

## **CHAPTER III**

### **RESEARCH METHOD**

#### **A. Approach and Type of Research**

This study employs a quantitative approach with a correlational design. The quantitative approach is chosen because the study seeks to obtain numerical, objective, and measurable data to examine the relationship between two variables, students' knowledge of phonetic symbols and their English pronunciation accuracy. As stated by Creswell (2014), quantitative research is an approach for testing objective theories by examining the relationship among variables that can be measured and analyzed using statistical procedures. Sugiyono (2022) further asserts that quantitative research is grounded in the positivist paradigm, which emphasizes objectivity, numerical data, and statistical hypothesis testing as the primary means of producing knowledge.

The correlational design is applied because this study aims to determine the degree and direction of the association between two variables without imposing any treatment or manipulation on the participants. According to Creswell (2014), a correlational study measures two or more variables

for the same individuals and examines the extent to which the variables are related. This design is suitable when the researcher seeks to understand whether a naturally occurring relationship exists between measurable variables — in this case, whether students who possess greater knowledge of English consonant phonetic symbols also demonstrate higher pronunciation accuracy.

In this study, students' knowledge of phonetic symbols serves as the independent variable (Variable X), while their English pronunciation accuracy serves as the dependent variable (Variable Y). Both variables are specifically focused on English consonant phonetic symbols and the accurate production of English consonant sounds. The researcher does not intervene in the participants' learning process, make changes to instructional approaches, or provide any phonetic training during the study. The study measures and statistically analyzes the relationship between the two variables as they naturally exist among the participants at the time of data collection.

The quantitative correlational design was selected for this study because it provides an objective and statistically verifiable means of determining whether a significant

relationship exists between phonetic symbol knowledge and pronunciation accuracy in an EFL university context. If a significant positive correlation is found, the findings will provide empirical grounds for strengthening phonetic symbol instruction as a foundation for developing pronunciation accuracy among English Education students.

#### **B. Location and Time of Research**

This study was conducted at the English Education Study Program (Tadris Bahasa Inggris), Faculty of Tarbiyah and Tadris, State Islamic University of Fatmawati Sukarno Bengkulu (State Islamic University of Fatmawati Sukarno Bengkulu), located in the city of Bengkulu, Province of Bengkulu, Indonesia.

This location was selected for several reasons. First, the fifth-semester students of the English Education Study Program at this institution have completed foundational courses in phonetics, phonology, and English pronunciation, making them appropriate participants for a study examining the relationship between phonetic symbol knowledge and pronunciation accuracy. Second, the researcher's preliminary observation indicated that many students in this program still experienced difficulties in accurately producing several

English consonant sounds and rarely applied phonetic symbol knowledge in their pronunciation learning, suggesting that students' phonetic symbol knowledge may be associated with their pronunciation performance.

The study was conducted during the odd semester of the academic year 2025/2026. Data collection, including the administration of both the Knowledge of Phonetic Symbols Test and the Pronunciation Accuracy Test, was carried out within the designated data collection period as coordinated with the study program administration.

### **C. Research Design**

This study employs a correlational research design within a quantitative framework. The correlational design is appropriate because the purpose of this study is to determine the degree and direction of the relationship between students' knowledge of English consonant phonetic symbols (Variable X) and their English pronunciation accuracy (Variable Y), without involving any experimental treatment or manipulation of variables.

According to Sugiyono (2022), a correlational study investigates the relationship between two or more variables and expresses the result in the form of a correlation

coefficient. In this study, students' scores on the Knowledge of Phonetic Symbols Test (Variable X) and their scores on the Pronunciation Accuracy Test (Variable Y) are collected and analyzed using Pearson Product-Moment Correlation to determine the strength and direction of the relationship between the two variables.

The following table illustrates the correlational research design of this study:

**Table 1. Correlational Research Design**

| <b>Independent Variable (X)</b>          |   | <b>Dependent Variable (Y)</b>     | <b>Analysis</b>                    |
|------------------------------------------|---|-----------------------------------|------------------------------------|
| Knowledge of Phonetic Symbols Test Score | → | Pronunciation Accuracy Test Score | Pearson Product-Moment Correlation |

(Sugiyono, 2022)

Description:

Variable X: Students' knowledge of English consonant phonetic symbols (IPA), measured through a multiple-choice written test consisting of 50 items.

