CHAPTER III

RESEARCH METHODOLOGY

This part explains the method of the research to answer the research questions proposed in Chapter I. This chapter also delineates the setting and the subjects of the study. There is also the explanation on how the data were collected and analyzed. The last section of the chapter discusses some strategies applied in testing the validity and reliability of the study.

3.1 Method of the Study

This research applied a case study, which constitutes a form of qualitative research. According to Fraenkel and Wallen (1990), this form of qualitative research studies particular individuals, classrooms, schools, or school districts. Through a thorough study of somewhat unique individuals, it is hoped that insights can be gained that will suggest ways to help other individuals. In a more general research category, this study belongs to a descriptive research (Fraenkel and Wallen, 1990). Also, Best and Kahn (1989) states that descriptive research method is "the method which describes, records, analyzes, and interprets conditions that exist in a certain group".

The rationale for choosing one methodology over another is related to the nature of the subject studied and the underlying goals of the research. This study was carried out as a single case aiming at analyzing students' pronunciation test results at SMAN 1 Cisarua and was attempting to find out the errors they made. Here, the data analyzed, described, and interpreted are the pronunciation test

results of the students at that school. Considering the scope of this research, the result of this study cannot be used to represent other individuals in general, yet insights gained from this study can be useful to suggest ways to help other students. This is due to the characteristics of case studies, which can help gain insights into why something is the case and see any noticeable pattern or regularity in the students' behaviors. It can then be hoped that through the study of a single rather unique case, valuable insights would be gained.

3.2 The Participants of the Research

This study involved 62 students of tenth grade in classes X-3 and X-6 SMAN 1 Cisarua, Bandung in the academic year of 2008/2009. The tenth grade students were selected based on the consideration that this grade is the beginning level of English learning at senior high school. They might come from various junior high schools and with different abilities accordingly. By knowing all possibilities of errors in pronunciation made by students with these diverse backgrounds, it was expected that the result would also be rather complete. Also, concerning this grade as the first level in senior high school, with the recognition of their abilities in the current condition, the English teacher would know what they lack and what they need in terms of pronunciation. Thus the research finding is expected to contribute to achieving better mastery of pronunciation in the next levels.

Based on the description above, this study adopted purposive sampling. The participants of the study were chosen based on certain consideration. Maxwell (1996) states that one of the possible goals for purposeful sampling is achieving

representativeness or typicality of the settings, individuals, or activities selected. The typicality of the participants described above prompts the researcher to earn in-depth understanding about them. Moreover, Patton (1980) (quoted in McMillan & Schumacher, 1989) explains, "purposeful sampling is a strategy when one wants to … come to understand something about certain selected cases without needing (or desiring) to generalize to all such cases".

3.3 Data Collections

In order to find out the answers to the research questions proposed in this study, some types of instruments were used. The data were collected by the administration of a pronunciation test and interview. The former was given to the students of SMAN 1 Cisarua classes X – 3 and X – 6, and the latter was intended to get some information related to the students from the teacher. This procedure was taken as this is in line with the objectives of the research, i.e. seeking answers to pronunciation errors made by the students in terms of their categories of error and discovering sounds that appear to be problems for the students. The interview served as a secondary instrument to find out some information from the teacher on how the learning of pronunciation had been taking place which might affect the students' performance.

3.3.1 Pronunciation Test

The test, combining multiple-choice techniques on paper and an audio recorder, was conducted to gain in-depth information on students' pronunciation mastery in terms of both their recognition and their production skills of English individual

sounds. The test consists of 54 items to be assessed, covering all problem sounds in English.

The form of the test adopted some formats found in various books and other publications adjusted as necessary. The test construction mainly referred to Robert Lado's *Language Testing*, supported by Joanne Kenworthy's *Teaching English Pronunciation,* J. B. Heaton's *Writing English Language Tests,* www.teachingenglish.org.uk, and Byrne and Walsh's *Pronunciation Practice: Students' Workbook*. The test was intended to measure students' mastery only in English individual sounds.

