CHAPTER III
RESEARCH METHODOLOGY

A. Research Design

This study is a descriptive-quantitative method, this type of quantitative approach used by the researcher is descriptive research.Moreover, (Creswell, 1994) has given a very concise definition of quantitative research as a type of research that is `explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics).Perspectives researcher uses descriptive research. The researcher use this type of research design to describe the effect of students' critical thinking in writing hortatory text exposition. In simple terms, through this kind of research design, the researcher describes what students think about this technique based on the influencing factors. So to get all the information about students' critical thinking.

Descriptive research aims to make a systematic description, factual and accurate information on the facts, and properties of the population of certain areas. The researcher tries to observe research by defining quantitative research as research that investigates the quality of relationships, activities, situations, materials. It focuses on understanding the context and trying to explain the intent of the behavior. Research design to analyze students 'critical thinking in themselves in writing hortatory text exposition and find students' level of critical thinking skills with their writing. According to the definition of descriptive quantitative research above, the researcher chose to conduct descriptive quantitative research in obtaining the data in this study.

B. The Population and Sample of the Research

The population is another important part of the research. The population in this study was the first semester students of the English Education Department, IKIP-PGRI Pontianak. Which is located on Ampera street, registered in the academic year (2021/2022). In this study, researchers was

used random sampling to select the study population. The researcher was taken student from attending list that has random number.

The simple random sampling technique is a simple technique because sample members from the population are taken randomly without seeing and paying attention to the similarities or equivalences in the population (Sugiyono, 2017: 82). Sampling for this research, if the subject is less than 100 people have to take altogether and if the subject is large or more than 100 people can take 10-15% or 20-25% or more (Arikunto, 2010: 112). In this research, the researcher took a sample of 15% of the total population were 24 students. First-semester students of morning and evening classes was be selected as the population because semester students already have more academic writing experience than other semester students. Researchers was take all classes of students from first semester and from 4 classes. Random sampling is the most commonly used sampling method.

Table 3.1 The Sample of the Research

NO.	CLASS	SAMPLE
1	The A Morning Class	6
2	The B Morning Class	6
3	The A Afternoon Class	6
4	The B Afternoon Class	6
TOTAL		**24 students**

C. Technique and Tools of Collecting Data

In this study, the researcher used a measurement as a data collection technique. A variety of data collection instruments were utilized to gain the data. A brief explanation of each instrument is explained separately as follows.

1. **The technique of Collecting Data**
   a) **Online test**

Measurement is the second technique in this research that could help the researcher know the students' scores. It was make research easier to analyze the critical thinking students' in writing text hortatory exposition. In the practice, the measurement was given to the students in test form. The researcher gives 1 question, the test form is the essay. The researcher was known the students' scores after giving the test. The result of the test show levels of critical thinking students'.

2. **Tools of data collection**

a) **Writing test**

The test is used to find out how well the students have mastered the hortatory exposition text learning. According to Arikunto's opinion, citied (Tanireja, 2012, p. 49), a test is a series of statements or exercises in other tools used to measure skills, intellectual knowledge, abilities, or talents owned by individuals or groups. The researcher was ask students to write about a topic that has been determined by the researcher.

Based on this, a written test was used as a tool to collect data for this research. This written test is used to determine students' critical thinking skills in writing hortatory text exposition texts. It is about 150 words long. Students be given several topics that be provided. Students can choose one of the topics for their writing there are corruption, global warming, and smartphone.

Furthermore, there are three reasons why the topic chosen. First, corruption is a public issue that currently often occurs in government, so it has always been a hot topic in every local and international media. Second, global warming has become a big concern for everyone in the world because it has contributed to the destruction of the earth. Third, smartphone are considered a means of communication for all people in the world who can provide harm or benefit to mankind. Overall, the topics mentioned above are adopted because it is considered a frequent phenomenon. Because the content of the material can affect the involvement and motivation of EFL students in related tasks. (Ebrahimi

& Rahimi, 2013), it is hoped that when students can determine the topic of their writing, they will be able to find more meaning in the writing task so that their motivation and ownership of the work increases.

a. Readability

In this research, readability test is a test that used to measure the students comprehension about the instruction that given. The readability test was given to students before giving the test. The researcher gave the readability test for critical thinking to the students', used the formula as follow:

$$X = \frac{n}{N} \ x \ 100 \ \%$$

Where:

X = the result of percentage

n = the total number of students who said yes/no

N = the total number of students

The criteria:

00,00% - 33,33%   : low

33,33% - 66,67%   : middle

66,68% - 100,00%   : high

Adopted by Ali (1985:184) in gunawan(2014).

The result from readability test, the participants which answers yes there are 96.88% and the participants answers no 3.12%.

b. Research Validity

In this step, the researcher reflects and rechecks the data from writing text hortatory students. The researcher does some correspondences to leading lecturer aimed to get conclude the data that been analyzed, interpreted, and identified in the preceding process. Quantitative research aims some process to gain the data based on the real happening in the field, to make the result of study more clearly and tangible needs some validity, to get the validity

the researcher observing the object, increasing attention to the object of study, triangulation, and do some discussion.

D. The Technique of Data Analysis

Analysis of data means a process of sample and arranging data to become simpler to find out the conclusion of the information. To answer the question about level critical thinking. The writing components are content and development, organization, sentence formatting and usage, vocabulary and style, and mechanic.

