

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **A. Research Methods**

##### **1. Research Design**

A research design is the data gathering and analysis procedures employed by the researcher to conduct the research. (Creswell, 2012) claims that research design is the process by which the researcher collects, analyzes, and interprets data. When selecting a research design, the researcher should consider what and how data will be gathered and processed.

The researcher conducted this study using a qualitative descriptive research design. The qualitative approach enquires in why errors occur. According to (Creswell, 2012), qualitative research examines and understands the individual or group. Descriptive research aims to draw clearly and systematically toward the specified research questions. The researcher aimed to use descriptive research to identify the sounds that are incorrectly pronounced and to identify the factors that contribute to errors in pronouncing English triphthong sounds produced by EFL students.

##### **2. Research Subject**

Subjects in a study are required to get the needed information. In qualitative research, the researchers select the subject based on the subjects' knowledge which is capable to answer the question (Lodico *et al.*, 2006). The researcher conducted this research in the third-semester students of the English Education Department in academic year 2021/2022 at IKIP PGRI Pontianak which contains 160 students overall.

To determine the sample that was used in this research, the researcher chose the subjects by applying purposive sampling. Purposive sampling is a sampling technique that considers specified criteria and the informants' ability to provide information that can answer the research questions (Ary,

2012). The class that were chosen as a sample is C Afternoon class which contains 34 students.

### **3. Technique of Data Collection**

The primary data in this study were obtained by conducting techniques of data collection which allowed the researcher to gather information systematically from the subjects of research. The researcher preferred to gather the data directly from the subjects by using measurement and direct-communication. By combining the different techniques for gathering qualitative data, the result of the data obtained will be more comprehensive. The further explanation regarding to the techniques of data collection is shown below:

#### **a. Measurement Technique**

The researcher used measurement process in gathering information to find out errors made by students in pronunciation. The measurement concern is that the application of its findings requires some assesment of a generally accepted set of goals or values. Educational measurement can refer to standard procedures and principles that underlie the application of the procedures used for tests (Adom, Mensah and Dake 2020).

#### **b. Direct Communication Technique**

Direct communication is speech that conveys clear messages or that clearly directs actions. This is the most common mode of communication in everyday life. This type of communication generates its atmosphere, namely familiarity, and natural trust. The instrument that had been used in this research was an interview, where interviews are easier if done directly to conveys clear messages.

### **4. Tools of Data Collection**

#### **a. Oral Pronunciation Test**

Tests are widely used in descriptive research to describe the existing conditions at a particular time. (Best *et al.*, 2016). Thus, the researcher conducted an oral pronunciation test to identify their fluency

with triphthong words. The subjects' pronunciations had been recorded in order to gather information on how they pronounce triphthongs, how proficient they are, and where they make errors. The test sheet, which contained 25 triphthong words were used to assist the researcher in conducting the test.

b. Interview

The researcher also conducted an interview with students for completing the data. Interview is one of the most common and fundamental tools for gathering qualitative data, and they are used to gain information from people about their thoughts, beliefs, and feelings about circumstances (Ary, 2012). In interview, the researcher took 4 students by looking at their scores on the previous oral pronunciation test; 2 lowest and 2 highest order to represent the 34 students in C Afternoon class of the third-semester students of the English Education Department in academic year 2021/2022 at IKIP PGRI Pontianak. The interview questions were adapted from Wangi & Nudiya (2020) based on what affects pronunciation. The data collected by having a personal interview with the selective respondents who have the highest and lowest errors in English triphthong sound because in this interview, the researcher will ask the factor that affects their errors. Furthermore, the researcher used 10 items in interview protocol in this research, the interview protocol is presented in the appendices section. The interview questions were in Indonesian language to make it easily understand by the respondents and avoid misunderstanding.

The researcher used a mobile phone as a voice recorder to record every word spoken by the respondents during the test and interview. Thus, information were gathered via audio recording. By repeating the audio recording to avoid biases.

## **5. Validity**

Before collecting the data, the researcher used content validity. The basic approach to determining content validity is to check the best and assess whether the sample is adequate from the content and objectives being measured and carried out by asking the teacher or subject matter expert (Ary, 2012). The researcher looked for someone who is an expert in English pronunciation as a validator. The researcher provided a file to the validator to check the oral pronunciation test sheet and the interview questions to find out whether the instrument is suitable for use or not. After the file is checked by the validator, the instruments were valid then the researcher continued the research.