To avoid boredom that the students might face, the test comprises five sections, four sections to measure the receptive or recognition skills and one for the productive skills. The first section of items measuring the students' recognition skills is phonemes identification, followed by vocabulary knowledge, discrimination of ending sounds, and homophones. The last part of the test was meant to measure students' production of sounds. Each section of the test, along with the example, will be presented below.

I. RECEPTIVE SKILLS

A. Phonemes Identification

1. Which of the following words do I say?

(a) Feel

(b) Peel

(c) Pill

(d) Fill

All the words above, which are known as minimal sets, have at least one significant, distinguishing sound. The teacher mentioned the intended word three times for each number, and the students had to choose the right word.

B. Vocabulary Knowledge: Word and Definition

1. Which of the following best describes what I say?

   a. Something used for writing

   b. A utensil for cooking

   c. Suffering or hurt

This form of the test also makes use of minimal sets. The students had to listen to a word mentioned three times by the researcher, and then had to choose the right definition of the word they just heard. For instance, the students heard the word 'pan', so they would have to choose 'b', not 'a', which is 'pen', nor 'c', which is 'pain'. Here, the distinguishing factor is the vowel in the middle of the words.

The use of 'word-and-definition' form was utilized as it is a common form of exercises in some textbooks and workbooks used at the school. So it was expected that this might not raise a great deal of difficulty for the students to have this kind of test. To make things clearer, the researcher also elicited some example questions and explained them as necessary until the students understood what they had to do.

C. Ending Sounds: - ed and –s

1. Which of these words has a different –ed sound?

    a) missed

    b) screamed

    c) served

    d) failed

2. Which of these words has a different –s sound?

    a) apples

    b) dreams

    c) rats

    d) birds

   This part of the test deals with how the students can differentiate three different sounds of –d/-ed and –s/-es endings in English words. The former problem, i.e. distinguishing three different –d/-ed endings is often faced by the students when they learn such genres as narratives or recounts. This kind of test is, therefore, in line with the materials covered in the curriculum. Like the former problem, the latter also often raises confusions among students. Often they have difficulties distinguishing the sounds of –s/-es endings in either plural forms of English words or verbs indicating the third person, which also have three distinctive phonemes according to where they occurs: /s/ in *snakes* and *eats*, /z/ in *waves* and *defines*, and /ɪz/ in *houses* and *watches*. Still, for each part, the researcher gave the instruction as clearly as possible, along with the examples needed.

D.   Homophones in English

*For each sentence, find the word in **bold** which has a **different** sound from the other two.*

1.

   a)   All the schools here are now built of **brick**.

   b)   In practicing this, you should be careful not to **break** your arm.

   c)   My car has some problems with the **brake**.

Like some of the previous sections, this part also makes use of minimal sets. There are three 'almost' similar words put in context, highlighted by their being bold. Only two out of the three words are homophones. The students had to choose the one that should be pronounced differently from the other two. This resembles a famous children game 'odd-one-out'. To make sure the students understood, the researcher also gave some example questions.

II. PRODUCTIVE SKILL

A. Phonemes Distinction

1.   The <u>date</u> has still to be settled.

        debt

2.   The <u>heart</u> is difficult to heal.

        hurt

In this last part of the test, the students were asked to read aloud the sentences, highlighting the necessary differences contained in each. What would be assessed was only the pronunciation of the two highlighted words; the students would get

score only if they pronounced those highlighted words correctly—which also means differently from each other. All the sentences including the words contained in them are familiar to the students and it is expected that they are relatively easy, too. Each student's voice was recorded and transcribed phonemically.

