

## **CHAPTER III**

### **RESEARCH METHOD**

#### **A. Research Design**

To fulfill the study's objectives of assessing the effectiveness of the ELSA Speak app in enhancing students' speaking abilities and understanding students' perceptions to optimize their speaking skills, an appropriate methodological framework was essential. This research adopts a mixed methods approach, which combines quantitative and qualitative research methodologies within a single study. This integrated design enables a comprehensive exploration of the subject matter. The study's methodological approach aligns with philosophical assumptions that guide data collection and analysis, incorporating both qualitative and quantitative methods at various stages of the research process (Creswell, 2007).

The research design employed is an Explanatory Sequential Design. This design employs a sequential approach, wherein two distinct research methods (quantitative and qualitative) are utilized in a specific order. Each method is implemented individually, in a non-simultaneous manner, across two distinct research phases (Vebrianto et al., 2020). Sequential mixed methods procedures involve the researcher aiming to build upon or further develop the findings from one method by utilizing another method (Creswell, 2009). This methodology consists of two primary stages:

1. Numeric Phase: Initially gathering and examining quantitative data.

Specifically, this entails administering pre-tests and post-tests to gauge

enhancements in English speaking proficiency subsequent to employing the ELSA Speak application.

2. Verbal Phase: Subsequently accumulating and scrutinizing qualitative data to elaborate on or enrich the quantitative outcomes. Here, the researcher will conduct thorough interviews and observations to comprehend students' encounters and viewpoints regarding the application's usage, along with the factors that impact its utilization.

## **B. Research Setting**

The researcher for this study carefully selected Antasari State Islamic University, specifically targeting the English Education Department housed within the Faculty of Tarbiyah and Teacher Training. The decision to choose this institution was rooted in the observation that numerous students pursuing English education encountered persistent difficulties in mastering spoken English. This context made Antasari State Islamic University an ideal setting for exploring and addressing the challenges faced by these students in acquiring fluency in the foreign language.

## **C. Population and Sample**

In line with the research objectives, this study has used a sample of fifth semester students, specifically those enrolled in class 22A, which has a population of 18 people. The researcher has chosen class 22A because here the researcher only wants to test the effectiveness and know the student's perception of the ELSA Speak application.

To identify a suitable sample, the researcher administered a pre-test to all students in class A. This pre-test was designed to identify students who showed deficiencies in speaking proficiency. After identifying students who met the specified criteria, the researcher implemented the treatment program for approximately one month and monitored students' progress on a weekly basis.

#### **D. Data**

The quantitative data employed by the researcher were the pre-test and post-test scores of the sample. These values were derived from speaking tests conducted prior to the subjects' utilization of the app and subsequent to their use of the app. While the qualitative data utilized by researchers were the results of interviews concerning the participants' perspectives on the application.

#### **E. Technique of Data Collection**

To accurately assess the scope and progression of student learning, it is essential to utilize both test-based and non-test-based evaluation methods. Recent educational research emphasizes that traditional testing alone often fails to capture the full extent of students' learning experiences, as test scores can be limited to numerical or letter grades that do not reflect deeper understanding or skills (Brown, 2019). Alternative assessment methods, including performance tasks, portfolios, and self-assessments, provide richer, more comprehensive insights into students' development by evaluating practical skills, critical thinking, and real-world application

(Gulikers et al., 2018). These approaches help educators obtain a more holistic picture of learning progress, moving beyond the constraints of conventional exams to support a more meaningful evaluation of student achievement.

To accomplish the research goal of gauging the effectiveness of the ELSA Speak application in enhancing students' oral communication skills, it is essential to employ appropriate and trustworthy assessment tools. These instruments have been specifically designed to gather both quantitative and qualitative data that are pertinent to this investigation. The tools utilized include a Rating Scale, and an In-Depth Interview Guide.

### **1. Quantitative Data Collection**

Objective: Measure changes in English speaking ability before and after the use of the ELSA Speak app.

Instrument: English Speaking Proficiency Rating Scale (Muhsin, 2016).

The steps are:

#### **a. Preparation of Measurement Tools**

- a) The researcher developed and tested a speaking proficiency rating scale that covered aspects such as pronunciation, grammar, vocabulary, fluency, and comprehension.

#### **b. Pre-test Implementation**

- a) Before using the ELSA Speak application, researcher conducted an initial assessment of students' speaking

ability using the prepared scale.