Variable Y: Students' English pronunciation accuracy, assessed through an oral paragraph-reading test evaluated by two independent raters.

Analysis: Pearson Product-Moment Correlation, used to determine the strength and significance of the relationship between Variable X and Variable Y.

The study was conducted in sequential phases. In the first phase, the population was identified and a sample was selected using purposive sampling. In the second phase, both research instruments were prepared and validated through expert judgment. In the third phase, the instruments were administered to the selected participants in separate sessions. Finally, the collected data were statistically analyzed using Pearson Product-Moment Correlation through SPSS, and conclusions were drawn based on the results of the analysis.

#### **D. Population and Sample**

##### **1. Population**

According to Sugiyono (2022), a population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by the researcher to be studied and from which conclusions are subsequently drawn. In quantitative research, defining the population clearly is essential because the validity and generalizability of the research findings depend on the characteristics and scope of the population.

The population of this study consists of all fifth-semester students of the English Education Study Program at State Islamic University of Fatmawati Sukarno Bengkulu in the academic year 2025/2026. The total population comprises 66 students distributed across four classes. Fifth-semester students were selected as the population because they have completed foundational courses in phonetics, phonology, and English pronunciation, and therefore possess prior exposure to the International Phonetic Alphabet (IPA) and English consonant sound production.

## **2. Sample**

A sample is a subset of the population selected to represent the characteristics of the population as a whole. According to Sugiyono (2022), a sample must adequately represent the population in order to ensure that the research findings are accurate and reliable.

This study employed purposive sampling as the sampling technique. Purposive sampling is a non-probability sampling method in which participants are selected based on specific criteria determined by the researcher (Creswell, 2014). The use of purposive sampling in this study was justified by practical considerations,

specifically the nature of the research instruments and the constraints of the research context.

The primary consideration for sample size in this study was the Pronunciation Accuracy Test (Variable Y), which requires each participant to be assessed individually through an oral paragraph-reading task recorded and evaluated by two independent raters. This individual oral assessment procedure is time-intensive, as each session requires 5–10 minutes per participant for recording, in addition to the time required by both raters to independently evaluate each recording. Administering this procedure to a large number of participants would exceed the time constraints of the study and risk reducing the quality and consistency of the assessment.

Based on these considerations, a sample of 20 students was selected from the population of 66 fifth-semester students. The selection was based on the following criteria: (1) the participants are actively enrolled fifth-semester students of the English Education Study Program at State Islamic University of Fatmawati Sukarno Bengkulu in the academic year 2025/2026; (2) the participants have completed courses in phonetics and phonology; and (3) the

participants are willing to participate in both the written test and the oral pronunciation test.

Although larger samples are generally recommended for correlational studies, a sample of 20 participants was considered appropriate for this study due to the time-intensive nature of individual oral pronunciation assessment and the homogeneity of the participants. All selected participants are fifth-semester English Education students who have completed the same phonetics and phonology courses, ensuring comparable levels of prior exposure to the subject matter. The findings of this study are therefore interpreted within the scope of this specific study context. This sample size is consistent with the practical research tradition in EFL pronunciation studies that involve individual oral assessment procedures (Dandee & Pornwiriyaakit, 2022; Dumanggas et al., 2024).

#### **E. Operational Definition of Variables**

Variables are characteristics or attributes of individuals or organizations that researchers can measure or observe (Creswell, 2014). This study consists of two variables: the independent variable (Variable X) and the dependent variable (Variable Y).

## **1. Independent Variable (X): Knowledge of Phonetic Symbols**

The independent variable is students' knowledge of phonetic symbols. This variable refers to students' understanding of the International Phonetic Alphabet (IPA), particularly their ability to recognize, identify, and interpret English consonant phonetic symbols correctly. In this study, students' knowledge of phonetic symbols is measured through a multiple-choice written test consisting of 50 items covering four indicators: (1) understanding basic concepts of phonetics and phonetic symbols; (2) recognizing IPA consonant symbols; (3) matching phonetic symbols with their corresponding English sounds; and (4) identifying the correct phonetic transcription of English words.

