CHAPTER III

RESEARCH METHOD

This chapter explains the methodology of this study. It covers the research design, population and sample, data collection techniques, instrument, and data analysis techniques

A. Research Design

Research design is an approach and procedure for research, which involves options ranging from general inferences to detailed data collection and analysis methods (Creswell, 2009). This research used an experimental research design. Based on (Creswell, 2009) Experimental research aims to determine whether a specific treatment affects outcomes. This impact is assessed by providing a special treatment to one group and withholding it from another, then determining how the two groups score on a specific outcome. In this study, a quasi-experimental research design was applied. Quasi-experimental research design refers to a structured and objective approach in conducting research, which is carried out to achieve the highest level of accuracy and provide certain conclusions about the given hypothesis. Miller et al. (2020) explained that a quasi-experimental research design enables implementation researchers to perform rigorous studies within contexts, though they come with specific limitations. Quasi-experimental research is aimed at testing a hypothesis to determine whether there is a significant influence of the independent variable. This quasi-experimental research was chosen because it aimed to implement an action or treatment. This is to determine the effect of the treatment using the FGD with a debate plot twist.

Therefore, the participants were divided into two groups: experimental and control classes, to collect the data. This research technique aims to collect data on the effect of innovative FGD with the Debate Plot Twist method on conventional FGD in improving students' speaking skills. The data in this research included the data of students' speaking test results before and after the treatment, along with observations during the teaching and learning process using FGD with Innovative Debate Plot Twist. However, they are treated differently:

1. In the control class, the treatment given is the application of conventional FGD, which is a regular debate.
2. In the experimental class, the treatment given is the implementation of FGD with the innovation of a debate plot twist.

The data obtained was in the form of a test, and the subjects of the research were the students of SMAN 1 Pare, followed by 60 respondents from the second grade.

In order to show the effect of the variable in this study, both variables are shown in the following:

Table 3. 1

Design of Experiment

Class	Pre- Test	Treatments	Post- test
Control	✓	-	✓
Experiment	✓	✓	✓

1. Variables

Variable X in this study refers to the use of the Focus Group Discussion (FGD) with the Debate Plot Twist method, which was implemented in the experimental class. This method aims to improve students' speaking skills in terms

of fluency, accuracy, and confidence. The treatment was conducted in four meetings. The implementation steps of the FGD with the Debate Plot Twist method are as follows:

1. Group Discussion: Students divided into small groups to discuss issues or topics related to analytical exposition texts. Each group developed arguments and viewpoints based on the topic.
2. Debate Plot Twist: After the initial discussion, students were randomly assigned a stance (pro or con) and were required to participate in a brief debate session, defending their assigned position regardless of their original opinion.
3. Presentation and Reflection: Each group presents the summary of their discussion and debate. There was a class reflection session guided by the teacher.

This method was carried out over four meetings. The total duration of the research implementation, including pre-test and post-test, was six meetings, each lasting 90 minutes.

Variable Y in this study is the students' speaking ability measured through an oral test. This test is administered twice, namely a pre-test before the treatment and a post-test after all the treatments have been completed. This test aims to measure the development of students' speaking abilities who participate in the FGD method with Twist Debate compared to the control class.

In the implementation of the test, students were asked to present arguments orally based on a predetermined topic according to the structure of an analytical exposition text. Each student is given a maximum of 2 minutes to express their opinion.

B. Population and Sample of the Research

1. Population

Population is a group of individuals or elements from which the sample is taken and where the findings will be generalized Brown and Abeywickrama (2010). The subject of this study is the students of the second grade of SMAN 1 Pare. The experimental class consists of 30 students from XI IA 4 and 30 students from XI IA 1 in the control class.

2. Sample

According to Sugiyono (2020), a sample is part of the number and characteristics possessed by that population. In this research, the participants use purposive sampling methods. This research only has a license to experiment with two classes that were divided into an experimental class in XI IA 4 and a control class in XI IA 1.

C. Instrument of the Research

The instruments used in this study are intended to raise the students' competence to communicate before and during learning. As a means of getting accurate and reliable data, the researcher also used speaking (pre-test and post-test) as the primary instrument, tapping Brown and Abeywickrama (2010).

The pre-test is conducted before the implementation of the treatments. In this test, students are asked to choose a topic related to analytical exposition and express their opinion orally for a maximum of two minutes. The objective of the pre-test is to assess the students' initial speaking proficiency, including how well they can organize their ideas, use appropriate language structures, and communicate their arguments effectively.

