

CHAPTER III

METHODOLOGY

A. Approach and Type of Research

Quantitative research refers to a method that uses statistics or numbers to quantify phenomena in the real world. With this method, researchers can describe phenomena numerically, making it easier to measure and analyze data objectively. Through quantitative methods, complicated phenomena can be explained using numbers and statistics, so that the relationship between variables can be mapped more clearly and systematically (Stockemer, 2018, p. 8).

Quantitative research tends to select research problems based on certain patterns that appear in the data to then explain the reasons why these phenomena occur. This is done with the aim of identifying and understanding the cause-and-effect relationship between one variable and another. In this context, quantitative researchers focus on how one variable can affect another, making it possible to determine the factors that contribute to the observed changes (Ghanad, 2023, p. 3795).

This method is very useful in exploring information that can be verified through accurate measurement and statistical analysis. Therefore, in quantitative research, researchers try to test hypotheses through data that has been collected using instruments that are structured and systematic. Experimental Research is among the most successful models in quantitative

research, because this model regulates how a certain treatment or intervention is given to research subjects under very controlled conditions. Thus, the treatment's impact on other variables can be clearly observable and the results can be trusted (Sugiyono, 2015, p. 117).

B. Research Location and Time

1. Location of The Research

This research was implemented at MTs Nur Rahma, located at Jl. Setia Negara, Kandang Mas, Kec. Kp. Melayu, Kota Bengkulu, Bengkulu.

2. Time of The Research

The research time was one month, from March 06 to April 06, 2024.

C. Research Design

An experimental method was employed in this study, specifically utilizing a one-group pretest-posttest design. This design allows researchers to measure the effect of a treatment by comparing students' performance before and after the intervention within the same group. In this case, the research involved only one experimental class.

The choice to use a single class was not merely due to logistical constraints, but rather based on the purpose and focus of the research itself, which was to investigate the potential effect of Task-Based Learning (TBL) on students' speaking skills. Since the primary goal was to examine the difference in performance before and after the treatment within a controlled instructional

setting, the one-group pretest-posttest design was deemed appropriate. It enables the researcher to observe changes directly attributable to the implementation of TBL, without the influence of external teaching variables that might occur when comparing multiple classes with potentially different classroom environments, teacher styles, or student backgrounds.

Additionally, as noted by Apuke (2017, p. 44), pre-experimental designs such as this do not involve random assignment or the use of a control group, but they can still provide valuable preliminary insights—particularly in small-scale classroom research where the goal is to evaluate the practical impact of a teaching method rather than to establish causality in a broad population. Furthermore, according to Safitri et al. (2020, p. 189), this design is often used when researchers aim to evaluate the effectiveness of an instructional intervention within a specific group, such as a single class. In this study, the class received six sessions of TBL-based instruction, followed by a post-test to assess improvements. This repeated exposure to the treatment aimed to ensure that any improvement in speaking skills could reasonably be attributed to the method itself rather than incidental factors.

In conclusion, the use of one class in this design was a deliberate methodological choice aligned with the research objectives—allowing for focused observation of the intervention's effect on student performance while minimizing variability from external instructional factors.

The research design used in this study is described as follows:

Table 2. Research Design

Pre-test	Treatment	Post-test
O1	X	O2

Source : (Sugiyono, 2016:74)

Description:

O1 = Pretest score (before treatment)

X = Treatment (cooperative model of talking stick type)

O2 = Posttest score (after treatment)

This experimental model goes through three steps, namely:

1. A pretest was administered to measure the dependent variable (students' English speaking ability) before the treatment was applied.
2. The treatment was given to the research subject class using the Task-Based Learning model.
3. A posttest was conducted to measure the dependent variable after the treatment was completed.

D. Population and Sample of the Research

1. Population

The population refers to all subjects or object involved that has certain characteristics and is the target in a study. The population is described as a population formed by subjects or objects that possess specific traits and characteristics, chosen by the researcher to be examined and to serve as the basis for drawing research conclusions (Sugiyono, 2016: 215). In this study, considers all students of class VIII MTs Nur Rahma

Bengkulu City, which consists of two classes, namely class 8 Sa'ad bin Abi Waqosh and 8 Zubair bin Awwam, with a total of 41 students.

The population in this study were all 8th grade students of MTs Nur Rahma Kota Bengkulu where there were 2 classes, namely class 8 Sa'ad bin abi Waqosh & class 8 Zubain bin Awwam, totaling 41 students.