## **6. Technique of Data Analysis**

After collecting the data, the researcher examined it using qualitative data analysis. Qualitative data analysis is the process of understanding a dataset as a whole, utilizing certain analytic methodologies to transform raw data into a logical description and explanation of the phenomenon being studied (Altinay and Paraskevas, 2008).

### **a. Oral Pronunciation Test**

In analyzing the data, the researcher analyzed students' pronunciation errors based on five types of triphthong sounds. There are /eɪə/, /aɪə/, /ɔɪə/, /aʊə/, and /əʊə/. The researcher also calculated the students' errors in pronouncing English triphthong sounds. The steps of data analysis will be as follows:

- 1) The researcher collected the data from students' oral pronunciation test.
- 2) Then, the data was assessed by using inter-rater. It is because the inter-rater technique is more effective to minimize subjectivity. The calculations were from the researcher and two English tutors who are skilled in pronunciation and phonology. Moreover, these English tutors also had no interaction with the

students, so it reduced the subjectivity. The students' recordings were duplicated to facilitate and expedite the analyzing process.

- 3) The frequency of students' pronunciation errors of English triphthong sounds were tabulated into a table. After getting the frequency, the researcher found the mean data in each type of error from raters 1 and 2. The researcher used a formula from Sudijono to find out the mean data from the first and second raters. The formula of average is:

$$Mx = \frac{x_1 + x_2}{N}$$

***Mx* : Mean or Average**

***x*<sub>1</sub> : Frequency of error from Rater 1**

***x*<sub>2</sub> : Frequency of error from Rater 2**

***N* : Number of raters**

(Sudijono, 2010)

After the mean data was classified, the researcher found the percentage of each classification. The researcher used the Winarsunu formula as shown below:

$$P = \frac{f}{N} \times 100\%$$

***P* : Percentage of error's item**

***f* : Mean data**

***N* : Total of the mean data**

(Winarsunu, 2006)

After getting the percentage of pronunciation errors for each type in English triphthong sounds, the researcher displayed a chart based on the result of the data gotten. This chart explained the most mispronounced of English triphthong sound by the EFL students.

## b. Interview

The researcher used the Miles and Huberman theory to assess the data gathered during the interview. Analyzing this research included several processes, including data reduction, data display, and conclusion drawing.

### 1) Data Reduction

Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in transcriptions (Miles *et al.*, 2014). In this case, the researcher only focus on the factors of the pronunciation errors of English triphthong sounds produced by the students that recorded during the research. The researcher ignored the another part on conversation recording that are not related to the research. As a result, this reduced data gives a clearer picture and makes it easier for the researcher to access it when necessary.

### 2) Data Display

A data display is a generic term that refers to the presentation of data. Data presentation is an organized, compacted collection of data that enables conclusion making. When displaying the data, the researcher is able to understand what is happening and either does additional analysis or takes action based on that understanding. In this step, the researcher explained the result of the interview about the factors of pronunciation errors in English triphthong sounds. The result of the interviews were explained into a description of each type of error factor to make it more efficient.

### 3) Conclusion Drawing and Verification

In this final stage, the researcher drew a conclusion depending on the data collected. This was done by looking for relationships, similarities, and differences among the data provided. Conclusions are drawn by comparing the

compatibility of the research subjects' statements to the meanings contained in the research's basic concepts. The researcher reported the full research results with the new findings from identifying the factors of the pronunciation errors of triphthong sounds produced by the students.

## **B. Research Procedure**

The research process is composed of a sequence of actions or stages required to conduct the research efficiently, as well as the ideal sequencing of these steps. The purpose of the research procedure is to establish the direction for doing the research. The following steps are used during the research:

1. Identified the research problem.
2. Collect information and theory which are related to the research.
3. Provided a recommendation letter and met the students.
4. Explained and gave the direction to the students.
5. Used a mobile phone to record the student's voice, instruct them to pronounce 25 English triphthong sounds aloud and fluently one by one.
6. Analyzed the test result from the raters.
7. Asking 4 students to be interviewed.
8. Interpreted the data analysis results.
9. Reported and consulted with the adviser about the research.
10. Organized the conclusion of the research.