## CHAPTER III
## RESEARCH METHODOLOGY

### A. Research Method

This study uses a correlational research design to identify the relationship between two or more variables. As Lodico et al. said, correlation is quantitative research to show the relationship between two or more variables.[1] Correlational research is non-experimental research that only consists of people and two or more variables that researcher do not modify or control.

Correlational research designs are useful when researcher want to explore and measure the relationship between variables in the research context. This research will involve measuring two or more relevant variables and then analyzing the data to determine the extent of the relationship or correlation between these variables.[2] Because correlational research is non-experimental, it requires data collection to determine whether two or more variables have a relationship.

This research has two variables: reading comprehension as the independent variable, commonly referred to as variable X, and translation ability as variable Y or the dependent variable. The researcher will use quantitative research methods that will be tested using statistics to determine whether there is a significant correlation between reading comprehension and translation skills of eleventh-grade students at MA Ibtidaul Falah, Dawe, Kudus in 2023/2024.

### B. Population and Sample
#### 1. Population

Sugiyono says that a population is a group of individuals or objects with certain characteristics that are a study's focus.[3] The population is not just the number of

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[1] Marguerite G. Lodico, Dean T. Spaulding, and Katherine H. Voegtle, *Methods in Educational Research: From Theory to Practice*, 2nd ed, Research Methods for the Social Sciences (San Francisco, CA: Jossey-Bass, 2010).

[2] Sukardi, *Metodologi Penelitian Pendidikan*, Pertama (Jakarta: Bumi Aksara, 2018).

[3] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Bandung: Alfabeta, 2015).

things or subjects studied but includes all the characteristics or properties of the subject or object. It can be interpreted that the population is all the subjects suspected in the study.

In this study, the researcher took a population from the eleventh-grade at MA NU Ibtidaul Falah, Dawe, Kudus, in the academic year 2023-2024. With a total population of 210 divided into seven classes, as follows:

**Table 3.1**
**Class XI Student Population MA NU Ibtidaul Falah Dawe, Kudus.**

| No. | Class | Number of Students |
|-----|-------|--------------------|
| 1. | XI IPA 1 | 30 |
| 2. | XI IPA 2 | 30 |
| 3. | XI IPS 1 | 30 |
| 4. | XI IPS 2 | 30 |
| 5. | XI IPS 3 | 30 |
| 6. | XI IPS 4 | 30 |
| 7. | XI IPS 5 | 30 |
| Total | | 210 |

2. **Sample**

According to Sugiyono, the sample is part of the number and characteristics possessed by the population.[4] The conclusions from sampling will be generalized as something that applies to the population. According to Cohen et al., the larger the sample size of the existing population, the better, but there is a minimum number of limits that must be taken by researcher, namely 30

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[4] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Bandung: Alfabeta, 2015).

samples.[5] According to Mahmud cited in Baley, who stated that in research using statistical data analysis, the minimum sample size is 30.[6]

Sugiyono cited in Roscoe's book suggests the following sample size for research:[7]

a. A reasonable sample size in research is between 30 and 500.

b. If the sample is divided into categories, the number of sample members for each category is at least 30.

c. In multivariate research (including multiple regression analysis), the sample size should be 10x greater than the number of variables in the study.

d. For simple experimental research, which uses an experimental group and a control group, the number of sample members is between 10 and 20 each.

According to Idrus cited in Gay et al., the minimum acceptable sample size is based on the research method used, as follows:[8]

a. Descriptive method, at least 10% of the population for relatively small populations, a minimum of 20%

b. Correlational-descriptive method, minimum 30 subjects.

c. Expost facto method, minimum 15 subjects per group.

d. The experimental method has a minimum of 15 subjects per group.

From the several opinions above regarding the determination of sample size, the researcher chose to determine the sample size based on the research method used, namely the correlational method with a minimum

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[5] Louis Cohen, Lawrence Manion, and Keith Morrison, *Research Methods in Education*, 6th ed (London ; New York: Routledge, 2007).

[6] Mahmud, *Metode Penelitian Pendidikan* (Bandung: Pustaka Setia, 2011).

[7] Sugiyono, *Metode Penelitian Kuantitatif*, Ke-3 (Bandung: Alfabeta, 2022).

[8] Idrus Alwi, "Kriteria Empirik Dalam Menentukan Ukuran Sampel Pada Pengujian Hipotesis Statistika Dan Analisis Butir," *Formatif: Jurnal Ilmiah Pendidikan MIPA* 2, no. 2 (2015).

sample of 30 respondents. Sampling researcher use probability sampling techniques, namely simple random sampling. Sugiyono said simple random sampling is the taking of sample members from a population that is carried out randomly without regard to strata in the population.[9] Both men and women, students with different characteristics and achievements, are involved in this study. Researcher took IPA class 1, with a total of 30 students or respondents to be sampled in the study.

The sampling technique was carried out through a lottery with several stages, as follows:
a. Make a lottery paper as many as the number of the population
b. Each lottery paper was numbered.
c. All lottery papers are rolled up and put into the lottery box.
d. The lottery box was shaken, and the selected lottery paper is designated as the research sample.

