

CHAPTER III

RESEARCH METHODS

A. Types and Research Approaches

This is quantitative research with a descriptive approach based on positivist philosophy, with the goal of investigating a specific population or sample through data collecting utilizing appropriate research equipment and statistical or quantitative data processing. Quantitative research is used to test previously developed hypotheses and describe the phenomena under investigation in numerical data that can be handled systematically (Sugiyono, 2022). This study is characterized as field research employing primary data, which is information gathered directly from the primary source at the research site (Yusuf, 2021). Questionnaires were distributed to respondents from the English Education Study Program, Faculty of Tarbiyah and Tadris, Fatmawati Sukarno State Islamic University (UIN) Bengkulu, in order to collect research data.

B. Location and Time of Research

1. Research Location

The Faculty of Tarbiyah and Tadris, State Islamic University (UIN) Fatmawati Sukarno Bengkulu, will perform this research. The choice of location is based on the study subject's relevance to academic and practical activities in the faculty setting, as well as the convenience of access to data and participants who meet the research objectives.

2. Research Time

In this study, the implementation is planned to start in 2025 and will last until the entire research process is completed. This timing is adjusted to the readiness of the instrument, the availability of respondents, and the smoothness of the administrative process that supports the research.

C. Research Design

This research design employs a quantitative approach with a descriptive research method. The purpose of this study is to describe the relationship between the variables studied as well as to assess the elements that influence the topic at hand. This research methodology employs a survey technique, which collects data from a large sample and provides a more representative picture of the topic under investigation.

D. Population and Research Sample

1. Population

Population is a generalized area that stands for an object or subject that has specific attributes and characteristics that are specified by researchers to be investigated and then made conclusions from. Population is the entirety of a research object consisting of people, creatures, objects, developments, events, indications or levels as sources of information that have certain characteristics based on the research conducted, (Suryani, 2021). The population to be used in this study is all students of the English study program, class of 2024, Faculty of Tarbiyah and Tadris, State Islamic University (UIN) Fatmawati Sukarno Bengkulu.

2. Sample

A sample is a subset of the total number and characteristics of a population chosen to represent the population in a research. In this study, the sample is taken as a representation of the entire population in order to gather meaningful and accountable data. Determining the sample is a crucial step because it functions as a basis for distributing questionnaires, so that the information obtained can describe the actual conditions of the population being studied. Therefore, selecting the right sample is very necessary so that the research results have high validity and reliability. (Sugiyono, 2022).

In this study, researchers utilized a non-probability sampling methodology, which is a sampling method that does not provide equal possibilities or chances for each element or member of the population to be chosen as a sample. In this scenario, researchers employ a purposive sampling strategy, which is a sampling procedure based on specific considerations or criteria deemed important to the research aims. This decision is based on the idea that the chosen topics have relevant information and can provide in-depth and accurate data about the problems under consideration, allowing the research results to more accurately depict the expected conditions (Umar, 2022).

The sample criteria utilized in this investigation were: (1) Active students of the English Language Study Programme, class of 2024, Fatmawati Sukarno State Islamic University, (2) willing to be respondents in this study by filling out the questionnaire provided by the researcher, (3) not on academic leave or in an inactive condition of studying during the research period, and (4) able to

show assignment results or a portfolio of writing in English as supporting material for assessing writing skills.

Based on the explanation above, the sample in this study is not determined using the Slovin formula. Instead, this study employs a whole sampling technique, in which all members of the population serve as research samples. This study's population consists of 61 students from the English Language Study Program, Faculty of Tarbiyah and Tadris, State Islamic University (UIN) Fatmawati Sukarno Bengkulu. As a result, the study's sample size is 61 respondents.

E. Operational Definition of Variables and Variable Measurement Scales

1. Operational Definition of Variables

Operational definition is the elaboration of abstract concepts into variables that can be measured or observed in research. This definition provides an explanation of how certain variables will be measured or identified, so that researchers and readers may better understand how data is collected and analyzed. In other words, operational definition bridges the gap between theoretical concepts and practical applications in research by guaranteeing that each variable researched has a defined measurement and can be operationalized in accordance with the study objectives (Waruwu, 2023). Overall, the operational definition of the variables employed in this study is as follows:

Table 3.1
Operational Definition of Research Variables

Variable	Definition	Indicator
<i>Self-Efficacy</i> (X)	Self-efficacy is a person's belief in his or her capacity to plan and execute the actions required to accomplish a specific objective. Individuals with strong self-efficacy tend to set difficult objectives, commit to reaching them, and persevere in the face of adversity.	1. Confidence in completing difficult tasks 2. Ability to overcome obstacles 3. Persistence in the face of failure 4. Influence of previous successful experiences 5. Response to social feedback
English Writing Proficiency (Y)	Writing proficiency in English is an individual's ability to express ideas, information, and arguments in writing with clear structure, correct grammar, and appropriate vocabulary.	1. Mastery of grammar 2. Extensive and precise vocabulary 3. Coherence and cohesion between paragraphs 4. Logical text structure (opening, content, closing) 5. Ability to revise and edit writing

2. Variable Measurement Scale

The Likert scale was employed in this study as a measurement approach to determine the level of respondent agreement with the assertions presented. The Likert scale allows respondents to react in terms of levels of agreement, ranging from strongly agree to strongly disagree. This scale measures positive and negative responses to a statement, so that it can provide a more measurable picture of the respondent's attitude, perception, or view of the topic being studied. The level of agreement is divided into 5 in the following table:

Table 3.2
Likert scale

No	Statement	Weight
1.	Strongly agree	4
2.	Agree	3
3.	Don't agree	2
4.	Strongly Disagree	1

To facilitate data analysis, the results of respondents' answers are interpreted into the following categories:

Table 3.3
Percentage Score

Percentage Score	Category
0% – 25%	Not enough
26% – 50%	Enough
51% – 75%	Good
76% – 100%	Very good

A four-level Likert scale was used in this study to avoid neutral options and simplify data calculation and interpretation. Percentage interpretation aims to group respondents' perceptions or attitudes toward the variables studied into more easily understood categories.