## **2. Dependent Variable (Y): Pronunciation Accuracy**

The dependent variable is students' English pronunciation accuracy. This variable refers to students' ability to produce English consonant phonemes accurately and consistently according to standard English pronunciation norms. Pronunciation accuracy is measured through an oral paragraph-reading test assessed by two

independent raters using a pronunciation scoring rubric. The assessment covers three indicators: (1) accuracy of consonant pronunciation; (2) correct articulatory placement of English consonant sounds; and (3) consistency in producing consonant phonemes across different words.

The operational definitions of both variables, their indicators, and corresponding instruments are summarized in the following table:

**Table 2. Operational Definition of Research Variables**

| Variable                          | Operational Definition                                                                                                                                                                           | Indicators                                                                                                                                                                               | Instrument                               |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Knowledge of Phonetic Symbols (X) | Students' understanding of the IPA, particularly English consonant phonetic symbols, and their ability to recognize, interpret, and associate the symbols with the corresponding English sounds. | 1. Understanding basic concepts of phonetics and phonetic symbols. 2. Ability to recognize IPA consonant symbols. 3. Ability to match consonant symbols with their corresponding English | Multiple-choice written test (50 items). |

|                            |                                                                                                                                  |                                         |                                                                |                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------|
|                            |                                                                                                                                  | sounds.                                 | 4.                                                             |                                                                                            |
|                            |                                                                                                                                  | Ability to                              |                                                                |                                                                                            |
|                            |                                                                                                                                  | identify the                            |                                                                |                                                                                            |
|                            |                                                                                                                                  | correct                                 |                                                                |                                                                                            |
|                            |                                                                                                                                  | phonetic                                |                                                                |                                                                                            |
|                            |                                                                                                                                  | transcription                           |                                                                |                                                                                            |
|                            |                                                                                                                                  | of English                              |                                                                |                                                                                            |
|                            |                                                                                                                                  | words.                                  |                                                                |                                                                                            |
| Pronunciation Accuracy (Y) | Students' ability to accurately and consistently produce English consonant phonemes according to standard English pronunciation. | 1. Accuracy of consonant pronunciation. | 2. Correct articulatory placement of English consonant sounds. | 3. Consistency in producing consonant phonemes across different words.                     |
|                            |                                                                                                                                  |                                         |                                                                | Oral pronunciation test (paragraph reading) assessed using a pronunciation scoring rubric. |

#### F. Data Collection Technique

Data collection in this study is carried out through two instruments administered to the 20 selected participants in sequence: a multiple-choice written test for Variable X and an oral paragraph-reading test for Variable Y. The data

collection procedure consists of the following sequential stages:

### **1. Preparation of Research Instruments**

The first stage involves preparing the research instruments for both variables. For Variable X, the researcher developed a multiple-choice written test consisting of 50 items designed to measure students' knowledge and understanding of IPA consonant phonetic symbols across four indicators: understanding basic concepts of phonetics and phonetic symbols, recognizing IPA consonant symbols, matching symbols with their corresponding sounds, and identifying the correct phonetic transcription of English words.

For Variable Y, the researcher prepared an oral pronunciation test in the form of a paragraph-reading task using a modified version of the Goldilocks and the Three Bears narrative. This paragraph was selected because it contains a wide variety of English consonant phonemes, including sounds commonly problematic for Indonesian EFL learners such as /θ/, /ð/, /ʃ/, /tʃ/, /dʒ/, and /ŋ/. The reading task elicits natural consonant production across

multiple phonological environments within connected speech.

Prior to administration, both instruments were reviewed and validated through expert judgment. The experts examined the relevance of test items to the stated indicators, the accuracy and clarity of IPA symbols, the clarity of instructions, the suitability of the reading paragraph, and the appropriateness of the pronunciation scoring rubric. Revisions were made based on expert feedback before the instruments were administered.

## **2. Determination of Schedule and Location**

The researcher coordinated with the English Education Study Program administration to determine the schedule and venue for data collection. The written test was administered in a regular classroom setting. Given that the oral pronunciation test requires individual sessions of 5–10 minutes per participant, the researcher arranged a separate quiet room to ensure the quality of audio recordings, minimize external noise, and allow each participant to perform without distraction from other participants.

### **3. Administration of the Knowledge of Phonetic Symbols Test**

The Knowledge of Phonetic Symbols Test was administered to all 20 selected participants as a group session in the classroom. Before the test began, the researcher explained the test format, instructions, and time allocation to ensure that all participants understood the procedures. Participants were given 40 minutes to complete the 50-item multiple-choice test.

