



CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This study employs a descriptive survey design with a quantitative approach. According to Creswell (In Radianto: 2023: 61), descriptive quantitative research aims to provide a systematic description of a phenomenon by collecting numerical data and analyzing it to identify patterns and tendencies. This approach focuses on describing the current condition of specific variables within a clearly defined context. Similarly, Sugiyono (2019: 58) states that descriptive quantitative research is conducted to examine existing phenomena by ensuring consistency with the research variables and presenting the findings in the form of measurable and statistically meaningful data. This method is particularly suitable for studies that seek to portray real conditions without manipulating variables.

Based on these perspectives, descriptive quantitative research is appropriate for this study because it allows the researcher to describe students' awareness of Artificial Intelligence (AI) usage in learning academic writing in a clear, structured, and measurable manner. Through this approach, the current level of students' awareness can be accurately identified based on numerical data obtained from the research instrument.



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B. The Location and Time

This research conducted in campus 2 of Islamic University of Indragiri at Faculty of teacher training and education's building, it takes place in Soeberantas street, number 10. The research started from May to April 2026.

C. Population and Sample of Research

1. Population

Population refers to the entire group of individuals, objects, or events that share specific characteristics and are relevant to the objectives of a study. Population is the complete set of elements to which the researcher intends to generalize the findings (Bhandari 2023). In this study, the population consisted of all students of the English Study Program, as they are directly related to the focus of the research on learning academic writing. There are 92 students from English study program in total all the way from the first until the eight semester that become the population of this study.

Table III. 1 Total Amount of Population

No	Semester	Number of Students
1	2	36
2	4	19
3	6	21
4	8	16
Total		92



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2. Sample

A sample is a subset of the population selected for observation or data collection. Sugiyono (2019: 146) states that a sample represents part of the population and is used to draw conclusions about the whole. This definition is consistent with Bhandari (2023), who explains that a sample is a group chosen from the population to provide measurable data for analysis. Therefore, the sample in this research served as a representative group for examining students' awareness of AI usage in learning academic writing.

This study employed purposive sampling as the sampling technique. Purposive sampling is a method in which participants are deliberately selected based on specific criteria relevant to the research objectives. Rather than selecting participants randomly, this technique allows the researcher to choose individuals who are expected to provide the most relevant and meaningful data (Campbell et al., 2020: 652)

The criteria for sample selection in this study are as follows:

- a. students of the English Study Program who have taken the academic writing course, and
- b. students who have used Artificial Intelligence (AI) tools to assist their academic writing activities.

Based on consultation with the Head of the English Study Program, students who have taken the academic writing course are those enrolled from the third to the eighth semester. To identify students who have used AI in learning academic writing, a preliminary questionnaire was administered.



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Consequently, the sample of this research consisted of 55 students in total from fourth to eighth-semester students of the English Study Program who have experience using AI in learning academic writing.

Table III. 2 Total Amount of Sample

No	Semester	Number of Students
1	4	18
2	6	21
3	8	16
		Total: 55

D. Research Instrument

A research instrument is a systematic tool used to collect, measure, and analyze data related to specific research variables. It allows researchers to operationalize abstract concepts into observable and measurable forms (Creswell, in Sahara et al., 2025: 2291).

In this study, a questionnaire is employed as the research instrument. A questionnaire is a structured set of written questions designed to obtain information from respondents in a standardized manner. According to Sugiyono (2019: 234), questionnaires are widely used to measure attitudes,



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perceptions, opinions, behaviors, or knowledge, as they enable efficient and consistent data collection from a large number of participants.

Table III. 3 Blue Print of Questionnaire

No	Indicator	Number of Item	Item Number
1	Exposure	3	1,2,3
2	Attention	3	4,5,6
3	Memory Awareness	3	7,8,9
4	Language Awareness	3	10,11,12
5	Executive Awareness	3	13,14,15

To measure students' awareness of Artificial Intelligence (AI) usage in learning academic writing, the questionnaire items were developed using a Likert scale format. Likert scale is a measurement technique commonly used in questionnaires to assess respondents' attitudes or perceptions by indicating the degree of agreement or disagreement with a series of statements through ordered response options. (Joshi et al., 2015: 396)

The questionnaire was administered in a digital format to facilitate data collection. The instrument was designed and distributed using Google Forms, allowing respondents to complete the questionnaire efficiently and enabling the researcher to collect and manage data accurately.



