Chapter III
Research Method

In this chapter, it will be discussed about the research methodology that includes research approach and design, type of research, time and place of the research, procedures of collecting data, and techniques of analysing data.

3.1 Research Approach

Cresswell (2018) emphasised that research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. The approach used in this research is mixed method, by combining qualitative and quantitative methods in the same research. Sugiyono (2018) argued that mixed methods is a research method between quantitative methods and qualitative methods to be used together in a research activity, to obtain data more comprehensive, valid, reliable, and objective.

Mixed method is a strategic step in research and provides better and more complete results than one method. Cresswell (2012) described mixed methods as having several models or designs as follows:

1. Sequential Explanatory

   Sequential Explanatory design is characterized by quantitative data collection and analysis in the first stage, followed by qualitative data collection and analysis in the second stage, to strengthen the results of the quantitative research conducted in the first stage.

2. Sequential Exploratory

   Sequential Exploratory design is the same as the sequential explanatory method, only inverted where this method at the initial stage uses qualitative methods and the next stage uses quantitative methods. The weight of the method is more on the first stage method, namely qualitative methods and then complemented by quantitative methods. Mixed Method data of both methods are connecting (connecting) the results of the first stage of research (qualitative research results) and the next stage (quantitative research results).

3. Sequential Transformative

   Sequential Transformative design is conducted in two stages with lens theory (gender, race, social science) integrated into each research procedure. The first stage can use quantitative or qualitative methods and continue in the next stage with qualitative or quantitative methods. Lens theory is presented in the introduction of the research proposal to guide the formulation of research questions to explore the problem.

4. Conccurent Triangulation

   Conccurent Triangulation design is the most familiar model among the six models in quantitative/mixed methods. In this model, researchers use quantitative and qualitative methods together, both in data collection and analysis, then it can be found which data can be combined and distinguished.

5. Conccurent Embedded

   Conccurent Embedded design is a research method that uses quantitative and qualitative research methods simultaneously/together (or the other way around), but the weight of the method is different. In this model there are primary methods and secondary methods. The primary method is used to obtain the main data, and the secondary method is used to obtain data to support the data obtained from the primary method.

6. Conccurent Transformative

   Concurrent Transformative design is a combination of triangulation and embedded models. Two methods of data collection are conducted at one stage/phase of the research and at the same time. The weight of the methods may or may not be the same. Combining data can be done by merging, connecting or embedding (mixing with equal weight, connecting, and mixing with unequal weight).

3.2 Reseach Design

Sequential Explanatory design is the research design used. The researcher started with the stage of collecting and analysis quantitative data, then continued with the collection and analysis of qualitative data. In this research, qualitative data contributes to provide an in-depth explanation of the quantitative data findings obtained through the direct test. The qualitative method is used to obtain an explanation of the implementation of the STAD learning method. Moreover, the quantitative method is to measure the extent of the improvement and influence of the STAD method on students' skills in writing descriptive text.

The research approach used in this research is experimental. Arikunto (2010) mentioned that an experimental is a design intended to determine the effect or absence of the impact of "something" on the subject of investigation. Furthermore, Consuelo (1993) stated that experimental research is the only research method that can test hypotheses about causal relationships. The experimental design used is a one-group pretest-posttest design, namely a design that has a pretest before being given action or treatment and a posttest after being given action. This makes the results of the treatment more accurate, because it can compare with the situation before treatment (Sugiyono, 2013). The specification of the research used is descriptive analysis that aims to make a description of the facts, characteristics, and influences between the phenomena being investigated.

In research, a good plan is needed so that the research can run well and smoothly, in line with the goals and expectations. The research design is a

comprehensive work plan so that the research results can answer research questions. In addition, it has the aim of making this research clear and easy to understand. Because of that, researcher divided into three stages in this research, they are: planning, implementing, and reporting.

3.2.1 Planning

First stage, the research began with initial observations as a basis for identifying problems. The researcher conducted a survey and observed directly at the school to find out the possibility and willingness of the school to be used as a research site. This survey aimed to obtain both physically and non-physically information about the state of the school and the atmosphere of the learning process in the classroom.

After conducting the initial observation, the researcher made a permit letter to the relevant institution to get permission to go to the field. Then, the researcher gave an explanation of the learning method that would be used in the research to the English teacher and collaborated to determine the steps that would be taken to solve the existing problems. Next, the researcher planned the action by preparing the lesson plan (RPP), observation sheet, materials, and test instruments.

3.2.2 Implementing

In the second stage, the implementation of activitiy is adjusted to the lesson plan (RPP) made previously. In the first meeting, the researcher will do pre-test to students before implementing STAD learning method. This is used to determine the level of students' writing skills before implementing the learning method. In the last meeting, the researcher will teach the material to students by implementing the STAD learning method and conduct post-test. The purpose is to compare students' writing skills before and after implementing the STAD learning method. In the process of learning activities, researcher collaborate with partner to support in completing the research stages. The partner roles as the observer of the activities and the researcher roles as an implementer of teaching and learning activities and conducting documentation during the learning process.