3.3.2 Interview

Supporting the pronunciation test, an interview was held afterwards. The teacher was given a series of questions related to how the learning of pronunciation had been taking place. This was also intended to find out the teacher's perspective about the students and their performance in pronunciation. Also, as Maxwell (1996) stated, an interview is valuable, especially to gain a description of actions and events that took place in the past or ones we cannot gain observational access. In this case, the teacher could also inform how the teaching and learning process was conducted in the previous time, how the students got involved in the process as well as how they performed especially in pronunciation.

The reason why only the teacher was interviewed was the fact that pronunciation, along with some technical terms included in it, might be foreign to the students. Also, it might be rare for teachers to separately or explicitly teach pronunciation in the teaching-learning process; it is likely that it would just be integrated with other learning aspects. At times students might not be aware that they were learning pronunciation. Through this interview, the teacher was asked to give her views both on all concepts related to pronunciation and its teaching

and on the students' mastery. Therefore, the teacher was expected to give more thorough and comprehensive data about the aforementioned.

In this study, a semi-structured interview was employed. Nunan (1992) explained that in this type of interview, the researcher has the general idea of where he or she wants the interview to go, and what should come out of it, but does not enter the interview with a list of predetermined questions. One of the advantages of this kind of interview is, as Nunan (1992) declared, that it gives the interviewee a degree of power and control over the course of the interview. Also, it gives the interviewer a great deal of flexibility with some interview guide previously prepared. With this, both the interviewer and the interviewee had the freedom to develop the questions in order to gain in-depth information about the students and their pronunciation mastery.

The interview was conducted in an informal way with expectation that the teacher could, in answering the questions, be more expressive and responsive without being tense or feeling any pressure of being investigated. This type of interviewing was intended to maintain the good rapport between the researcher and the teacher. For better understanding and ease of explanation, by no means of underestimating the teacher's English speaking competence, Indonesian language was used in the interview. The interview was recorded and transcribed.

3.4 Data Analysis

After the data had been gathered, some steps were employed to analyze them. Before going through the analysis, the initial step was, as suggested by Maxwell (1996), listening to the recording of the pronunciation test as well as of the

interview as it is. In other words, document analysis was employed here: the result of the pronunciation test as well as the interview was closely analyzed.

The data obtained from the test were analyzed in two ways. First, the test items measuring the receptive or recognition skills, which use multiple-choice technique, were counted based on the correct and incorrect answers. Second, test items intended to measure the productive skills employed reading-aloud technique, where the voice of each participant was recorded. The writer then transcribed their voices in the recording into phonemic transcription. To find out where the errors exactly lay, the data obtained were compared with the standard phonemic transcription, which is based on International Phonetic Alphabets (IPA) and dictionary transcription. The transcriptions were then analyzed for each test item. Having been thoroughly analyzed, the errors were then classified into some categories.

In conducting the classification of these errors, the writer followed Haycraft's (1973) list of common types of errors. The list comprises the following. (1) There is any difference in pronunciation of the letter sound; students pronounced the letters based on their native language; thus the word 'hurt' is pronounced /hʊrt/. (2) The English sounds seem to be the same in the students' mother-tongue, which are actually not. They used their native version; for instance, some pronounced the initial sound in 'short' as /s/. (3) The English sound is quite new to the student; for example, the final consonant phoneme in 'breathe'. The students may substitute it to any approximate sound. (4) The students find it difficult to pronounce sounds embedded in cluster of consonants or vowels: -stskr- as in *the best script*, -ldgr- as

in *Old Granny*. (5) Students' mother tongue does not use the same sound combination, in certain positions in the word: *special* becomes /səpesial/, Spanish *nada* makes the word *riding* pronounced as if it were 'rithing', very bad is pronounced 'very bat' just like 'ein Bad' in German. (6) Students' mother tongue does not accept certain combinations of sounds; when 's' precedes 'm' in Italian it will be pronounced 'z', resulting *small* pronounced 'zmall'. (7) Students do not expect sounds to change: s > z in *rosy* and *noisy*. Another example would be -s ending in either plural forms of English words or verbs indicating the third person, which have three distinctive phonemes according to where it occurs: /s/ in *snakes* and *eats*, /z/ in *waves* and *defines*, and /ɪz/ in *houses* and *watches*.

