

## CHAPTER III

### RESEARCH METHOD

#### A. Research Design

The research design used in this study is qualitative. According to Denzin and Lincoln quoted by Brady: (2015). Strauss and Corbin define qualitative research as a type of research whose findings are not obtained through statistical procedures or other forms of calculation. Furthermore, qualitative research methods are interpreted as describing phenomena based on the informant's point of view, determining diverse realities and developing a holistic understanding of a phenomenon in a particular context Hilal and Alabri: (2013).

This study involves the researcher doing documentations and data collection by analyzing the content of the specific apps. Content analysis is a qualitative analysis technique, which is guided by standard rules applied to certain units. In its application, this technique is used to determine the character of documents or to compare them Berelson, (1952). Krippendorff (1991:34-37) identifies content analysis into the following classifications:

- a) Pragmatic Content Analysis; conducted to classify signs based on their possible causes and effects. For example, how many times a particular

word is uttered that can result in the emergence of a liking attitude towards a product. Semantic Content Analysis; conducted to classify signs according to their meaning.

- b) Sign Tool Analysis: conducted to classify the content of a message or information through the psychophysical properties of the sign, for example how many times the word "beautiful" appears, or the word "terror" appears in a series of texts or discourses.

## **B. Object**

The Artificial Intelligence (AI) objects in this research are online android Apps created using technology. Some examples of such Apps are AI-based android Apps called Sivi, Loora, and Stimuler that can help to improve English language skills without having to rely on expensive private tutors with limited availability or practice directly with others. These objects of observation have a variety of features that can help many things in learning, but researchers focus on features that can be more helpful in speaking practice only. these Apps were chosen because they can be accessed without having to subscribe first. The researcher understands that these apps can facilitate students in learning languages because of features such as Ai English teacher, Practice Speaking, Progress tracking, and word translation.

### **C. Data**

The data in this study consists of content from three Ai-Based Android Apps that use AI: Sivi, Loora, and Stimular. The researcher found many recent AIs that attracted attention; however, considering various factors and the suitability of the AI functions, the researcher selected the three apps mentioned above as the data for this study.

### **D. Technique of Data Collection**

The data collection technique applied by the researcher for this research is documentation. According to Sugiono (2013:240) documentation is a record of past events. Documentation can be in the form of writing, pictures, monumental works from someone. Documentation study is a data collection technique by studying documents to obtain data or information related to the problem being studied. Used to describe field conditions that help researchers to increase the clarity of research. Documentation is used as data that encourages data production. This study makes researchers do documentation and data collection by analyzing certain Ai-based applications. After determine conclusion of the data documentation and explaining the substance of the data, researchers obtain conclusions related to the data and explain the substance of the data in order to present information more clearly and easily. After that,

researchers obtain conclusions that can be the basis for answering research questions.

## **E. Data Analysis**

The process that follows data collection and organization is data analysis. The first step in this process involves collecting data through documentation. The results of the analysis are then updated in a descriptive format. In this study, data collection begins by observing the research object. Furthermore, the collected data is categorized and analyzed. When collecting data, researchers must select relevant information to answer the research topic, as suggested by Creswell & Creswell (2018). Therefore, it is important to provide a detailed description of the information used in this study. In addition, it is essential to identify the type of data needed and collect information that goes beyond mere observation.

According to Miles & Huberman (2014), qualitative research employs the following analytical methods:

### **1. Data Reduction**

Data reduction is an analytical method that involves grouping, classifying, eliminating, and organizing data into themes to create a clearer understanding of observations. This process includes selecting, condensing,

and focusing the content on the main research issue. In this study, data collection starts with observing the research subjects.

Following this, the gathered data is categorized and analyzed. Researchers should choose information pertinent to the research topic during data collection, as noted by Creswell & Creswell (2018). Therefore, it is crucial to provide a comprehensive description of the information utilized in the study. Additionally, identifying the type of data required and collecting information that goes beyond mere observations is essential.

By applying Creswell & Creswell's (2018) data reduction principles, the researcher was able to filter out important information and draw relevant conclusions regarding the effectiveness and features of these AI-based android apps in enhancing users' speaking comprehension.

## 2. Data Display

In qualitative research, tables, graphs, brief explanations, and relationships between categories are used to describe the data. By combining and organizing the data, this presentation makes it easier to interpret the information. The data presentation process is carried out after the data reduction step. After analysis, data from the documentation is presented in descriptive form.

This research uses a qualitative approach with data collection through the researcher's in-depth use experience of AI-based android applications. The data collected will be analyzed to identify key themes related to user experience, challenges faced, and perceived benefits.

### 3. Conclusion/Verification

A conclusion necessitates the inclusion of evidence and derived insights. If it is determined that further data collection is required due to inadequate information, the initial findings may need to be adjusted. In qualitative research, the responses can address the original inquiry. The data that has been gathered and presented enables the researcher to formulate conclusions, which are substantiated by robust evidence collected during the data gathering process. The conclusion encompasses responses to the research questions initially posed by the researcher.

By utilizing the inference principles outlined by Creswell & Creswell (2018), the researcher was able to arrange the information in a coherent and organized manner, facilitating easier analysis and comprehension of the research results. Additional research is necessary to investigate how AI applications can be integrated with traditional teaching methods to enhance the overall effectiveness of English language education.