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In this study, researcher used the five-agreement level of Likert scale. It consists the statement of strongly agree “SA” (5), agree “A” (4), neutral “N” (3), disagree “D” (2), strongly disagree “SDA” (1).

Table III. 4 Classification of Agreements

No	Agreement	Interpretation	Score
1	SA	Strongly Agree	5
2	A	Agree	4
3	N	Neutral	3
4	D	Disagree	2
5	SDA	Strongly Disagree	1

E. Data Collection Technique

Previously, researcher mentioned that he used questionnaire as the instrument of this research. At the implementation, researcher gave the questionnaire to the sample which consisted of 15 statements. Below are the specific procedures of collecting the data:

- a. The researcher gives questionnaire to the sample of the research.
- b. The researcher collects the questionnaire
- c. The researcher analyses the data
- d. The researcher classifies the result
- e. The researcher make conclusion



F. Data Analysis Technique

1. Validity

Cresswell (2018: 162) distinguish validity by several types:

a. Content Validity

Content validity shows whether the items in a research instrument properly cover all parts of the concept being measured. An instrument has good content validity when its questions are relevant, clear, and represent the whole concept, usually judged by experts.

b. Construct Validity

Construct validity refers to how well an instrument measures an abstract concept, such as awareness, attitude, or perception. It is usually tested using statistical methods, for example factor analysis or by checking relationships with related variables.

c. Criterion Validity

Criterion validity shows how well a research instrument's results match an external standard. It is assessed by comparing the instrument with another measure.

In this research, the researcher used content validity to ensure that all statements given to the sample are valid and accurately measure the intended variables. Content validity examines whether each item in the instrument is relevant and representative of the variable being measured. Since the goal of this study is to describe a specific phenomenon accurately, it is essential to ensure that the instrument has



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been validated by experts. Therefore, the data collected can be considered reliable and credible. The instrument was validated by some contextually related lecturers. There are two elements that been validated; Content and Grammar. Content is related to the reliability of content from the instrument to the indicators. On the other hand, Grammar is the sentence structural validity which needed to ensure all the items on instrument are grammatically correct and understandable when implemented to the sample.

In analyzing the data, researcher used the descriptive statistical analysis method to determine the mean score and describe the result. According to Sugiyono (2019: 241) Descriptive statistical analysis is a method used to describe and summarize data that have been collected. It helps in showing what the data look like without making conclusions about a larger population. This analysis usually uses simple statistics such as the mean, median, percentage, range, and standard deviation to explain patterns in the data.

Researcher also used software app called SPSS (Statistical Package for the Social Sciences) to assist in analyzing the data. It is a software application used for data management and statistical analysis, particularly in social sciences, education, psychology, business, and health research. In practical terms, SPSS allows researchers to input, organize, analyze, and interpret quantitative data efficiently. The software provides a user-friendly



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interface where users can perform statistical procedures without extensive programming knowledge.

In this particular research, researcher utilized the analysis method to find out the mean score of awareness in SPSS application. Mean score itself has its own formula in carrying it out, below is the explanation of the formula:

$$\bar{X} = \frac{\sum X}{N}$$

Where:

- $\bar{X}$ = Mean score
- $\sum X$ = Total of all scores
- N = Number of respondents

Table III. 5 Classification of Awareness Level

No	Range of Total Mean Score	Classification	Interpretation
1	1.00 – 1.80	Low	Low Awareness
2	1.81 – 2.60		
3	2.61 – 3.40	Moderate	Moderate Awareness
4	3.41 – 4.20	High	High Awareness
5	4.21 – 5.00		

Arikunto (2013)

With this classification, there are several final conclusions can be discovered:



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- a. If the final result of mean score obtained between 1.00 to 2.60, it will be interpreted that the students have a low awareness of Artificial Intelligence (AI) Usage in Learning Academic Writing.
- b. If the final result of mean score obtained between 2.61 to 3.40, it will be interpreted that the students have a moderate awareness of Artificial Intelligence (AI) Usage in Learning Academic Writing.
- c. If the final result of mean score obtained between 4.21 to 5.00, it will be interpreted that the students have a high awareness of Artificial Intelligence (AI) Usage in Learning Academic Writing.