Table 3. The number of population

No.	Class	Gender		Total
		Female	Male	
1.	8 Saad bin abi Waqosh	8	14	22
2.	8 Zubair bin Awwam	8	11	19
Total				41

2. Sample

The sample indicates the actual a selected group from the population of individuals who have certain characteristics (W.Cresswell, 2015, p. 247). In the same way, a sample is part of a population selected with certain techniques to act as a reference of research data. This study employed purposive sampling, a participants are selected based on specific criteria or considerations aligned with the objectives and needs of the research (Sugiyono, 2020, p. 85).

During the implementation process, the school authorities officially granted permission for the researcher to conduct the study at the eighth-grade level. After consulting with the English teacher and considering several academic and

logistical factors, class VIII Zubair was selected as the research sample. The selection was not done arbitrarily but was based on several important considerations.

Firstly, the English teacher confirmed that the overall language proficiency of students in class VIII Zubair is at an average level and comparable to other eighth-grade classes. This ensures that the class is academically representative and that the findings from this group can reasonably reflect the general population of eighth-grade students at the school.

Secondly, class VIII Zubair was chosen due to its manageable class size, consisting of 19 students. A moderate number of students is beneficial in experimental research, as it allows the researcher to implement the treatment more effectively, closely monitor student progress, and minimize external variables that may affect the outcome.

Thirdly, based on preliminary classroom observations and input from the English teacher, students in this class have demonstrated strong motivation and active participation in English-speaking and group activities. These characteristics are important because Task-Based Learning (TBL) requires a high degree of student engagement, collaboration, and willingness to participate in communicative tasks.

Lastly, the researcher intentionally chose to involve only one class to maintain focus and ensure the feasibility of applying the one-group pretest-posttest design. This design allows the researcher to measure the difference in students'

speaking performance before and after the implementation of the TBL model, and to evaluate its effectiveness within a controlled and consistent environment.

In summary, the selection of class VIII Zubair was based on a combination of academic representativeness, logistical feasibility, student characteristics, and suitability for the applied research design.

Table 4. Total students in the experiment

No	Class	Male	Female	Total
1.	Zubair	11	8	19
Total				19

The sample utilized in this study comprised one class selected from two existing classes, with a total of 41 students. The selection of this particular class was predicated on a set of criteria, including the students' English language proficiency and their inclination to engage in the research. Consequently, the researcher was able to ensure that the selected sample conformed to the pre-experimental research design, which focused on how task-based learning influences students' speaking skill development.

E. Operational Definition of Variables

Everything that has been determined to do research includes the notion of variables. (Sugiyono, 2022, p. 38) states that all research variables are identified by the researcher as the subject of investigation to gather data and draw conclusions,

analyzed for the purpose of collecting data and deriving conclusions. Two variables are involved in this research: The independent variable, represented by (X), influences or forms the basis for the emergence of the dependent variable. Meanwhile, the dependent variable, represented by (Y), is the outcome that is influenced or affected by (X).

The operational definition of a variable is a variable described based on characteristics that can be observed or researched. The process of measuring variables in research is described by operational variables. The students' speaking skill serves as the dependent variable in this research, whereas Task-Based Learning functions as the independent variable. Based on this explanation, we can conclude that this research consists of two variables, that is:

1. Independent variable (X)

An independent variable in this study is task-based learning, which has an impact on other variables. Task-based learning (TBL) method focuses on the use of real-life tasks. In TBL, students are actively participate in completing tasks that focus on the effective use of English. The objective of TBL is to improve students' speaking skills through coversation, group discussions and presentations.

2. Dependent variable (Y)

Dependent variable is the one that is influenced or determined by the independent variable. In this research, the dependent variable is speaking skill. English speaking skill

refers to the capacity of students to use English fluently and effectively in communicating, interacting, and using appropriate vocabulary and grammar.

F. Data Collection Techniques

To collect the data required data in this research, data collection techniques are an important step because the data obtained used to test the research hypothesis. In this research, researchers used a type of data collection technique, namely by test.