1. To Analysis Writing Test

In analyzing the data, the researcher applied the analytical percentage at the end of the study to find out, the researcher assisted by experts in giving students' essay test scores to get the best results. To analyze the writing test, the researcher use an assessment rubric by Marguerite Finken and Robert Ennis (1993).

Table 3.2

The Criteria and Scoring for Critical Thinking Essay Test by Marguerite Finken and Robert Ennis (1993 as cited in (Zubaidah, Corebima, & Mistianah, 2015)

Variable	Sub-variable	Indicators
Focus	The degree to Which the main idea/theme or point of view is clear and maintained.	a) Unclear: absent: insufficient length to ascertain maintenance b) Confusing attempted main point unclear or shifts c) Under promise, over deliver, overpromise, underdeliver: infer: two= position w/o unifying statement d) Barebones: position clear: main point previewed

		e) Position clear, generally previewed f) All main points are specified and maintained
Supporting Reasons	The degree to which supporting reasons and evidence are clear believable, and from credible sources	a) No support, no credible sources, unbelievable vague, confusing b) Attempted, dubious search, inaccurate, vague c) Some sources and/or reason/evidence dubious, some vagueness d) Some sources credible: reasons/evidence generally believable, sometimes second level, specific e) Most sources credible: most reasons/evidence believable, often at second level, specific f) All sources credible: all reasons/evidence believable, second level/beyond spec.
Reasoning	The degree to which conclusion supported by reasons/evidence, alternatives addressed, and argument clear	a) Conclusion unsupported, no reasoning attempted, insufficient b) Conclusions minimally supported, alternatives unmentioned, muddled confused c) Some insufficient support, alternatives prejudicially

		mentioned, key terms underlined
		d) Moderate supports, alternatives mentioned fairly, some vagueness
		e) Conclusions well supported, alternatives well recognized; clear
		f) Strong supported, alternatives thoroughly addressed clear
Organization	The degree to which the logical flow of ideas and explicitness of the plan are clear and connected	a) No plan; insufficient length to ascertain maintenance
		b) Attempted plan is noticeable
		c) Not knowledgeable in paragraphing
		d) some cohesion and coherence from relating to topic, plan is clear
		e) Most points connected, coherent, cohesive, using various methods
		f) All points connected, signaled with transition/other cohesive devices
Conventions	Use of conventions of standard English	a) Many errors, unreadable, confused meaning, problems with sentence construction insufficient maintenance
		b) Many major errors, confusion
		c) Some major errors, many minor, sentence construction below master of sentence construction

		below mastery
		d) Developed, few major errors, some minor, meaning unimpaired, mastery of sentence construction
		e) A few minor errors, but no more than one major error
		f) No major errors, one or two minor errors
Integration		a) Doesn't present most features, insult
		b) Attempts address assignment, conclusion
		c) Partly developed, one features not develop
		d) Essentials present
		e) Features present, but not all equal
		f) All features evident and equally well developed

After scoring, the researcher analyzed the data by using the formula suggestion by Sudijono (2009:318) as cited in Sabu & Vernandes (2019) as follow:

$$Mark = \frac{Raw\ Score}{Score\ Maximum\ Idea} \times 100$$

Where:

Mark   = Students Ability

Raw Score   = Number of

correct answers

Score Maximum Ideal = Total items

Then, the data that has been collected before categorized intoa rating scale by Marguerite   Finken and Robert Ennis (1993).

Table 3.3 The Students Mastery Ability

Range of Score	Grade
90-100	(A) Excellent
80-90	(B) Very Good
70-80	(C) Good
60-70	(D) Poor
Below 60	(E) Very Poor

Marguerite Finken and Robert Ennis (1993).

To analyzing the ability of students in each category, the researcher analyzes the category of all students include in the sample by using the formula suggestion by Sudijono (1987) as cited in Sabu & Vernandes(2019) as follow:

$$M_x = \frac{\sum x}{N}$$

Which:

Mx = Average of students' ability

$\sum X$ = Total score

N = Total of students

The average or mean score of the student score for the test will be obtained by using a formula below from Heaton (1997:176)

$$M_x = \frac{\sum fx}{N}$$

Where:

MX   = Mean

ΣFX   = The total of obtain score

N   = The number of the students

To assess students' critical thinking in writing essays, use the following is a description of the assessment aspects;

1) Focus

2) Reasoning

3) Integration

4) Supporting reasons

5) Convention

6) Organization

Subsequently, to get the percentage of the classification of the ability of the first-semester students of IKIP PGRI Pontianak in writing hortatory exposition, the formula below was be used:

$$P = \frac{f}{N} \ x \ 100 \ \%$$

Where:

P = Percentage

F = Frequency

N = The number of the students

(Hatch and Farhady, 1982)

Score will distribution the table in below

Table 3.4

Score distribution and percentage

Score Range	Criteria	Student number (F)	Percentage (P)
		N	100%

E. **Research Procedure**

To conduct the research, the researcher has several steps to collect data. First of all, the researcher was selected students by using a random sampling technique. Each class taken 6 students from 4 classes and a total of 24 students taken. After that, the researcher given them the material about hortatory exposition text, and given online test writing link using a Google form and calculate the score. And finally, after writing test results have been collected, the researcher was displayed and describe the result.