

CHAPTER III

RESEARCH METHOD

A. Research Design

The study was conducted by researcher utilizing quantitative research methods. This study employed correlation research as its approach. Correlation study is used to determine the level of the correlation between two variables. The variables examined in this study are the learning strategies employed by students and their level of speaking fluency.

Rendi (2023) provided a definition of correlational research as the process of gathering data to determine the presence and strength of a relationship between two or more measurable variables. A correlation coefficient is used to express the strength of the link. A correlational study's goal is to discover the link between variables and then use that association to create further predictions (Imam Santoso, 2021, mentioned in Rendi, 2023).

B. Research Setting

The study was conducted at SMA Negeri 3 Banjarmasin, situated at Jl. Veteran, Sungai Bilu No.381, Sungai Bilu, Kec. East Banjarmasin, Banjarmasin, South Kalimantan. Through the process of conducting observations and delivering instruction in several classrooms, the researcher have identified specific constraints in the speaking proficiency of students, notably those in class X.

C. Population and Sample

1. Population

The population refers to the entire set or collection of elements to which study findings applied. Population can be defined as the entirety of elements to which research findings can be applied. Nurhafizah (2023) defines a population in research as the complete set of people, objects, or events that possess common characteristics and are the focus of investigation.

This research was conducted at SMA Negeri 3 Banjarmasin. The population of this research is all class X students. Consisting of six classes, they were X-A, X-B, X-C, X-D, X-E, and X-F. The total population is 232 students.

Table 3.1 Total Class X Students at SMAN 3 Banjarmasin

X Grade at SMA Negeri 3 Banjarmasin	Number of Students per Class
X-A	38
X-B	40
X-C	39
X-D	39
X-E	37
X-F	39
Total of the Students	232

2. Sample

A sample is a subset of the population that is used to represent the full group. Nurhafizah (2023) defines a sample as a subset of the population that is selected for the purpose of study (Taherdoost, 2018; Bhardwaj, 2019). Samples are smaller numbers that researcher use to make inferences and draw conclusions about the total population.

The research employed a probability sampling technique known as simple random sampling. A simple random sample refers to a subset of a population that is chosen in a completely random manner. This selection method, known as simple random sampling, ensures that each participant in the population has an equiprobable chance of being selected. The data indicates that there are 232 students in the X class at SMA Negeri 3 Banjarmasin. To assist the researcher, the technique employed to determine the sample size in this study is based on the calculations derived from Slovin's formula.

$$n = \frac{N}{1 + N(e)^2}$$

n = Number of samples.

N = Number of population.

e = Error tolerance limit, percentage of accuracy lapse due to sampling error (1%, 5%, or 10%).

From the formula above, the following calculation results are obtained:

$$n = \frac{232}{1 + 232(0,1)^2}$$

$$= \frac{232}{1+232 \times 0,01}$$

$$= \frac{232}{1+2,23}$$

$$= \frac{232}{3,22} = 69,87$$

Based on the calculations that have been obtained, in this study the sample size of respondents was 69,87 or rounded up to 72 students.

Table 3.2 Total Sample of Class X Students

X Grade at SMA Negeri 3 Banjarmasin	Number of Samples per Class
X-A	12
X-B	12
X-C	12
X-D	12
X-E	12
X-F	12
Total of the Students	72

D. Data

For data sources, researcher used tests and questionnaires. The researcher used questionnaires to collect data on students' English speaking skills as well as their preferred learning strategies. To collect data on students' speaking fluency, the researcher conducted an oral test in English.

E. Technique of Data Collection

Data collection is an essential aspect of research as its primary aim is to acquire data and gather information. In order to get the requisite data, the researcher employed tests and questionnaires as the instruments.

A questionnaire is used to gather and analyze information about students' learning strategies. The purpose of implementing questionnaires is to collect information from students on their preferred learning strategies, particularly while learning to speak English. Researcher came to the classroom to observe, administer tests, and give questionnaires to potential respondents.

A test is an exercise or instrument used to assess the skills, progress, abilities, or intelligence understanding of individual students or groups. The speaking test is based on the speaking task in the student's English workbook. The test was assessed directly by the subject teacher who was witnessed directly by the researcher. Following the paired dialogue test, potential responders were directed to complete the questionnaire provided by the researcher.

