

CHAPTER III

RESEARCH METHOD

A. Research Design

This research also adopted a mixed methods approach, which was a combination of quantitative and qualitative data to give a holistic understanding of a complex phenomenon (Ramírez-Montoya & Lugo-Ocando, 2020; Dawadi et al., 2021). This approach allowed the combination of post-positivist and interpretivist paradigms, so data could be collected and analyzed in a flexible and adaptive way according to the needs of the research. In this study, the mixed methods approach was used to answer two main questions: how the application of collaborative learning affected the English proficiency of young EFL students, and what challenges and supporting factors in the implementation of collaborative learning influenced the success of improving the students' English proficiency?

To answer these questions, this research used both quantitative and qualitative methods as follows. First, the quantitative method was used to measure the effect of applying collaborative learning on students' English proficiency by collecting data through pre-tests and post-tests. Statistical analysis was used to compare the results before and after the implementation of the method (Hancock, Algozzine, & Lim, 2021; Taherdoost, 2022). Second, the qualitative method was used to explore challenges and supporting factors through in-depth interviews with students, teachers, and parents, as well as

direct observation during the learning process. This data aimed to describe students' experiences and the contextual factors that influenced the success of applying the collaborative learning method (Patrick & Middleton, 2023; Taherdoost, 2022).

The use of the mixed methods approach gave the flexibility and depth of analysis needed to understand the affect of collaborative learning in the context of young EFL students. This approach also addressed the limitations of a single method by providing a richer and more multidimensional view of the phenomenon being studied.

In the context of this research, the theory of collaborative learning was operationalized as a teaching method that involved active interaction among students to achieve shared learning goals. This method was applied through strategies such as group work, discussions, and collaborative tasks designed to improve students' English proficiency.

For the first research question, quantitative data from the pre-test and post-test were used to measure the improvement of students' English proficiency. The measured variables included speaking, reading, writing, and listening skills. This method allowed the evaluation of the impact of collaborative learning on specific aspects of students' language skills (Hancock, Algozzine, & Lim, 2021). For the second research question, qualitative data were analyzed to identify challenges (for example, lack of student engagement or time constraints) and supporting factors (for example, teacher support and student

cooperation). Data analysis was carried out through coding to find the main themes related to the success of implementing collaborative learning (Patrick & Middleton, 2023).

This research used a mixed methods approach, which combines quantitative and qualitative data, to give a complete understanding of a complex situation (Ramírez-Montoya & Lugo-Ocando, 2020; Dawadi et al., 2021). This approach allows the use of both post-positivist and interpretivist perspectives, so data can be collected and analyzed flexibly according to the research needs. In this study, the mixed methods approach was used to answer two main questions: how the use of collaborative learning affects the English skills of young EFL students, and what challenges and supporting factors influence the success of collaborative learning in improving students' English skills.

The quantitative method was used to measure the effect of collaborative learning on students' English skills through pre-tests and post-tests. Statistical analysis was used to compare the results before and after using the method (Hancock, Algozzine, & Lim, 2021; Taherdoost, 2022). The skills measured included speaking, reading, writing, and listening, which helped evaluate the impact of collaborative learning on specific parts of students' language abilities.

The qualitative method was used to explore challenges and supporting factors through interviews with students, teachers, and parents, as well as direct observation during the learning process. Data was analyzed by coding to find main themes about

the success of using collaborative learning (Patrick & Middleton, 2023). This method allowed the researcher to describe students' experiences and the context that affected the success of the collaborative learning method.

By combining these two methods, this research aims to give a clear understanding of the effect of collaborative learning on English learning, especially for young EFL students in the research area. This approach also overcomes the limits of using only one method by providing a richer and more complete view of the phenomenon being studied. With this combination of approaches, the research was expected to give a significant contribution to understanding the affect of collaborative learning on English learning, especially among young EFL students in the research area.

B. Population and Sample

1. Population

The population in this research included all fifth-grade students at SDN 60 Bengkulu Utara in the 2024/2025 academic year. Based on data obtained from the school, the fifth grade consisted of one class with a total of 24 students, including 9 female students and 15 male students.

2. Sample

The sample in this research was determined using the total sampling technique, in which all members of the population were used as the research sample. This technique was chosen because the population size was relatively small

and consisted of one homogeneous class, making it possible to involve all students fully in the data collection process. Therefore, all fifth-grade students at SDN 60 Bengkulu Utara in the 2024/2025 academic year, totaling 24 students (9 female and 15 male), became the subjects of the research to measure the affectt of collaborative learning on their English proficiency.

This research was conducted because young learners' English skills still need to be improved through effective and enjoyable learning methods. Initial observations at SDN 60 Bengkulu Utara showed that some students had difficulties in understanding English materials, especially in speaking and writing. Therefore, a learning method that can increase students' active participation and support interaction between students during learning is needed.

One suitable method is collaborative learning, which emphasizes cooperation, discussion, and collaborative tasks among students to achieve shared learning goals. This method is believed to improve students' motivation, confidence, and English communication skills. This research aims to explore the effect of implementing collaborative learning on improving the English skills of fifth-grade students at SDN 60 Bengkulu Utara.

In addition, this research also aims to identify the challenges and supporting factors in applying collaborative learning. By understanding these factors, teachers are

expected to adjust their teaching strategies to be more effective in improving students' English skills. This study is expected to provide practical contributions for developing interactive and enjoyable English learning methods for elementary school students.

C. Research Instrument

This research used various instruments to collect data in order to ensure the validity and reliability of the findings. Quantitative data were collected through an *English Proficiency Test* and a *closed-ended questionnaire*, which aimed to measure the students' English proficiency level objectively and to obtain numerical data on the variables studied. Meanwhile, qualitative data were collected through *observation*, *in-depth interviews*, *focus group discussions* (FGD), and a qualitative questionnaire in the form of *open-ended questions*. The qualitative approach aimed to gain a deeper understanding of the experiences, perceptions, and learning dynamics that occurred during the implementation of Collaborative Learning in the English classroom.