3.2.3 Reporting

Third stage, the researcher will analysis the students' test results and describe the implementation of STAD learning method in teaching descriptive text to improve students' writing skills. The results of the analysis are used by the researcher to compile the research results into a report based on the findings of the analysis data.

3.3 Procedures of Collecting Data

Data collection is the process of obtaining some data to complete the research results. Sugiyono (2019) explained that the most important step in research is data collection techniques, because getting data is the main purpose of a research. Data collection techniques can be done through observation, tests, questionnaires, interviews, documentation or a combination of the five techniques. However, the researcher chooses only three of the techniques mentioned above, including as follows:

3.3.1 Observation

Observation is a technique or way of collecting data by monitoring the activities that are ongoing. The purpose of the researcher conducting observation activities is to obtain data related to learning conditions, student activities, and how the teacher teaches in the classroom by implementing the STAD learning method in teaching descriptive text.

Based on the explanation above, the researcher prepared an observation sheet to find out how the implementation of STAD learning method in teaching descriptive text as follows:

Table 3.1

Observation Sheet of Activities in the Application of STAD Learning

Method in Teaching Descriptive Texts

Instructions:

- Give a checklist (√) in the provided column

No	Activities	Fulfilled	Not Fulfilled
	Pre-Activities		
1.	Teacher gives the greetings to students and ask them to pray together		
2.	Students respond to greetings and pray together		
3.	Teacher check students' attendance list		
4.	Teacher give motivation to students and explain the benefits of learning about today's material		
5.	Students prepare themselves to learn and listen to the teacher's explanation of the purpose and benefits that will be learnt.		
	Main Activities		
5.	Teacher prepares tools and materials for the teaching and learning process		

6.	Teacher briefly explain the learning material to be taught		
7.	Teacher divides the students into 6 groups		
8.	Students make groups based on the instructions given		
9.	Teacher delivers descriptive text material to students use good language		
10.	Students listen to the teacher's explanation of the material being taught		
11.	Teacher provides opportunities to students for asking questions		
12.	Teacher guides all groups of students to discuss the learning material about descriptive text and complete the group assignment		
12.	Students discuss in groups about the material being learnt and complete group assignments		
12.	Teacher monitors the discussion process and guides groups that are having difficulties		
13.	Students present the results of group task		
14.	Teacher gives feedback and calculates the students' task scores		

15.	Teacher gives reward to the best group		
16.	Teacher summarizes the material that has been taught together		
Closing Activities			
17.	Teacher gives an overview of the material to students to be discussed at the next meeting		
18.	Teacher asks the students to pray together before ending the class		
19.	Students pray together and greeting to the teacher		

3.3.2 Test

In this research, the test format is in the form of a descriptive text writing task about famous tourist places and historical buildings in the world to obtain data on the improvement of student learning outcomes, especially about mastery of the material or topics that are taught by implementing the STAD learning method.

This research uses pre-test and post-test. The pre-test is used to measure students' writing skill before implementing the STAD learning method. In addition, the post-test is conducted to measure students' writing skill after implementing the STAD learning method.

The researcher analyzed related to the results of students' descriptive text writing test skills using an analytical assessment rubric adapted from Weigle (2002) with five components, they are: content, organization, vocabulary, language use, and mechanics. The analytical scoring rubric is used as follows:

Table 3.2

Analytical scoring rubric adapted from Weigle (2002)

Components of Writing	Score	Indicator
Content	4	Relevant to the topic and easy to understand
	3	Rather relevant to the topic and easy to understand
	2	Relevant to the topic is not quite easy to understand
	1	Quite relevant to the topic but is not quite easy to understand
Organization	4	Most of the sentences are related to the main idea
	3	Some sentences are related to the main idea
	2	A few sentences related to the main idea
	1	The sentences are unrelated to each other
Vocabulary &	4	A few errors in choice of words, spelling and punctuation

Mechanic	3	Some errors in choice of words, spelling and punctuation
	2	Occasional errors in choice of words, spelling and punctuation
	1	Frequent errors in choice of words, spelling and punctuation
Grammar	4	A few grammatical inaccuracies
	3	Some grammatical inaccuracies
	2	Numerous grammatical inaccuracies
	1	Frequent grammatical inaccuracies

Source: *S. C. Weigle, Assessing Writing, (Cambridge: Cambridge University Press, 2002)*

3.3.3 Questionnaire

According to Sugiyono (2017) a questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer. After the learning activities were done, the researcher uses a questionnaire to find out students' responses to learning by using the STAD method during the learning process. The researcher provided a questionnaire consisting of 10 that would be given through the Google Form link to 10th IPA 3 grade students. Researchers used a Likert scale interval of 1-4 by Riduwan (2014) where the scale of four indicates strongly agree (SA),

three for agree (A), two for disagree (D), and one for strongly disagree (SD).