- b) The pre-test score becomes the baseline data for each participant.
- c) The pre-test questions given by the researcher are questions that force students to actively speak. The questions are as follows:

*Table 3. 1 Pre-Test Questions*

1.	Please tell me about your daily activities!
2.	Tell me about an unforgettable experience!
3.	Tell me about your worst experience!

c. Intervention

- a) Researcher asked the students to use the ELSA Speak app in a structured manner for 4 weeks.
- b) Ensure that the use of the app is followed according to the guidelines provided.

d. Post-test

- a) After the period of application use, reassess the students' speaking ability using the same scale as the pre-test.
- b) The questions were the same as the pre-test questions:

*Table 3. 2 Post-Test Questions*

1.	Please tell me about your daily activities!
2.	Tell me about an unforgettable experience!
3.	Tell me about your worst experience!

- c) Post-test scores are used to measure changes or improvements in speaking ability.

## **2. Qualitative Data Collection**

Objective: To gain an in-depth understanding of students' experiences, perceptions, and challenges in using the ELSA Speak app.

Instrument: In-depth Interview Guide

The steps are:

### **1) Qualitative Instrument Preparation**

- a) Develop an in-depth interview guide that includes questions about the experience of using the application, perceived benefits, and difficulties encountered.

### **2) Implementation of In-Depth Interviews**

- a) Conducted structured interviews with several students to dig deeper into their experiences using ELSA Speak.
- b) Recorded the interviews for transcription and further analysis.

## **F. Research Instrument**

In this study, researchers employed three instruments. The first was a speaking rating scale, which was utilized to assess students' oral proficiency. This rating scale, which was developed by Muhsin (2016) and has been utilized in numerous studies, encompasses five domains: pronunciation, grammar, vocabulary, fluency, and comprehension. Each domain is rated on a scale of 1 to 5.

Secondly, the researcher employed an interview guideline to ascertain the students' perspectives on the ELSA Speak application. The questions utilized in the interview were formulated directly by the researcher.

## **G. Data Analysis**

Data analysis encompasses the structured acquisition, refinement, reconfiguration, characterization, modeling, and comprehension of data, often leveraging statistical methods (Eldridge, 2025). In explanatory sequential design research, data analysis employs two distinct data analysis methods, namely quantitative and qualitative, in two distinct phases. The following data analysis steps are typically employed in this design:

### **1. Quantitative Phase**

#### **a. Descriptive Statistics**

Descriptive statistics are crucial for summarizing and analyzing data across disciplines, providing clear insights into patterns, trends, and relationships within datasets (Pyzdek, 2021). The primary step in the researcher's methodology is to identify a sample of students who have a speaking score below the mean or who demonstrate challenges in speaking. To calculate the mean score, the researcher administers the same speaking test to the entire population using a speaking rating scale that has been prepared. Following the administration of the test, the researcher calculates the mean value for the entire

population to identify the sample with the desired mean score.

$$\text{Average Score per Aspect} = \frac{\text{Total Score}}{\text{Number of Participants} \times \text{Number of Aspects}}$$

#### b. Paired Sample T-Test

A paired t-test is a statistical technique utilized to compare the average values of two correlated datasets (Samuels, 2011). Use a paired sample t-test to compare students' speaking proficiency scores before and after using the app. This will show if there is a statistically significant difference.

## 2. Qualitative Phase

#### a. Thematic Analysis

Thematic analysis entails the methodical identification, detailed description, insightful interpretation, rigorous substantiation, and meaningful interrelation of themes derived from qualitative data (Kampira, 2021). Steps include:

- 1) Familiarization with the data: Rereading the interview transcripts.
- 2) Coding the data: Coding relevant segments of the data.
- 3) Searching for themes: Grouping codes into larger themes.
- 4) Reviewing themes: Ensuring the themes found are consistent and representative of the data.



- 5) Naming themes: Giving each theme a name and definition.

### **3. Data Integration**

After analyzing the quantitative and qualitative data, the final step was to integrate the findings from both phases:

- 1) Summarize Quantitative Results:

- a) Report the results of the statistical analysis, including the difference in speaking ability before and after the use of the app and the general effectiveness of the app.

- 2) Connecting with Qualitative Results:

- a) Use the qualitative findings to provide more context and explanation to the quantitative results.

- 3) Writing the Research Report:

Combine both data sets in a final report, discussing how the quantitative and qualitative findings complement each other and provide a more comprehensive insight into the effectiveness and perceived use of the ELSA Speak app.