The post-test was administered after the treatments were completed in both the experimental and control groups. The format of the test is similar to the pre-test. However, the post-test aims to evaluate the improvement in the students' speaking performance after being exposed to different teaching strategies. Students are expected to demonstrate better fluency, more accurate grammar usage, improved vocabulary, clearer pronunciation, and more confident delivery of their arguments. The post-test serves as a crucial indicator of how effective the teaching methods were in enhancing the students' speaking skills.

The assessment of this speaking test refers to the evaluation guidelines of Brown and Abeywickrama (2010), which include six aspects: pronunciation, grammar, vocabulary, fluency, comprehension, and task. Each aspect is scored on a scale of 1-5.

Table 3. 2

Instruction of Speaking Test

No	Test	Topic	Indicator
1	**Pre-test**	Analytical Exposition Text	Students are able to deliver their opinion orally based on the given topic by applying the appropriate structure of argumentative text.
2	**Post-test**	Analytical Exposition Text	Students are able to present structured, convincing, and confident arguments orally after receiving the FGD with Debate Plot Twist treatment.

D. Validity and Reability of the Instrument

An instrument of research is valid where content ensures its reliability. The speaking test derives from the curriculum and instructional materials on

analytical exposition texts tailored to the eleventh graders' syllabus at SMAN 1 Pare. The subjects and questions employed in the pre-test and post-test phases were intentionally selected to capture the constructs of speaking skills defined in this study: fluency, accuracy, and confidence.

To enhance content validity, the instruments were evaluated by other experts in English education and speaking pedagogy. Also, the materials are aligned to the respective constituents of the skill being assessed so that the described competencies are directly measured.

The dependability of the instrument is ensured by using a consistent evaluation method, employing the Brown and Abeywickrama, which assesses six components: comprehension, grammar, vocabulary, pronunciation, fluency, and task. Students' oral performances are assessed by two raters independently.

Table 3. 3

Speaking Skill Components Brown and Abeywickrama (2010)

Component	Description
Accuracy	The ability to understand and respond in spoken communication. Required for initiating and maintaining conversation.
Grammar	The ability to construct correct sentences using appropriate structure. Essential for effective oral and written communication.
Vocabulary	The appropriate and sufficient use of words to express ideas. Limited vocabulary restricts one's ability to communicate effectively.
Pronunciation	The correct production of sounds in speech, including phonemes and intonation. Good pronunciation helps listeners understand the speaker clearly.
Fluency	The ability to speak smoothly and effortlessly with minimal pauses. Fluency indicates ease and confidence in communication.

Table 3. 4

Speaking Assessment Rubric

Component	Score 5 (Excellent)	Score 4 (Good)	Score 3 (Fair)	Score 2 (Poor)	Score 1 (Very Poor)
Accuracy	Understands all questions and responds without help; smooth two-way communication.	Understands most with minor mistakes.	Sometimes understands, but needs repetition or clarification.	Often fails to understand without repetition or assistance.	Cannot understand even simple questions.
Grammar	Almost perfect grammar; varied and accurate sentence structures.	Minor errors, do not hinder understanding.	Uses simple structures with some noticeable errors.	Many basic errors; often confusing.	Frequent errors; cannot form correct sentences.
Vocabulary	Wide and appropriate vocabulary; idiomatic and varied.	Fairly varied; few repeated words.	Limited vocabulary; some repetition or misuse.	Very limited; often cannot find suitable words.	Extremely poor vocabulary; communication nearly impossible.
Pronunciation	Clear and natural pronunciation like a native speaker.	Noticeable accent but does not interfere with understanding.	Strong accent; sometimes hard to understand.	Often unclear; many mispronounced words.	Very difficult to understand; frequent fundamental pronunciation errors.
Fluency	Fluent and confident; very few pauses or hesitations.	Fluent with natural pauses; smooth communication.	Some fluency, but frequent pauses and fillers like 'uh', 'um'.	Often halting or searching for words.	Frequent long pauses; struggles to maintain conversation.