## C. Instrument and Data Collection Technique
### 1. Research Instrument

Arikunto said that research instruments are tools selected and used by researcher in their activities to collect data so that these activities become systematic and easier.[10]

The data collection instrument in this research is a test. It consists of two parts of the test, namely an objective test using multiple choice questions to measure students' reading comprehension skills. The second test is a subjective one in the form of an essay, where this essay test is used to measure students' translation skills. In this essay test, students will be asked to translate several English sentences into Indonesian related to the material taught in eleventh grade.

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[9] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*, 2015.
[10] Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*, Edisi Revisi VI (Jakarta: Rineka Cipta, 2006).

2. **Data Collection Technique**

Data collection techniques are an essential step in research because the main purpose of a study is to obtain data.[11] Various methods, tools, and strategies allow researcher to collect the data needed. The techniques used by researcher are as follows:

a. **Test**

Researcher divided the study into two tests. The first is a reading comprehension test, and the second test is for students' translation skills.

The research was conducted in one of the selected schools. Before the research, the researcher had made a schedule for filling out the test with one of the teachers concerned. After the planning was determined, the researcher prepared a test sheet that would be given to students. However, before the test was carried out, the researcher explained to the students the purpose and importance of the test.

The first reading comprehension test consists of 20 multiple-choice questions (A, B, C, and D). The score of each item is 5 scores, and the overall score in reading comprehension is 100 points. After the reading comprehension test, the researcher analyzed the students' answers according to the predetermined values. The second test is the translation ability test consisting of 10 questions; the form of the question is a subjective test, namely an essay test. Participants will be asked to translate sentences from English into Indonesian in this translation test. The total score of each item is 3 scores. The total score of the translation ability test is 45 scores.

b. **Documentation**

The documentation method is finding data about things in notes, books, transcripts, newspapers,

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[11] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*, 2015.

inscriptions, magazines, meeting minutes, agendas, and photographs of activities.[12] The documentation method in this study was used to complement data from the results of distributing test questions. At this stage, the researcher collects several things that will support the research, such as documents in the form of a list of student names and photos during the research, because research results can be more trusted if there are photos, academic literature and other aspects that support them.

## D. Research Data Test

### 1. Validity

According to Arikunto, the validity test is a process to measure the extent to which the research instrument can measure what should be measured.[13] The validity test is carried out to measure whether the statement in the questionnaire that has been made is valid or not. The questionnaire is valid if the statement on the questionnaire can reveal something that the questionnaire will measure.[14] A test has high validity if it carries out its measuring function or provides precise and accurate measurements by the imposed test. A test that produces data irrelevant to the measurement's purpose is said to have low validity.

In carrying out calculations for the validity test, researcher used the help of the Microsoft Excel 2010 program. Based on the validity test calculation, if $rhitung > rtabel$, then the statement item is considered valid. Conversely, if $rhitung < rtabel$, then the statement item is considered invalid and should be dropped or not used.

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[12] Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*.
[13] Arikunto.
[14] Imam Ghozali, *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25*, Edisi 9 (Semarang: Badan Penerbit Universitas Diponegoro, 2018).

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## 2. Reliability

A reliability test is a process to measure the extent to which a research instrument can provide consistent, stable, and reliable results.[15] Reliability testing can be done in various ways, such as using the retest, parallel, bisection, or alpha coefficients. A test is considered to have high reliability if the test can provide fixed results.

Reliability is measured using the Cronbach Alpha (α) statistical test tool. A construct or variable is reliable if it has a Cronbach Alpha value > 0.70. Item reliability is tested by looking at the alpha coefficient and conducting reliability analysis with SPSS version 25. The Cronbach Alpha value will be used to determine the reliability of all items in one variable.

## E. Data Analysis Technique

In the process of data analysis techniques, researcher follow several steps, as follows:

1. Collecting student answer sheets and giving scores by analyzing student answers. The maximum score for the reading comprehension test is 5, and the translation ability test is 3. Researcher use the following assessment criteria:

**Table 3.2**
**Criteria of Reading Comprehension (Multiple Choices Test)**

| No | Criteria | No. Item of Instrument |
|----|----------|------------------------|
| 1. | Finding the main idea | 7, 12, 13,14 |
| 2. | Finding the meaning of vocabulary | 1, 5, 8, 9, 15, 16, 17, 18, 19, 20 |
| 3. | Finding factual information | 2, 3, 4, 6, 10, 11 |

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[15] Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik.*

**Table 3.3**
**Reading Comprehension Assesment Test**

| No | Test | Number | No. Item | Score of each item | Total Score |
|----|------|--------|----------|--------------------|-------------|
| 1. | Reading Comprehension | 20 | 1-20 | 5 | 100 |

(Adapted from Brown 2007)[16]