F. Data Sources and Data Collection Techniques

1. Data source

The data source is where the data being researched is found. In this case, the data sources used by the researcher are as follows:

a. Primary Data

Primary data is information gathered directly from the primary source, either persons or groups that are the subjects of research, using methods such as interviews, questionnaires, or observations. Researchers acquire this data directly to answer specific study questions, which is usually deemed more accurate and relevant because information comes directly from the source, (Sugiyono, 2022).

b. Secondary Data

Secondary data is data derived from existing sources, such as records, reports, journals, and books, or data gathered by others. Researchers get this data indirectly, from earlier processing and publication results, rather than directly from their research objects. Secondary data is typically used to support or supplement primary data that has been acquired, (Suryani, 2021).

2. Data collection technique

The methods used in collecting data and information required for this research are:

a. Questionnaire

A questionnaire is a method of gathering information in which respondents are given a set of written questions or statements to answer. Questionnaires are usually used in quantitative research, where data collected from questionnaires are analyzed statistically to find certain relationships or patterns.

Questionnaires can be closed, where respondents only choose from the answers provided, or open, where respondents are free to provide their own answers. Students from the English Study Program, Faculty of Tarbiyah and Tadris, State Islamic University (UIN) Fatmawati Sukarno Bengkulu participated in this study.

b. Documentation

Documentation is a data collection technique that involves collecting and analyzing written materials or records related to the research topic. These documents can include official records, academic documents, institutional archives, photos, reports, regulations, and other written sources that are relevant to the study. Documentation is used to support and complement data obtained from questionnaires and observations, as well as to strengthen the validity of the research findings. In this study, documentation was obtained from relevant documents such as academic records, course-related materials, institutional data of the English Study Program, Faculty of Tarbiyah and Tadris, State Islamic University (UIN) Fatmawati Sukarno Bengkulu, and other supporting documents related to the research variables.

G. Research Instrument Testing

1. Validity Test

Validity testing is conducted to assess the appropriateness of each question item in measuring the variables defined in the study. Each question item represents an aspect of a particular variable, and to determine whether the item is valid, testing is performed by examining the corrected total correlation value. This value indicates

the extent to which each question consistently contributes to the overall construct of the variable, ensuring that only truly relevant and accurate items will be used in subsequent data analysis. This discussion of validity does not focus on the test itself, but on the results or test scores, as follows:

- 1) If the calculated r value $>$ the table r value, then the measuring tool or research instrument used is valid.
- 2) If the calculated r value $<$ the table r value, then the measuring tool or research instrument used is invalid.

2. Reliability Test

Reliability testing is used to establish how consistent and steady the findings of a measurement are when performed on the same symptoms with the same measuring device. In this study, the Cronbach's Alpha methodology was employed to examine the internal consistency of items in a research instrument. An instrument is considered reliable if the resulting reliability coefficient (r) value is more than 0.6, suggesting that the items are consistent in assessing the variables under study.

H. Data Analysis Techniques

This study's data analysis technique is Likert Scale analysis. The Likert scale is used to assess students' beliefs of self-efficacy in English writing abilities by presenting multiple alternative replies with varying degrees of agreement. The responses obtained from the questionnaire are converted into numerical scores so that they can be analyzed quantitatively and described systematically.

1. Descriptive Statistics

The initial step in data analysis in this study is descriptive statistical analysis. Based on the questionnaire data, this analysis

describes students' judgments of self-efficacy in English writing abilities. The questionnaire replies are measured using a four-point Likert scale, with the purpose of avoiding neutral answers and encouraging respondents to express distinct ideas.

Each item in the questionnaire is scored numerically as follows:

Table 3.4

Likert Scale

No	Statement	Weight
1	Strongly Agree	4
2	Agree	3
3	Disagree	2
4	Strongly Disagree	1

The total score, mean, lowest score, maximum score, and standard deviation are determined based on the responses of the respondents. Descriptive statistics are utilized to provide a systematic summary of students' perceptions of their own English writing skills.

In addition, the results are interpreted using percentage analysis with the following formula:

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

Where:

P = Percentage of respondents' answers

F = Frequency of respondents choosing a particular response

N = Total number of respondents

This percentage analysis helps describe the distribution and tendency of students' responses toward each statement related to self-efficacy in English writing.

2. Normality Test

After descriptive analysis, a normality test is used to see if the data is normally distributed. The normalcy test is a necessary requirement for selecting acceptable inferential statistical tests, particularly parametric ones.

In this study, the Kolmogorov-Smirnov test is used to determine data normality. The decision-making criteria are listed below:

- a. Normal distribution is shown by a significance value (Sig.) greater than 0.05.
- b. A significance value (Sig.) ≤ 0.05 indicates that the data are not regularly distributed.

The results of the normalcy test determine if the data meet the assumptions needed for further hypothesis testing with a t-test.

3. T-Test

After the data has been shown to be normally distributed, a t-test is used to assess the study hypothesis. The t-test is used to see if there is a statistically significant difference or effect associated with students' self-efficacy in English writing abilities.

Depending on the research design, this study uses either an independent samples t-test or a paired samples t-test. The decision criteria for hypothesis testing are listed below:

- a. If Sig. 2-tailed < 0.05 , reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1).
- b. If the 2-tailed significance value (Sig.) is greater than 0.05, the null hypothesis (H_0) is accepted.

The t-test results give statistical evidence to support the conclusions drawn about students' self-efficacy in English writing skills.