After the test, the answer sheets were collected and scored using the predetermined answer key. Each correct answer received one (1) point and each incorrect answer received zero (0) points. The total raw score was then converted to a scale of 0–100 using the following formula:

$$\text{Final Score} = (\text{Number of Correct Answers} / 50) \times 100$$

### **4. Administration of the Pronunciation Accuracy Test**

The oral pronunciation test was administered individually after the written test session. Each of the 20 participants was called individually into the designated quiet room and asked to read the prepared paragraph aloud. A printed copy of the paragraph was provided to each participant. Each individual session lasted approximately 5–

10 minutes. The reading performance was recorded using an audio recording device to facilitate thorough and accurate evaluation.

The audio recordings were subsequently assessed by two independent raters who are qualified lecturers with expertise in English phonetics and pronunciation. Each rater evaluated the recordings independently using the pronunciation scoring rubric, without access to the scores awarded by the other rater. The assessment focused on three indicators: accuracy of consonant pronunciation, correct articulatory placement, and consistency in producing consonant sounds.

The scores from both raters were averaged to obtain each participant's final pronunciation score:

$$\text{Pronunciation Score} = (\text{Rater 1 Score} + \text{Rater 2 Score}) / 2$$

The final raw scores were then converted to a scale of 0–100:

$$\text{Final Score} = (\text{Obtained Score} / 15) \times 100$$

## **5. Data Tabulation**

After completion of all data collection sessions, the researcher tabulated all scores systematically. The scores of the Knowledge of Phonetic Symbols Test (Variable X) and

the Pronunciation Accuracy Test (Variable Y) for all 20 participants were entered into Microsoft Excel and subsequently imported into SPSS for statistical analysis. The data were then analyzed using Pearson Product-Moment Correlation to determine whether a significant relationship existed between the two variables.

#### **G. Research Instrument**

Research instruments are tools employed by researchers to systematically collect the data needed to answer the research questions and test the research hypotheses. According to Sugiyono (2022), a research instrument is a tool used to measure natural or social phenomena being observed. In this study, two instruments are employed: a multiple-choice written test for Variable X (Knowledge of Phonetic Symbols) and an oral pronunciation test for Variable Y (Pronunciation Accuracy).

##### **1. Knowledge of Phonetic Symbols Test (Variable X)**

The first instrument is a multiple-choice written test designed to measure students' knowledge and understanding of English consonant phonetic symbols as represented in the International Phonetic Alphabet (IPA).

The test consists of 50 items, each with four answer options (a, b, c, and d), of which only one is correct. Each correct answer receives one (1) point and each incorrect answer receives zero (0) points. The maximum raw score is 50.

The test measures students' competency across four indicators, as presented in the blueprint below:

**Table 3. Blueprint of the Knowledge of Phonetic Symbols Test**

| No           | Indicators                                                        | Item Numbers | Total Items |
|--------------|-------------------------------------------------------------------|--------------|-------------|
| 1            | Understanding basic concepts of phonetics and phonetic symbols    | 1 – 9        | 9           |
| 2            | Recognizing English consonant phonetic symbols                    | 10 – 20      | 11          |
| 3            | Matching phonetic symbols with their corresponding English sounds | 21 – 35      | 15          |
| 4            | Identifying the correct phonetic transcription of English words   | 36 – 50      | 15          |
| <b>Total</b> |                                                                   |              | <b>50</b>   |

Items under Indicator 1 (items 1–9) assess recall and comprehension of basic phonetics concepts and IPA functions. Items under Indicator 2 (items 10–20) require

students to recognize IPA consonant symbols and associate them with the correct English sounds. Items under Indicator 3 (items 21–35) require students to actively match phonetic symbols to their corresponding phonemes across various word contexts. Items under Indicator 4 (items 36–50) require higher-order application, as students must select the correct phonetic transcription from competing options for given English words.

## **2. Pronunciation Accuracy Test (Variable Y)**

The second instrument is an oral pronunciation test requiring each participant to read a prepared paragraph aloud individually. The paragraph is a modified version of the Goldilocks and the Three Bears narrative, selected for its inclusion of a diverse range of English consonant phonemes across varied phonological environments. The paragraph contains consonant sounds commonly challenging for Indonesian EFL learners, including /θ/, /ð/, /ʃ/, /tʃ/, /dʒ/, and /ŋ/.