E. Data Collection Technique

Based on Sugiyono (2020), the most strategic step in research is to obtain valid data according to research standards. Without proper collection techniques, this research was not able to obtain valid data to address the research problem. In

this research, a quantitative method was used to collect the data. Quantitative method is an approach to testing objective theories by examining the relationship between variables, which are measured using research instruments, so that the resulting numerical data can be analyzed based on statistical procedures (Creswell, 2009). In collecting the data, this research uses the following techniques:

1) Pre-Test

A pre-test will be given to the two groups before the beginning of the treatment. This test intends to measure the students' speaking skills before any intervention. The students had to give their opinion on the subject of an analytical exposition text for not less than two minutes. The outcomes provided baseline information to use in comparison.

2) Treatment

The treatment will be conducted for the experimental group using the FGD with the Debate Plot Twist approach during four consecutive classes. In these classes, the students participate in group discussions, followed by debates designed to enhance speaking and critical thinking skills. For the control group, the treatment will give some conventional FGD.

3) Post-Test

After the treatment sessions, both groups were given a post-test that followed the same format and the same topic as the pre-test. This test was designed to identify changes in the speaking skills after the intervention.

Table 3. 5

The Blueprint of Pre-test

Pre- test of the Speaking Test
Instructions for students: Here are some topics you can choose. Choose one and express your opinion orally for a maximum of 2 minutes. Your opinion must follow the structure of an analytical exposition text, namely: thesis, argument, and reiteration
Topic of choice: 1. Social media brings more harm than good. 2. Online learning is better than face-to-face learning. 3. Cell phones are not allowed in class.

Table 3. 6

The Blueprint of Post-test

Post- test of Speaking Test
Instructions for students: Here are some topics you can choose. Choose one and express your opinion orally for a maximum of 2 minutes. Your opinion must follow the structure of an analytical exposition text, namely: thesis, argument, and re-iteration
Topic of choice: 1. Social media hurts teenagers' mental health. 2. School should start later in the morning to help students concentrate better. 3. Mobile phones should be banned during school hours.

F. Treatment Procedure

To investigate there is any significant difference in the improvement of speaking skills between students who participates in innovative FGD with Debate Plot Twist and those who participates in conventional FGD. As stated by Creswell (2009) in experimental research, the experimental group was given a specific treatment while the control group is given the usual method. The goals is to seen the effect of the independent variable on the dependent variable.

The procedure of this research will be conducted through several stages. First, a pre-test in the form of an individual oral speaking test will be given to both the experimental and control classes. The test will be prepared to assess the initial level of students' speaking, particularly in terms of delivering analytical exposition texts. Treatments will be applied to each group after the pre-test. H. Douglas Brown (2001) stated that the speaking test can be used to measure students' communication skills before and after learning. The experimental group will be taught using the FGD with the Debate Plot Twist method, while the control group receives the conventional FGD technique. These treatments will be conducted in four meetings to make students' speaking more fluent, accurate, and confident.

Following the treatments, a post-test in a format mirroring the pre-test will be administered to assess any improvements in students' speaking abilities. The pre-test and post-test scores will be rated on the Brown and Abeywickrama (2010) speaking rubric comprising five eminent features: comprehension, grammar, vocabulary, pronunciation, and fluency. Two independent raters scored to ensure objectivity and consistency. After the scoring, the data will be statistically analyzed using SPSS software in an effort to determine if there is any significant improvement in speaking skills between the two groups. The findings of the study will be interpreted to investigate the effectiveness of the innovative instructional method. Finally, the researcher will provide suggestions and proposals based on the findings, which can serve as thoughtful recommendations for subsequent teaching interventions and continue the research on the acquisition of speaking skills.