The questionnaire sheet, as follows:

Table 3.3

Instrument Questionnaire Sheet for Students

The use Student Team Achievement Division Method in Teaching

Descriptive Text to Improve Students' Writing Skills

Instructions:

a. Please choose the answer honestly, because it will not affect your score.

b. Give a checklist (√) in the provided column number, there are:

1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree

No	Statement	1	2	3	4
1	The use of Student Team Achievement Division Method in learning descriptive text makes you happy.				
2	The subject matter delivered is in accordance with the learning objectives.				
3	The Student Team Achievement Division method helped me better understand the material of descriptive text.				

4	The Student Team Achievement Division method helped me to be more focused and engaged in learning descriptive text.				
5	In the Student Team Achievement Division method, I feel that I get support and help from group members in understanding about descriptive text.				
6	The Student Team Achievement Division method helped improve my skills in writing descriptive text.				
7	I feel that the Student Team Achievement Division method has enhanced my creativity in presenting descriptive text.				
8	Your interest in learning descriptive text has increased after using Student Team Achievement Division.				
9	The Student Team Achievement Division method has helped improve social skills and teamwork abilities.				
10	Overall, I am satisfied with the use of the Student Team Achievement Division method in learning descriptive text.				

3.4 Techniques of Analyzing Data

After the research data is collected, the next step is to analyze them. Data analysis technique is the process of finding and compiling data obtained from research systematically. The researcher will analyze three types of data in this research namely: observation, test, and questionnaire. The data obtained from the results of the research that has been carried out is then analyzed and processed into information so that the characteristics of the data can be understood easily and are useful for answering any questions that arise about the issues under research.

3.4.1 Observation

The observation data in this research is in the form of teacher and student activities in the learning process during the implementation of STAD learning method in teaching descriptive text. The observation data in this research is analyzed descriptively and the researcher will make conclusions to get the results of the observation data.

3.4.2 Test

The test data in this research is obtained from tests performed twice, namely pre-test and post-test. The purpose is to compare the two test results, whether there is an improvement or not in students' writing skills before and after using the STAD learning method in teaching descriptive text. After

obtaining the students' test scores, the researcher will first find the students'

average score by using the formula adapted from Sudijono (2008) as follows:

$$Mx = \frac{\Sigma X}{N}$$

Mx = Mean

ΣX = Individual score

N = Number of students

Then, after obtaining the average value of the student test results, the

researcher will calculate the pre-test and post-test scores using the adaptation

formula from Sudijono (2008) as follows:

$$P = \frac{y1 - y}{y} X \ 100\%$$

P = Percentage of Students' Improvement

y = Pre- test Result

y1 = Post-test Result

3.4.3 Questionnaire

After analysing the test results and observing the activities during the research, the researcher uses a questionnaire to find out the students' responses to the STAD learning method that is used. In analysing students' responses, the researcher using the adaptation formula from Sudijono (2012) as follows:

$$P = \frac{F}{N} \text{ x } 100\%$$

P = The percentage

F = Total of agree and strongly agree answer

N = Total of idea score

Based on the percentage results of student responses, researcher uses the following evaluation interpreting criteria: Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1. After tabulating all the answers, the researcher calculated the percentage of response strength using the adaptation formula from Sudijono (2008) as follows:

$$P = \frac{Total\ of\ agree\ and\ strongly\ agree\ answer}{Total\ of\ ideal\ score} \text{ x } 100\%$$

After tabulating all the answers, the researcher calculated the percentage

of response strength by Riduwan (2005) using the previous formula as follows:

a. Percentage 0% - 25% = Very Low

b. Percentage 26% - 50% = Low

c. Percentage 51% - 75% = Strong

d. Percentage 76% - 100% = Very Strong

3.5 Population and Sample

3.5.1 Population

The research population is a place where research will be conducted to

obtain information related to the problem or research topic. Arikunto (2017)

stated that the population is the entire research subject. If the researcher wants

to examine all of his elements in the research area, it is a population research.

The population of this research is 10th grade students of SMA Pasundan

8 Academic Year 2023-2024 consisting of 6 classes (3 science classes and 3

social classes) with a total population 173 students. This location is located on

Jl. Cihampelas No.167, Cipaganti, Coblong District, Bandung City, West Java

40131.

3.5.2 Sample

The research sample is part of the population taken as a data source

which is considered to represent the characteristics possessed by the population.

According to Arikunto (2017) the sample is part of the number and characteristics owned by the population.

In this research, researcher does not take the entire population to be sampled. The sampling technique in this research uses purposive sampling technique. Sugiyono (2018) explained that purposive sampling is a sampling technique with certain considerations in accordance with the desired criteria to be able to determine the number of samples to be studied.

The reason for using the purposive sampling technique is due to time and cost limitations. Therefore, the researcher only needs 1 class as a research sample from 6 classes of 10th grade students. The sample to be taken is 10th IPA 3 grade students of SMA Pasundan 8 Bandung with total 26 students who are expected to assist the researcher in applying the STAD learning method and representing the desired population characteristics.