Each participant's reading performance is recorded using an audio recording device. The recordings are then

independently assessed by two qualified raters using the pronunciation scoring rubric below:

**Table 4. Pronunciation Accuracy Assessment Rubric**

| Aspect                              | Score 5                                                                   | Score 4                                                       | Score 3                                                 | Score 2                               | Score 1                                                        |
|-------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------|---------------------------------------|----------------------------------------------------------------|
| Accuracy of Consonant Pronunciation | Almost all consonant sounds produced correctly; errors minimal or absent. | Few pronunciation errors; most consonants produced correctly. | Several errors; recognizable but noticeably non-target. | Many errors; intelligibility reduced. | Very frequent errors; consonant production largely inaccurate. |
| Correct Articulatory Placement      | Excellent articulation; place and manner consistently accurate.           | Good articulation with minor deviations in placement.         | Fair; noticeable placement errors in several sounds.    | Poor; frequent placement errors.      | Very poor; systematic placement errors throughout.             |
| Consistency in Producing            | Very consistent consonant                                                 | Generally consistent;                                         | Moderately consistent;                                  | Frequently inconsistent;              | Highly inconsistent; no                                        |

|                  |                                                                  |                                       |                                                          |                                             |                                                    |
|------------------|------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------|---------------------------------------------|----------------------------------------------------|
| Consonant Sounds | ant pronun<br>ciation through<br>out the entire<br>reading task. | minor lapses in one<br>or two sounds. | same sound produc<br>ed differe<br>ntly across<br>words. | same phone me<br>produc<br>ed variabl<br>y. | stable pattern of<br>conson<br>ant produc<br>tion. |
|------------------|------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------|---------------------------------------------|----------------------------------------------------|

Each of the three assessment aspects is scored on a scale of 1 to 5, producing a maximum raw score of 15 and a minimum of 3. The scores are categorized according to the following rating scale:

**Table 5. Pronunciation Accuracy Rating Scale**

| Total Score | Category  |
|-------------|-----------|
| 13 – 15     | Excellent |
| 10 – 12     | Good      |
| 7 – 9       | Fair      |
| 4 – 6       | Poor      |
| 1 – 3       | Very Poor |

The final pronunciation score for each participant is obtained by averaging the scores from both raters, then converting the result to a scale of 0–100: Final Score =  $(\text{Obtained Score} / 15) \times 100$

### 3. Validity of Instrument

Validity refers to the extent to which an instrument measures what it is intended to measure. According to Creswell (2014), validity is the degree to which evidence and theory support the interpretations of test scores for their intended purpose. In this study, content validity is established for both instruments through expert judgment.

Two expert validators qualified lecturers with expertise in English phonetics, pronunciation teaching, and language assessment evaluated both instruments. The evaluation covered: (a) the relevance of each test item to the stated indicators; (b) the accuracy and clarity of IPA symbols and transcriptions; (c) the clarity of item instructions; (d) the suitability of the paragraph reading text for eliciting consonant production; and (e) the clarity and appropriateness of the pronunciation scoring rubric. Revisions were made based on expert feedback, and the instruments were considered content-valid before administration to the research participants.

#### 4. Reliability of Instrument

Reliability refers to the consistency and stability of an instrument in producing similar results under similar conditions (Sugiyono, 2022).

The reliability of the Knowledge of Phonetic Symbols Test (Variable X) is established through expert judgment and internal consistency analysis. The internal consistency is measured using Cronbach's Alpha coefficient through SPSS following data collection, and the results are reported in Chapter IV. An instrument is considered reliable when the Cronbach's Alpha coefficient reaches 0.70 or higher (Sugiyono, 2022). The criteria for interpreting Cronbach's Alpha values are presented below:

**Table 6. Reliability Criteria Based on Cronbach's**

| <b>Cronbach's Alpha</b> | <b>Interpretation</b> |
|-------------------------|-----------------------|
| 0.90 – 1.00             | Excellent             |
| 0.80 – 0.89             | Good                  |
| 0.70 – 0.79             | Acceptable            |
| 0.60 – 0.69             | Marginal              |
| Below 0.60              | Poor                  |

(Source: Sugiyono, 2022)

For the Pronunciation Accuracy Test (Variable Y), reliability is established through inter-rater reliability. Two independent raters assess each participant's pronunciation recording using the same scoring rubric. The consistency between both raters is evaluated to confirm the objectivity and reliability of the assessment. The final score is obtained by averaging the scores from both raters: Final Score =  $(\text{Rater 1 Score} + \text{Rater 2 Score}) / 2$

The use of two independent raters minimizes subjective bias and strengthens the consistency and reliability of the pronunciation assessment outcomes.