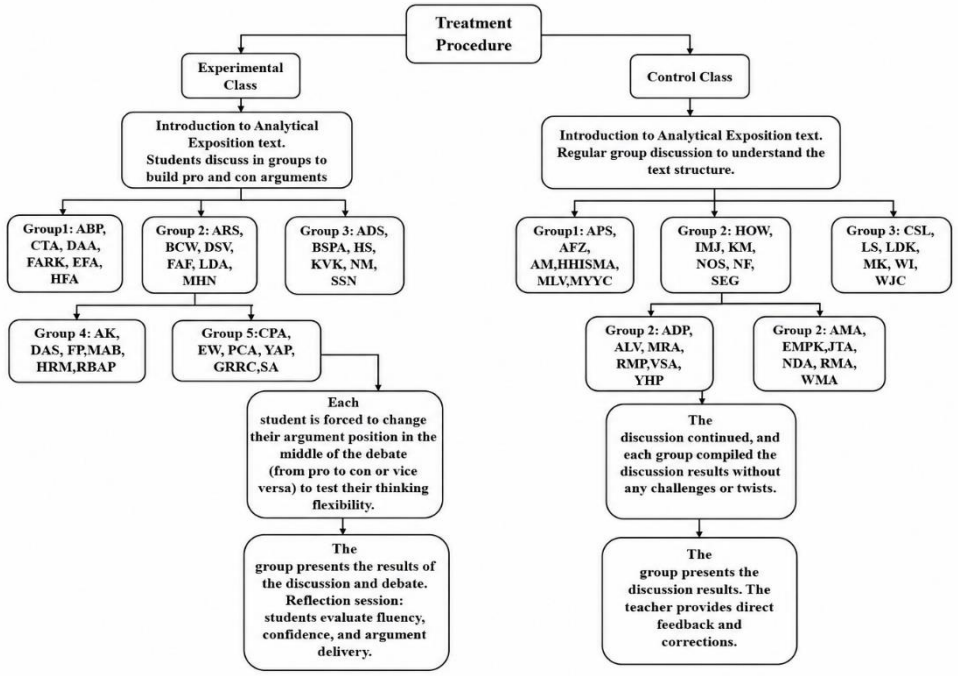

Figure 4. 1 Treatment Procedure

G. Data Analysis Technique

Data analysis technique is a systematic process of organizing, arranging, grouping, and interpreting data (quantitative or qualitative) to transform raw data into meaningful, accurate, and accountable information, patterns, or conclusions to solve a research problem (Sugiyono, 2020). In this research, the data were analyzed through descriptive statistics and inferential statistics. Base on Sugiyono (2020), descriptive statistic data are statistics used to analyze data by describing or depicting the data that has been collected as it is. Meanwhile, the inferential statistics are employed to test hypotheses and determine whether there are significant differences between groups (Sugiyono, 2020).

Before analyze the data by using SPSS, to calculated the students' speaking score based on 5 components: fluency, accuracy, vocabulary, pronounciation, and grammar, can be calculated by the formula: Final Score =

(Total Score / 25) x 100. After obtaining the final scores, the data were further analyzed using descriptive and inferential statistics (ANCOVA) to determine the effectiveness of the treatment.

1. Descriptive Statistic Analysis

The descriptive analysis in this study was conducted using IBM SPSS Statistics 22, which is commonly utilized in educational research due to its accuracy and efficiency in processing quantitative data. The data were presented in the form og the table, mean, STD deviation, maximum, minimum, and range. The patterns are:

a) Mean Pattern

$$\bar{x} = \frac{\sum F_i \cdot x_i}{\Sigma_{Fi}}$$

b) Standard Deviation

$$S = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}}$$

2. Inferential Statistic Analysis

The inferential statistic is the process of making conclusions based on a smaller sample of data into more general conclusions for a population. It was focused on analyzing the data through the statistical tests, namely Normality Residuals, Homogeneity of Variance, and Analysis of Covariance (ANCOVA). They were discussed as follows.

a. Normality Residuals

Normality residuals test aimed to establish whether the data is normally distributed. It was quantified by using the Shapiro-Wilk test with SPSS 22. The conclusions were drawn gather than 0.05. The pattern is:

$$T_3 = \frac{1}{D}\left[\sum_{i=1}^{k} a_i (X_{n-i+1} - X_i)\right]^2$$

b. Homogeneity of Variance

Homogeneity of variance is used to determine whether the groups are homogeneous or not. It was conducted on the pre-test and post-test scores and used *Levene's test* with SPSS 22. The conclusions were drawn at (> 0.05). The pattern is:

$$W = \frac{(n-k)}{(k-1)} \frac{\sum_{i=1}^{k} n_i (\bar{Z}_{i.} - \bar{Z}_{..})^2}{\sum_{i=1}^{k} \sum_{j=1}^{n_i} (Z_{ij} - \bar{Z}_{i.})^2}$$

c. Analysis of Covariance (ANCOVA)

Analysis of Covariance (ANCOVA) was performed to test the hypotheses that have been formulated before. The data were analyzed by using ANCOVA in SPSS 22. The conclusions were drawn at ($p < 0.05$). The pattern is:

$$y_{ij} = \mu + \tau_i + \beta x_{ij} + \varepsilon_{ij}, \quad i = 1, 2, \ldots a$$
$$j = 1, 2, \ldots n_i$$