

CHAPTER III RESEARCH METHODOLOGY

A. Research Design

This research employed a quantitative research design. According to Barella et al. (2024: 283), quantitative research is a strategy used to collect data or information that can be counted or assessed objectively using deliberately developed instruments. In addition, this research applied a descriptive approach within the quantitative framework. According to McCombes (2023: 2) stated that descriptive research is used when the researcher aims to explore or describe various characteristics, tendencies, frequencies and classification of a certain phenomenon in more detail.

In this research, the descriptive aspect was used to express students' perspectives on utilizing ChatGPT to practice essay writing. Students' perceptions were objectively assessed using a Likert scale. The questionnaire items were created based on perception indicators, namely acceptance, understanding and interpretation. Data from the questionnaire were analyzed using descriptive statistical approaches, such as calculating scores and mean scores. These techniques were used to explain the level of students' perceptions and to classify them into categories. Therefore, this research used a quantitative research approach and descriptive statistical analysis to describe students' perceptions of using ChatGPT in learning essay writing in the English Study Program at Islamic University of Indragiri.





B. The Location and Time

This research was conducted at the Islamic University of Indragiri in English Study Program. It is located on Soebrantas street, Tembilahan. The research was carried out the study in April 2026.

C. Population and Sample of the Research

1. Population

This study included all English Study Program students at the Islamic University of Indragiri who had taken the essay writing course. According to Putri et al (2020: 160) stated that population is defined as the maximum possible number, either in quantitative or qualitative sense, as well as the characteristics associated with the set of relevant objects that are clear and comprehensive enough to be understood. Based on academic records, the students who had taken the essay writing course were from semester 4, semester 6, and semester 8. The total number of students who meet this criterion was 56 students. Therefore, all 56 students were considered as the population of this research.

Table III.1 Population

Semester	Population
4	19
6	21
8	16
Total	56 students

2. Sample

According to Shukla (2020: 5) stated that sample is a portion taken from population that fully reflects it. This means the individuals chosen as the sample should include all the key characteristics that exist within the



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population. In this research, the researcher employed the total sampling technique. According to Sugiyono in Pratama and Indrayana (2021: 35), total sampling is a sampling approach that uses the entire population as the research sample. Total sampling was utilised since all members of the population met the requirements for selection as a sample. According to the preliminary questionnaire, all students who took the essay writing course had used ChatGPT to learn essay writing. As a result, all 56 students from the English Study Program at the Islamic University of Indragiri who had attended an essay writing course were chosen as the research sample. The sample included students from semesters four, six, and eight. They were picked using the following criteria:

1. They were active students in English Study Program at Islamic University of Indragiri
2. They had learned essay writing as part of their curriculum.
3. They had used ChatGPT in their learning process, particularly in writing essays.

D. Research Instrument

According to Oben (2021: 114) stated that research instrument refers to a systematically and scientifically designed tool that enables researchers to collect, measure, and analyze data in accordance with their research objectives. In this research, the researcher used a questionnaire as the main instrument to collect data about the students' perception of using ChatGPT in learning essay writing. The questionnaire was created to find out how students saw, understood, and evaluated the use of ChatGPT as a learning aid in their writing assignments. According to



Ranganathan and Caduff (2023: 152) stated that research questionnaire is a structured instrument made up of several questions or items that aims to gather data from participants concerning their knowledge, attitudes, beliefs, opinions and behavior.

Table III.2 Blueprint of Questionnaire

NO.	Indicator	Number of items	Item Number
1.	Acceptance	6	1,2,3,4,5,6
2.	Understanding	6	7,8,9,10,11,12
3.	Interpretation	5	13,14,15,16,17

E. Data Collection Technique

In this research, data was collected through a questionnaire. The researcher used a structured questionnaire consisting of 17 items that represented the indicators of students' perception namely acceptance, understanding, and interpretation. The questionnaire used a Likert scale with five options: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). Each item was designed using the indicators provided in the questionnaire's blueprint.

The questionnaires were distributed to students of the English Study Program at Islamic University of Indragiri who met the criteria of the sample. The questionnaire was administered through Google Form to make the data collection process more efficient and accessible for all participants.

Before distributing the instruments, the researcher provided a brief explanation of the research's purpose as well as directions for completing the questionnaire. Participants were promised that their replies would be kept anonymous and used



solely for research reasons. The researcher then collected and organized all of the participants' responses in preparation for data analysis.