#### **H. Data Analysis Technique**

Data analysis is the process of organizing, processing, and interpreting the collected data to answer the research question and test the stated hypotheses. In this study, data from both instruments are analyzed using the Statistical Package for the Social Sciences (SPSS). The following procedures are applied sequentially:

##### **1. Scoring the Knowledge of Phonetic Symbols Test**

Each correct answer receives one (1) point and each incorrect answer receives zero (0) points across the 50

multiple-choice items. The final score for each participant is calculated using the formula:  $\text{Final Score} = (\text{Number of Correct Answers} / 50) \times 100$

## **2. Scoring the Pronunciation Accuracy Test**

The pronunciation scores are calculated by averaging the scores from the two independent raters across the three assessment aspects. The raw total (maximum 15) is converted to a scale of 0–100:  $\text{Final Score} = (\text{Obtained Score} / 15) \times 100$

## **3. Descriptive Statistics**

Descriptive statistics are computed for both variables, including the mean, standard deviation, minimum score, and maximum score for Variable X (Knowledge of Phonetic Symbols) and Variable Y (Pronunciation Accuracy). These statistics provide an overview of participants' overall performance on both instruments prior to inferential analysis.

## **4. Normality Test**

Before conducting Pearson Product-Moment Correlation, the normality of the data distribution for both variables must be verified. Because the sample size is 20

participants, the Shapiro-Wilk test is used, as it is more appropriate than the Kolmogorov-Smirnov test for small samples ( $n < 30$ ) (Sugiyono, 2022). Data are considered normally distributed if the significance value ( $p$ ) is greater than 0.05. Normal distribution is a prerequisite for the use of Pearson Product-Moment Correlation.

If the data of either variable are not normally distributed ( $p < 0.05$ ), the non-parametric Spearman Rank Correlation will be used as an alternative.

## **5. Pearson Product-Moment Correlation**

If the normality assumption is satisfied, the relationship between Variable X and Variable Y is analyzed using Pearson Product-Moment Correlation through SPSS. This method measures the linear relationship between two continuous variables on an interval or ratio scale (Creswell, 2014). The formula is:

$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{[\sum(X - \bar{X})^2 \times \sum(Y - \bar{Y})^2]}}$$

Where:

$r$  = Pearson correlation coefficient;

$X$  = individual score of Variable X;

$Y$  = individual score of Variable Y;

$\bar{X}$  = mean score of Variable X;

$\bar{Y}$  = mean score of Variable Y.

The resulting coefficient ( $r$ ) ranges from  $-1.00$  to  $+1.00$ . A positive value indicates that higher phonetic symbol knowledge is associated with higher pronunciation accuracy. The interpretation of the correlation coefficient follows the criteria below:

**Table 7. Interpretation of Pearson Correlation**

| Coefficient ( $r$ ) | Interpretation              |
|---------------------|-----------------------------|
| 0.80 – 1.00         | Very Strong Correlation     |
| 0.60 – 0.79         | Strong Correlation          |
| 0.40 – 0.59         | Moderate Correlation        |
| 0.20 – 0.39         | Weak Correlation            |
| 0.00 – 0.19         | Very Weak or No Correlation |

(Source: Sugiyono, 2022)

## 6. Hypothesis Testing

The significance of the correlation coefficient is evaluated by comparing the significance value ( $p$ ) with the significance level of  $\alpha = 0.05$ :

If  $p < 0.05$ , the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted, indicating a statistically significant positive correlation between

students' knowledge of phonetic symbols and their English pronunciation accuracy.

If  $p \geq 0.05$ , the null hypothesis ( $H_0$ ) is accepted, indicating no statistically significant correlation between the two variables.

All statistical analyses are conducted using SPSS, and the results are presented in tabular and descriptive form in Chapter IV.