**Table 3.4**
**Criteria of Translation Ability (Essay Test)**

| No. | Qualitative Parameters (Criteria). | Score |
|-----|-----------------------------------|-------|
| 1 | The meaning of source language words, technical terms, phrases, clauses, sentences, or texts is accurately transferred into the target language; no meaning distortion occurs. | (3) Accurate |
| 2 | Most of the meanings of source language words, technical terms, phrases, clauses, sentences, or texts have been accurately transferred into the target language. However, there are still distortions of meaning or double-meaning translations, or omitted definitions, which disrupt the integrity of the message. | (2) Less accurate |
| 3 | The meaning of source language words, technical terms, phrases, clauses, sentences, or texts must be more accurately transferred into the target language or deleted. | (1) Inaccurate |

(Adapted from Nababan at.al 2012)[17]

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[16] Douglas Brown, *Principles of Language Learning and Teaching* (USA: Pearson Longman, 2007).

[17] Mangatur Nababan and Ardiana Nuraeni, "PENGEMBANGAN MODEL PENILAIAN KUALITAS TERJEMAHAN," *Kajian Linguistik dan Sastra* 24, no. 1 (n.d.).

**Table 3.5**
**Classifying The Students' Scores Into Seven Classifications**

| No | Score | Grade |
|----|-------|-------|
| 1 | 96-100 | Excellent |
| 2 | 86-95 | Very Good |
| 3 | 76-85 | Good |
| 4 | 66-75 | Fairly Good |
| 5 | 56-65 | Very Fair |
| 6 | 36-55 | Poor |
| 7 | 0-35 | Very Poor |

(Depdikbud in Novikasari, 2011)[18]

The above assessment instrument tested a significant relationship between reading comprehension and translation ability of eleventh-grade students at MA NU Ibtidaul Falah school in 2023/2024.

2. In this study, the data were analyzed using the statistical formula of SPSS version 25 for Windows to determine whether there is a significant relationship between students' reading comprehension and translation ability. The researcher will use the test scores of variable X and the test scores of variable Y. To see if there is a correlation between students' reading comprehension and translation ability, Budiwanto said that the product-moment correlation analysis technique created by Pearson determines the tendency of the relationship between two interval or ratio variables.[19] The statistical hypothesis in this research is as follows:

*Ha*    : sig.2 tailed $< 0.05$
*Ho*    : sig.2 tailed $> 0.05$
*Ha*    : there is a significant relationship between reading comprehension and translation ability

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[18] Yuanita Novikasari, "The Correlation Between Students' Vocabulary Mastery and Their Translation Ability of the Second Year Students of Senior High School (A Case Study of the Eleventh Grade Students of SMA Negeri 1 Blora in the Academic Year Of 2010/2011)." (Semarang, Semarang State University, 2011).
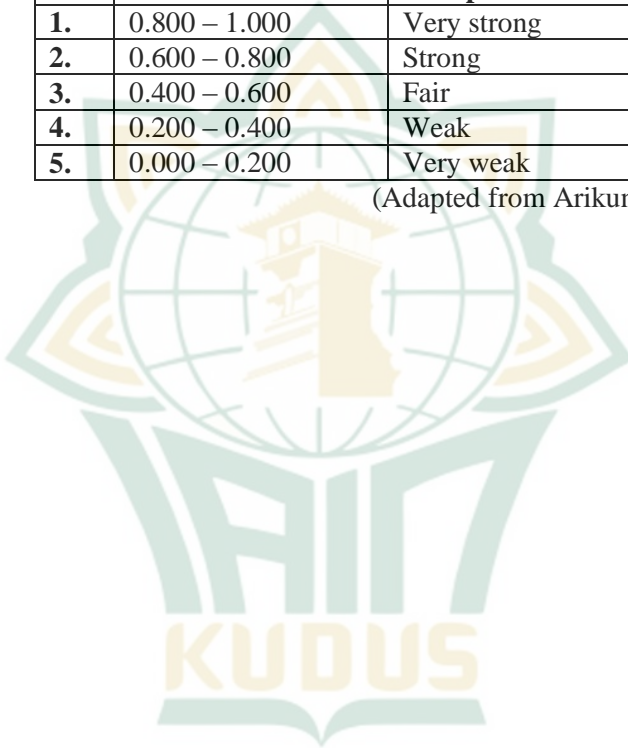
[19] Budiwanto Setyo, "Metode Statistika Untuk Mengolah Data Keolahragaan" (Malang: Depdiknas Universitas Negeri Malang, 2017).

*Ho* : there is no significant relationship between reading comprehension and translation ability

To interpret the results of the correlation analysis, researcher use the following correlation standards:

**Table 3.6**
**Interpretation of the Result**

| No | Standard | Interpretation |
|----|----------|----------------|
| 1. | 0.800 – 1.000 | Very strong |
| 2. | 0.600 – 0.800 | Strong |
| 3. | 0.400 – 0.600 | Fair |
| 4. | 0.200 – 0.400 | Weak |
| 5. | 0.000 – 0.200 | Very weak |

(Adapted from Arikunto 2002)[20]

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[20] Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*.