F. Data Analysis Technique

1. Validity of the Instrument

In doing this research, the researcher assessed the validity of the instrument employed to guarantee that the questionnaire could measure what it was supposed to test. According to Faiz Zahfa et al. (2025: 50) validity consists of several types, they are:

a. Content validity

Content validity pertains to the extent to which test items or tasks correspond to the overall content and skills that are being assessed. A test is said to have strong content validity when its items adequately and proportionally represent the subject that students are expected to learn.

b. Construct validity

Construct validity refers to the degree to which test items accurately measure the specified construct using a well-defined idea or theoretical framework. This type of validity is commonly applied to instruments designed to assess conceptual variables, including both typical performance (attitudes, self-concept, interests, locus of control, leadership style, and accomplishment motivation) and maximal performance (instruments assessing aptitude, IQ, emotional intelligence, and other associated abilities).

c. Criterion validity

Criterion validity is the degree to which individual test items are valid when the entire test score is used as the criterion. which is why it is often called



item validity. This type of validity is demonstrated by the degree to which each item's measurement results are in harmony with, or contribute consistently to, the total test results as a whole.

In this research, the researcher employed content validity as the instrument was created based on the indicators of the research variable that were theoretically established. Content validity was chosen to ensure that all questionnaire items represented the content and dimensions of the variables being measured so that the instrument was relevant to the purpose of the research.

2. Reliability Test

According to Zahfa et al. (2025: 49) stated that reliability is the degree to which a test gives consistent findings when conducted under similar conditions. Cronbach's Alpha coefficient was used in this study to assess questionnaire reliability. Cronbach's Alpha is extensively used to measure the internal consistency of questionnaire items, especially those using a Likert scale. According to Sugiyono (2019: 186) Cronbach's Alpha is an appropriate method for testing the reliability of instruments consisting of multiple items designed to measure the same construct.

The reliability test was carried out using the Statistical Package for the Social Sciences (SPSS) software. The questionnaire consists of 17 items represented three indicators of students' perception, namely acceptance, understanding and interpretation. All items were examined concurrently to determine the overall internal consistency of the instrument. The criterion for

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determining reliability in this research was based on the Cronbach's Alpha value. According to Hair et al (2019: 112) an instrument is considered dependable if its Cronbach's Alpha coefficient is 0.70 or above. If the obtained reliability coefficient met or exceeded the minimum acceptable value, the questionnaire was considered reliable and appropriate for collecting data on students' perception of using ChatGPT in learning essay writing in English Study Program at Islamic University of Indragiri.

3. Questionnaire Data Analysis

The questionnaire results were analyzed using descriptive quantitative analysis. This technique was applied to describe students' perception of using ChatGPT in learning essay writing based on numerical data collected through a Likert-scale questionnaire. The questionnaire consisted of 17 items represented three indicators of students' perception, namely acceptance, understanding, and interpretation. Each question was assessed using a five-point Likert scale, which is commonly used in perception and attitude research.

Each response was scored by assigning numerical values ranging 5 to 1, where Strongly Agree (SA) is score as 5, Agree (A) as 4, Neutral (N) as 3, Disagree (DA) as 2, and Strongly Disagree (SDA) as 1. After scoring all responses, the data were tabulated and analyzed by calculating the mean score. A mean score analysis was utilised to assess the average degree of students' perception for each questionnaire item, each perception indicator (acceptance, understanding, and interpretation) and the overall perception of using ChatGPT

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to learn essay writing. The mean score was determined by dividing the total score obtained by the number of responses using the following formula:

$$\text{Mean} = \frac{\sum X}{N}$$

Where:

Mean = average score

$\sum X$ = total score obtained

N = number of respondents

To interpret the mean score results, scores were classified into perception levels. The classification was adapted from Widoyoko (2018: 114), who explain that Likert-scale data can be interpreted by dividing the score range into equal intervals. Since the Likert-scale ranges from 1 to 5, the interval width was calculated using the following formula:

$$\text{Interval} = \frac{\text{Highest Score} - \text{Lowest Score}}{\text{Number of Categories}}$$

According to this calculation, the categorization of students' perceptions is illustrated in the table below:

Table III.3 Classification of Perception Questionnaire Score

Mean Score Range	Classification Score
4.21 – 5.00	Very Good
3.41 – 4.20	Good
2.61 – 3.40	Fair
1.81 – 2.60	Poor
1.00 – 1.80	Very Poor

Widoyoko (2018: 118)



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Based on the classification above, the students' perception of using ChatGPT in learning essay writing were interpreted according to the mean score obtained. This classification helped the researcher describe the level of students' perceptions in a clear, systematic, and objective manner.