In analyzing the result of the interview, the model of analysis used was that of Miles and Huberman (Flow model). The following were the employed steps to analyze the data obtained from the interview.

1. Data reduction

    - Transcribing the interview

    - Coding the transcript of the interview

    - Categorizing the data into selected categories

2. Data display

    - Synthesizing the transcript of the interview

    - Interpreting the result of the interview

    - Presenting the result of the interview

3. Conclusion drawing and verification

    - Concluding the result of the pronunciation test and interview

- Verifying all the results to make the data valid

3.5 Reliability and Validity of the Study

In this research, two types of instruments were used to answer the research questions: pronunciation test and interview. Both instruments were utilized by previously considering the reliability and validity, two important characteristics of any instrument. Hatch and Farhady (1982) warned that "the validity of the results of any research project depends, in a very real way, on the appropriateness of the instrument or test items used." Here, the first instrument, i.e. the pronunciation test was intended to gain in-depth information on students' pronunciation mastery in terms of both their recognition and their production skills of English individual sounds. The second was an interview with the teacher as the source of information regarding how the learning of pronunciation had been taking place and how the students got involved and performed.

The first instrument used was the pronunciation test. The test was made after some steps to examine its reliability and validity had been conducted. Reliability, as Hatch and Farhady (1982) define it, is the extent to which a test produces consistent results when administered under similar conditions. Hatch and Farhady (1982) further explain that there are three basic methods of estimating reliability: test-retest by administering the test to the same participants twice and computing the correlation between the two administrations, parallel tests by computing the correlation between two parallel test, and internal consistency methods using split-half method, Kuder-Richardson formula 20, and Kuder-Richardson 21. Considering the practicality of the test administration and the ease of computation,

in this research the method used was one which belongs to internal consistency methods, that is, Kuder-Richardson 21. The following is the formula:

$$\text{KR-21}\, r_K = \frac{K}{K-1}\left[1 - \frac{X\,(K-X)}{Ks^2}\right]$$

Notes:

K = number of items in the test

X = the mean of the participants joining the try-out

S^2 = the variance of the participants joining the try-out

Referring to hatch and Farhady (1982), the reliability of a test will be between 0 and 1. Further, Sekaran (1992) in Priyatno (2009) maintains that reported test variability less than 0.6 is categorized as less reliable, 0.7 is acceptable, and more than 0.8 is considered reliable.

Apart from the reliability, the validity of the test was also examined. Hatch and Farhady (1982) state that validity refers to the extent to which the results of the procedure serve uses for which they were intended. The test made in this research was aimed to measure the students' pronunciation mastery in terms of both their recognition and their production skills of English individual sounds. The test items cover all English sounds that might be problems in pronunciation. Therefore, the type of validity concerned here is content validity. This test is intended to measure a representative sample of the subject matter content, focusing on the adequacy of the sample. The materials or the test items contained in the pronunciation test embrace the 44 English speech sounds.

To get more thorough understanding of the students' competence and how the learning process had been carried out, an interview was used as another instrument. This is also an effort to enhance the validity. As Maxwell (1996) puts it, validity refers to the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account. For the purpose of ruling out validity threats and increasing the credibility of the conclusions, certain strategies should be considered. Using various methods in collecting data or information is one way to solve the problem of validity known as triangulation (Maxwell: 1996).

Another strategy to rule out validity threats employed in this research is what Maxwell (1996) refers to as "rich" data. The data are detailed and complete enough that they provide a full and revealing picture of the events being investigated. The interview is completed with its full transcript and the recording of students' voices in the pronunciation test is also phonemically transcribed. This is in line with Maxwell's (1996) explanation on "rich" data: "In interview studies, such data generally require verbatim transcripts of the interviews, rather than simply notes on what you noticed or felt was significant."