F. Research Instrument

In collecting data, researchers used speaking tests and questionnaires to obtain data from students.

1. Speaking Test

The speaking test determines students' speaking skill scores. Students take a conversation test in pairs as part of the speaking test. The conversation is extracted from the students' English workbooks. To obtain speaking scores, researchers collaborated with English teachers. Oral evaluation papers are used to evaluate students' speaking fluency. After receiving the score from the subject teacher, the researcher will review the results along with the questionnaire filled by the students.

2. Questionnaire

The questionnaire was developed to assess the language strategies utilized by class X students at SMA Negeri 3 Banjarmasin in their speaking skills. The questionnaire has 34 questions separated into five learning strategy categories. Each part contains multiple questions, which students must respond to in four-point scale responses such as 1 “Never”, 2 “Sometimes or usually true for me”, 3 “Often”, and 4 “Very often or always true for me”.

Of the 34 questions, there are six sections that represent types of learning strategies. Among the sections are the following: seven questions for Memory Strategy, nine questions for Cognitive Strategy, four questions for Compensation Strategy, six questions for Metacognitive Strategy, three questions for Affective Strategy, and five questions for Social Strategy.

G. Validity and Reliability

1. Validity

Depending on Golafshani (2003), referenced in Dyah Budiastuti (2018), the validity of quantitative research is based on empiricism, which values evidence, objectivity, truth, deduction, reason, facts, and numerical data. A test can be said to have high validity if it carries out its measuring function or provides precise and accurate measurement results in accordance with the purpose of imposing the test. A test that produces data that is irrelevant to the purpose of the measurement is said to be a test that has low validity.

Pearson Product Moment Correlation is used to test the validity of research questionnaires, including factor analysis and principal component analysis. In this context, the statistical correlation test findings provide the researcher with a notion of the relationship's direction (positive or negative) and also the strength between the variables. This validity test was carried out using the statistical software SPSS.

2. Reliability

Reliability, as defined by several statisticians cited by Dyah Budiastuti (2018), refers to the consistency of the techniques, conditions, and outcomes. This concept is supported by the works of Best and Kahn (1998), Manning and Don Munro (2006), Pallant (2005), and Wiersma and Jurs (2005). Researcher employed the Alpha

Cronbach formula, which was derived using SPSS, to carry out reliability testing. Cohen et al (2007), as cited by Wildawati (2020), defines the reliability coefficient as a numerical measure that empirically indicates the level of reliability. According to their findings, a coefficient value greater than 0.90 indicates very high reliability, a value between 0.80 and 0.90 indicates high reliability, a value between 0.70 and 0.79 indicates reliability, a value between 0.60 and 0.69 indicates unacceptably low reliability, and a value below 0.60 indicates unreliability.

H. Data Analysis

This study involves two variables: the dependent variable and the independent variable. Student learning strategies are classified as an independent variable since, based on theory, they have an impact on students' speaking fluency. Researcher identified speaking fluency as the dependent variable for the speaking test because to its correlation with students' learning strategies. In order to investigate the research inquiries, the researcher conducted oral examinations and distributed surveys.

The aim of this study is to establish the correlation between students' learning strategies and their ability in spoken English. The research data was analyzed using statistical methods. Nevertheless, in order to streamline and enhance the accuracy of data calculations, the researcher employs SPSS to process the data and ascertain the connection between the two variables. The

researcher constructs a product-moment scale interpretation table that delineates the correlation between two variables in the following manner:

Table 3.3 Interpretation of r Value

No.	Correlation Coefficient	Interpretation
1.	0,00 – 0,20	There is no correlation
2.	0,21 – 0,40	Low correlation
3.	0,41 – 0,70	Moderate correlation
4.	0,71 – 0,90	High correlation
5.	0,91 – 1,00	Very high correlation

(Arikunto, 2006)

This formula can be utilized to compute the correlation coefficient (r) between two variables. The interpretation table help the researcher in ascertaining the significance of the correlation. The Pearson product moment/correlation design was used by researcher to assess the correlation data between students' learning strategies and their speaking fluency.

This study includes the independent and dependent variables; the researcher recognizes the independent variable as X , while the dependent variable is represented by the symbol Y . The SPSS application helps the researcher calculate the data. After collecting data, the researcher enter all of the information gathered and then analyze it using the variables that have been defined.