1. Test Technique

Tests were used to measure students' skills to speak English pre- and post-treatment phases. In this study, the test consisted of pretest and posttest. The steps of collecting data through tests are as follows:

a. Pre-test

Pre test was carried out before the intervention to assess the initial English oral communication skills of grade 8 students at MTs Nur Rahma. This speaking test included various tasks designed to measure students' basic skills in English communication. The tasks were in the form of picture descriptions, composing wrong sentences into correct sentences, conversations, as well as telling experiences. Through this activity, the pretest aims to provide an initial measurement of students' abilities, which will then be compared with their performance after the intervention to assess the progress

and effectiveness of learning.

b. Treatment

The treatment using Task based learning was provided to the students after pre-test was completed, this treatment was carried out for 6 meetings with learning material namely comparison degree, this treatment was carried out using small discussion groups which aimed to make students less nervous when told to come forward to make presentations, the tasks given were in the form of picture descriptions, composing wrong sentences into correct sentences, conversations, and telling experiences (comparison in story telling), each task given will be presented so that students get used to pronouncing English words, these tasks are designed to improve students' speaking skills. These activities aim to build a flexible and motivating classroom environment, not only to improve students' language proficiency but also to encourage collaboration and practical application of their English skills in real-life contexts.

c. Post-test

After the treatment, post-test was carried out to evaluate the influence of Task-Based Learning in developing of speaking abilities among eighth-grade students at MTs Nur Rahma.. The test given was similar to the pretest but focused on the comparison of degree

material to analyze several factors, including speaking fluency, pronunciation accuracy, grammar use, vocabulary selection, and the ability to convey ideas clearly using the assessment rubric prepared by the researcher.

G. Research Instruments

An instrument is a device utilized for data collection and the generation of quantitative outcome. In this study, the researcher used different subjects for the pretest and posttest, so that they obtained better results. The instrument used in data collection was a speaking test.

1. Speaking test

Tests are systematic procedures consisting of standardized tasks administered to people or groups for completion, response, or engagement, whether in written, oral, or practical form (Ramadhan et al., 2024, p. 10968).

Tests serve as an essential component of the learning process because they are designed to assess a person's competence, knowledge, intelligence, or skills. In this study, the test used is a speaking test aimed at measuring the speaking ability of eighth-grade students before and after the implementation of the Task-Based Learning (TBL) method. The test was conducted in two stages: a pre-test and a post-test. The pre-test was administered before the students received instruction using the TBL method, while the post-test was given after the students completed the learning

process using this method, in order to observe the extent of their speaking improvement.

The format of the speaking test in this study was an individual task in which each student was asked to deliver a short oral presentation based on visual stimuli in the form of pictures depicting two or more objects, people, or places. These images served as the basis for students to describe and compare the items using comparison degree structures (positive, comparative, and superlative degrees). This test was designed in accordance with the teaching material used during the treatment process. Before speaking, students were given approximately 3–5 minutes to prepare their answers, and then each student was given 2–3 minutes to deliver their oral presentation. The test was conducted individually, with each student taking turns to speak.

The speaking test consisted of 10 items, both in the pre-test and post-test. However, the assessment was based on three key aspects: accuracy (correct use of grammar and vocabulary), fluency (smoothness of speech), and comprehensibility (how easily the speech can be understood). The evaluation used a speaking rubric adapted from J.B. Heaton (1998), with a scoring scale ranging from 1 to 6 for each aspect. Therefore, the maximum total score a student could achieve was 18 points, and if all 10 items scored 6 points each, the total would be converted to 100. This instrument was chosen because it provides an objective overview of students' speaking abilities before and after being given the treatment using the Task-Based Learning method, thus ensuring that the data

obtained is more valid and relevant to the research objectives.

Table 5. Speaking assessment rubric

Score	Accuracy	Fluency	Comprehensibility
6	Pronunciation is only very slightly influenced by the mother-tongue. Two or three minor grammatical and lexical errors.	Able to speak with relative ease using a reasonably wide variety of expressions; sometimes hesitates briefly with just one or two unnatural pauses.	It is easy for the listener to get the speaker's message and general meaning, with very little need for interruptions or asking questions.
5	Pronunciation is slightly influenced by mother-tongue. A few minor grammatical and lexical errors but most utterances are correct.	Sometimes needs to try to find the right words, but generally speaks smoothly with only a few unnatural pauses.	The speaker's message and overall meaning are mostly clear. The listener sometimes needs to ask questions to understand better.
4	The speaker's accent is slightly influenced by their mother tongue, with only one or two big mistakes that could confuse the listener, but no major pronunciation or vocabulary errors.	Although he has to search for words at times, his speaking is generally smooth with few unnatural pauses. Occasionally his sentences are incomplete, but he succeeds in communicating the overall meaning. He uses a fairly wide range of expressions.	Most of what the speaker says is easy to understand. His meaning is usually clear, but the listener needs to interrupt a few times to help or ask questions.
3	The speaker's pronunciation shows influence from their mother tongue, but serious pronunciation errors are few. There are several mistakes in grammar and word choice, some causing confusion.	Needs to try hard most of the time and often looks for the right words. Speech is often slow and broken. Uses a limited range of expressions	The listener understands much of what is said but often needs to ask for explanations. He struggles to understand many of the speaker's longer or more complex sentences

