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CHAPTER III

RESEARCH METODOLOGY

A. Research Design

This study employed a descriptive quantitative research design. The purpose of this design was to describe the students' speaking motivation in bilingual activities at MTsN 2 Indragiri Hilir. According to Creswell (2014) in Sari (2021:43), quantitative research is a research approach used to test objective theories by investigating the relationships among variables. Whereas, Sugiyono (2018:13) in Sari (2021:43) explain that quantitative data consist of numerical information or data that can be converted into numbers through a scoring or measurement process.

B. Location and Time

This research was conducted at MTsN 2 Indragiri Hilir, was located at Batang Tuaka Street, Tembilahan city, Indragiri Hilir regency. This research was conducted from March until Juny 2026. The total of all students was more than 1000 students. This school had various facilities and infrastructure such as a teacher's room, office, classroom, language and Science laboratory, etc.



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C. Population and Sample

1. Population

According to Arikunto in Sari (2021:44) a population refers to the entire group of objects or subjects included in a research study. Similarly, Burhan Bungin (2005:110) in Sari (2021:44) defines a population as a collection of objects or individuals within a particular area that possess specific characteristics are then examined to draw conclusion from the study. As the population, the researcher used and select eighth-grade students, who consisted of nine classes and the total of population consist 367 students. The details of population were as follow:

Table III.1
Population

NO.	CLASSES	POPULATION
1.	VIII.1	40
2.	VIII.2	42
3.	VIII.3	41
4.	VIII.4	40
5.	VIII.5	39
6.	VIII.6	41
7.	VIII.7	40
8.	VIII.8	42
9.	VIII.9	42
TOTAL		367

(Source: MTsN 02 Indragiri Hilir)

Class VIII.8 was not included as part of the main research sample in this study. Instead, this class served as the instrument try-out class for the purpose of examining the validity and reliability of the research instrument prior to its administration to the selected research sample.

2. Sample

A sample was a subset of the population selected to participate in a research study. The selected sample was expected to represent the characteristics of the entire population so that the findings could be generalized. According to Sugiyono (2017:18) in Sari (2021:45) a sample is a portion of the population that possesses the characteristics of the whole population and serves as the source of research data. The sampling technique used in this study was probability sampling, specifically simple random sampling.

According to Dewi (2021) simple random sampling is a sampling technique in which every member of the population has an equal and independent chance of being selected as a sample, without dividing the population into subgroups. This technique was chosen because it allows every student in the population to have the same opportunity to be selected as a research participant, so that the sample obtained can adequately represent the population.

In this study, researcher used simple random sampling to obtain 25% of the total population as the research participants. If the number of subjects is large, the sample will be taken around 10%-15%, 20%-25%, or even more, depending on the needs of the research, (Arikunto, 2004 in Nita Nilamsari, 2014: 48). Based on this calculation, since the total population in this study was 367, the sample taken was 25% of the population, which equaled 91,75 and was rounded to 92 participants. Therefore, the total sample used in this study was 92 respondents.



D. Research Procedure

The procedures conducted by the researcher are as follows:

1. Preparation: The researcher obtained permission from the school authorities and informed the students about the purpose of the study. The researcher also ensured that students' participation was voluntary and that all information collected was kept confidential.
2. Sampling: The researcher employed a simple random sampling technique using the Spin the Wheel application as a sampling tool. The names of all students from classes VIII.1 to VIII.9 were entered into the digital wheel, and the required number of participants (92 students) was selected randomly from the entire population through the application, without dividing the population into class-based groups. However, class VIII.8 was excluded from the main research sample because it was used as the instrument try-out (validity testing) class. Therefore, the main research sample was selected only from classes VIII.1-VIII.7 and VIII.9.
3. Questionnaire Distribution: The questionnaires were distributed to the students who had been selected as the research sample. Clear instructions were provided on how to complete the questionnaires, and the researcher ensured that all students understood each questionnaire item before completing the questionnaire.
4. Data Collection: The completed questionnaires were collected and examined for completeness and consistency to ensure that the data were appropriate for further analysis.

E. Research Instrument

In this research, the researcher used questionnaire. Sugiyono, (2018:142) The collection of data used by researchers is based on the technique or method. A questionnaire was a technique used by researcher to collect research data, the



researcher provided a set of questions or written statements to the respondent with the aim of the respondent answering the questions or statements given.

In this research the researcher used a questionnaire totaling 11, which were developed based on the indicators of motivation.

TABLE III.2
Blue Print of Questionnaire

NO.	Indicator	Number of item	Item Number
1.	Intrinsic Motivation	1	1
2.	Extrinsic Motivation	3	8,9,14
3.	Instrumental Motivation	4	15,16,18,19
4.	Integrative Motivation	3	23,24,25.

F. Data Collection Technique

The primary data used in this study were collected through a questionnaire. The questionnaire consisted of 11 statement items. It was distributed to the eighth-grade students of MTsN 2 Indragiri Hilir who were selected as the research sample, and the responses obtained were collected for analysis. To measure students' motivation, the respondents were asked to respond to each statement provided in the questionnaire. The respondents were given approximately 10–15 minutes to complete the questionnaire.

