three categories. The first part is the least intelligible English vowel sounds, the second part is the less intelligible vowel sounds and the last is quite intelligible vowel sounds. The word is considered the least intelligible if it is answered incorrectly by 21 until 31 respondents. The word is considered less intelligible if it is found incorrectly by 11 until 20 respondents and included to be quite intelligible if it is found incorrectly by 1 until 10 respondents.
5. Analyze the mistakes based on the comparison between the vowel systems of English and Indonesian languages.
6. Interpret the result of the analysis.