2	The speaker's pronunciation is strongly influenced by their mother tongue, leading to misunderstandings. Numerous fundamental grammatical and word errors occur.	Takes long pauses when trying to find the right meaning. Speech is often broken and hesitant. Sometimes almost stops trying. Uses a limited variety of expressions.	Just short sentences and phrases are understandable, and only with considerable effort from a listener who knows the speaker well.
1	The speaker makes major pronunciation errors and numerous basic grammatical and lexical mistakes. No indication of having learned the language skills or content taught in the course.	Speaks with many long and unnatural pauses. Delivery is very slow and broken. Sometimes stops trying altogether. Uses a very limited variety of expressions.	Almost nothing the speaker says can be understood. Even when the listener tries very hard or asks for clarification, the speaker cannot explain what was meant.

(Source: Heaton J.B, *Writing English Language Tests*(1998))



H. Data Analysis Techniques

The researcher analyzed the data using pre-test and post-test results of the experiment group. The purpose was to determine whether the application of TBL method significantly improved students' speaking ability.

1. Instrument testing

a. Validity Test

Validity tests are used to ensure the accuracy of items in research instruments and to assess the clarity of the research framework. The instruments used must demonstrate validity and reliability. An indicator is considered valid if the calculated r value is higher than the table r value. This study assesses validity using product moment analysis, comparing the calculated r value with the r table value at a 5% significance level. The increase in the validity of the instrument correlates with the increase in accuracy in data measurement. Validity is assessed using the product moment formula (Nababan, et al., 2024, p. 1424)

In this study, the validity test was conducted using SPSS with the Product Moment Correlation method. The test results showed that 10 items were valid because the calculated r -value was greater than the r -table value, and 15 items were invalid because the calculated r -value was smaller than the r -table value. Thus, 10 items could be used, while 15 items were discarded due to being invalid.

b. Realibility Test

After the instrument is validated, the next step is the reliability test. Reliability refers to the degree of accuracy of an instrument in measuring the intended aspect. If the instrument is used multiple times to measure the same aspect and produces consistent results, it is considered reliable.

The reliability measurement in this study uses SPSS software with the Cronbach's Alpha (α) feature. A construct or variable is considered reliable if it yields a Cronbach's Alpha value > 0.60 (Agustin Putri, 2020, p. 179).

Table 6. Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.782	25

Based on the reliability test results above, it can be seen that the Cronbach's Alpha value is $0.782 > 0.60$. This indicates that the items used in this study have a good level of reliability and can be considered reliable. Therefore, the research instrument can be used to measure the intended variable with an adequate level of consistency.

2. Assumption Testing

a. Normality test

The normality test is used to assess whether the data in a variable are normally distributed. In this study, the Shapiro-Wilk test was used to examine the normality of the data, as the sample size consisted of fewer than 50 respondents. The Shapiro-Wilk test is appropriate for small samples of no more than 50 participants (Ghasemi & Zahediasl, 2012, p. 487). The data is normally distributed if the test results show an asymp.sig (2-tailed/ 2-sided) value > 0.05 .

So that the hypothesis of the normality test can be formulated as follows:

Ho: Data is not normally distributed.

Ha : Data is normally distributed

b. T-test

The Paired Sample T-Test was employed to assess whether there was a significant difference between the pre-test and post-test scores within the same experiment group, specifically the eight-grade students of MTs Nur Rahma Kota Bengkulu. This statistical test was appropriate as the research design used in this study was a pre-experimental one-group pretest posttest design. When observations are made in pairs and are interdependent, the paired t-test is applied to compare the mean difference between two sets of scores from the same group, in this case, the pre-test and

post-test results of the experimental group.

- a. If the significance level $< \alpha$ (0.05) it indicates that the individual independent variable affects the dependent variable.
- b. If the significance level $> \alpha$ (0.05) it means that the individual independent variable does not have a significant effect on the dependent variable.