G. Data Analysis Technique

a. Questionnaire

The researcher used a descriptive quantitative approach to analyze the data. The data collection technique was a questionnaire consisting of 11 statements. The questionnaire used a 4-point Likert scale, which was considered effective in producing valid and high-quality data. The Likert scale contained four response



options, namely: 1) Strongly Agree (SA), 2) Agree (A), 3) Disagree (D), and 4) Strongly Disagree (SD). In general, quantitative data analysis was conducted using descriptive statistics. In this study, the researcher will used SPSS Statistics 27 to analyze data related to students' speaking motivation in bilingual classroom activities.

TABLE III.3
The Likert Scale Rating

No	Scale	Score
1	Strongly Agree	4
2	Agree	3
3	Disegree	2
4	Strongly Disegree	1

After all responses had been collected, the total score of the variable was calculated by summing the scores from all respondents. Since the questionnaire used a four-point Likert scale and was administered to 92 respondents, the highest possible score was obtained by multiplying the highest Likert scale value (4) by the total number of respondents, resulting in a maximum score of 368. Meanwhile, the lowest possible score was calculated by multiplying the lowest Likert scale value (1) by the total number of respondents, resulting in a minimum score of 92.

This classification was used to determine the level of students' speaking motivation in bilingual classroom activities at MTsN 02 Indragiri Hilir. The determination of class intervals in this study follows the theory developed by Syukur and Saputra (2021:120). Furthermore, the results of these calculations were used as the basis for classifying the data into very low, low, high, and very high categories, thereby systematically and measurably determining the level of students' speaking motivation in bilingual classroom activities. According to



Widyoko's model (2014:109) as cited in Agusria (2023:28), the collected data can be analyzed by calculating the total amount for each score obtained from the respondents.

Formula Explanation:

1. The Highest Score

The highest score is obtained by multiplying the highest Likert scale value (4) by the total number of questionnaire items, indicating the maximum score that respondents can achieve ($4 \times 92 = 368$).

2. The Lowest Score

The lowest score is calculated by multiplying the lowest Likert scale value (1) by the total number of questionnaire items, indicating the minimum score that respondents can obtain ($1 \times 92 = 92$).

3. Class Interval

$$\text{Class Interval} = \frac{(\text{Highest score} - \text{Lowest score})}{(\text{Number of response categories})}$$

$$\text{Class Interval} = \frac{(368-92)}{4} \times \frac{276}{4} = 69$$

Based on the interval above, the classification or level of students' speaking motivation in bilingual classroom activities could be seen below.

TABLE III.4
Learning Style in Speaking Skills

Score level	Level of Students' Speaking Motivation
299 – 368	Very Good
230 – 299	Good
161 – 230	Fair
92 – 161	Low

Syukur and Saputra (2021: 120).



4. Mean Score

To identify the level of students' speaking motivation, all statement scores must be summed up and divided by the number of statements. The result can be expressed as the level of students' speaking motivation in bilingual classroom activities.

$$\text{Mean score} = \frac{\sum \text{all of the score of the statements}}{\sum \text{all of the statements}}$$

To evaluate the reliability level of a research instrument, the reliability classification proposed by Cohen (2007:33) in Agusria (2023:27) is used as the reference in this study. These classifications provide guidelines for determining the extent to which an instrument can be regarded as reliable. The following table presents the reliability categories used to evaluate the degree to which a test instrument can be considered reliable.

TABLE III.5
A Commonly Accepted Rule of Thumb of Describing
Internal Consistency by Using Cronbach Alpha

Cronbach Alpha	Internal Consistency
> 0.90	Very highy reliable
0.80-0.90	Highly reliable
0.70-0.79	Reliable
0.60-0.69	Minimally reliable
< 0.60	Unacceptably low reliable

(Cohen in Agusria, 2023:27)

The reliability of the questionnaire was examined through the Statistical Package for the Social Sciences (SPSS) version 27, which was used to evaluate the internal consistency of the instrument and verify its reliability.

b. Validity Test

According to Sanaky et al. (2021: 433), validity is an aspect of



measurement accuracy. A validity test is necessary to determine whether the data collection instruments accurately and effectively measure what they are intended to assess (Pariani, 2016) in Harnita (2023:26). A valid measuring instrument was able to perform its measuring function precisely and had a high level of accuracy. Accuracy here means that the instrument can detect small differences in the attributes being measured. Therefore, a valid instrument could be defined as a measuring tool that had a high level of accuracy and reliability in collecting data. In this study, the validity used was construct validity. According to Heale and Twycross in Khomeiran and Barrett (2025:38) Construct validity refers to the ability to interpret test results in a way that is consistent with the concept being studied. Moreover, the critical value of the r-table at a 0.05 significance level was employed to determine the results of the validity test, which was carried out using SPSS 27 to evaluate how accurately the instrument measured its intended construct.

c. Reliability Tests

Reliability was defined as the degree to which a measurement produces consistent and stable results. According to Shodiya and Adekunle (2022: 712), a reliability test is used to determine the consistency of an instrument's score across different occasions of testing, different raters scoring the responses. Reliability indicated whether an instrument was able to produce stable and trustworthy data. Therefore, the more consistent the measurement results were, the higher the level of reliability of the instrument was.