1. Instrumen Data Kuantitatif

a. English Proficiency Test

In this research, the English Proficiency Test was used as an instrument to measure the students' English proficiency. The test consisted of 30 multiple-choice questions developed based on four main indicators: vocabulary, reading, writing, and speaking. Each

indicator included 5 to 10 questions, which were designed to measure various aspects of English proficiency comprehensively. This instrument aimed to provide an objective picture of the students' language ability, especially in the context of the collaborative learning applied in this research.

The English Proficiency Test used in this research was adapted from the book *My Next Words Grade 5 – Student's Book for Elementary School* written by the ETLC Team. Although it did not go through a formal validation process, the test had been used in several previous studies and proved to be relevant for measuring English proficiency. The relevance of this instrument was also supported by the study of Tai & Zhao (2024), which stated that a language proficiency test was an affective tool to evaluate reading, writing, speaking, and listening skills. Therefore, the use of this instrument in this research was considered able to provide valid and reliable data.

In addition, the approach used in developing this instrument was in line with John Dewey's educational theory, which emphasized the importance of direct experience and social interaction in learning. This concept became the basis for measuring English proficiency, where students were tested not only on cognitive aspects but also on their practical language skills. Therefore, the *English Proficiency Test* used in this research was

expected to give a deeper understanding of the students' language skill development. *Complete details about this test instrument could be found in Appendix 1.*

b. Questionnaire

In this research, a *questionnaire* was used as the main instrument to collect data about students' perceptions of collaborative learning and its affectt on improving their English proficiency. The instrument consisted of 30 questions grouped into eight main indicators, with each indicator containing two to four questions. The questions in the questionnaire were arranged based on an instrument blueprint that had been designed earlier to ensure the measured aspects were accurate. *Details about the instrument blueprint could be found in Appendix 3, while the complete questionnaire could be seen in Appendix 4.*

Although this questionnaire did not go through a formal validation process, it was adapted from various academic references relevant to the field of English language education. As stated by Қойбақар Ұлбосын Хыдырчарықызы (2024), the questionnaire was designed to measure students' perceptions of the importance of English for their academic success and communication. In addition, recent studies (Yang, 2023; Eskiyurt & Özkan, 2024; Makransky & Petersen, 2023) also showed that questionnaires were affecttive tools for

collecting data from many respondents efficiently and for measuring students' perceptions of collaborative learning. Therefore, the use of this instrument in this research was considered to provide a comprehensive picture of students' perceptions.

Furthermore, the use of the questionnaire in this research was based on the consideration that this method allowed the collection of a large amount of data in a systematic and structured way. Through questions arranged according to predetermined indicators, the questionnaire could explore students' understanding of the affectiveness of collaborative learning in improving their English proficiency. Therefore, the results of this questionnaire not only provided insights into students' views but also could serve as a basis for developing more affective learning strategies in the future.

2. Instrumen Data Kualitatif

a. Observation

In this research, observations were carried out directly to assess the dynamics of interaction in collaborative learning and the affectiveness of this method in improving students' English proficiency. The observation sheet used covered various aspects related to student engagement and the teacher's role during the learning process. The main aspects observed included student participation, group interaction, and the support

provided by the teacher. Student participation was measured through their active involvement in group discussions, their confidence in expressing ideas, and their ability to listen and respond to others' opinions politely and affectively. In addition, group interaction was observed through how students helped friends who had difficulty understanding the material and how they gave constructive feedback. Meanwhile, the teacher's involvement was evaluated based on the clarity of the instructions given and the teacher's role in providing guidance and support to students during the learning activities.

The observation instrument in this research consisted of 10 main indicators, with each indicator represented by one question, making a total of 10 questions in the observation sheet. Each question was specifically designed to collect data relevant to the established indicators. The evaluation was carried out using a 1–4 scale, which allowed a more systematic analysis of the affectiveness of collaborative learning in improving students' English proficiency. The design of this instrument ensured that every aspect of collaborative learning could be measured clearly and objectively. *The observation instrument used in this research could be found in Appendix 5.*

Although this observation instrument did not go through a formal validation process, it was developed based on relevant literature and practical experience in the field of education. The instrument referred to Lev Vygotsky's theory, especially the concept of the *Zone of Proximal Development* (ZPD), which emphasized that social interaction played a crucial role in the learning process. According to Brau (2022), observation was an affective method to understand how social interaction in collaborative learning helped students develop their English proficiency. This approach was in line with Vygotsky's theory, which stated that learning happened more affectively when students received support from their social environment, both from peers and teachers. Therefore, the instrument used in this research focused on analyzing the interaction and support that took place in collaborative learning.

b. In-depth Interview

In this research, an in-depth interview was used as an instrument to collect more detailed information about the teaching strategies and challenges faced by teachers in teaching English to young learners. The interview instrument consisted of 10 questions developed based on four main indicators that had been determined. Each indicator had one to four questions designed to gather information in a specific and systematic way. The

questions were prepared by considering their relevance to the research objectives so that the data collected could provide a comprehensive understanding of collaborative learning practices and their influence on the development of students' English proficiency. *The interview grid could be seen in Appendix 6, while the interview instrument used in this research was presented in Appendix 7.*

Although this interview instrument did not go through a formal validation process, its validity was confirmed by an expert in the field of education, Khulel (2021). The in-depth interview in this research was designed to explore how teachers planned innovative lessons that matched the characteristics of young learners. In addition, the interview also identified the challenges teachers faced in applying affective teaching strategies, including how they adapted teaching methods to meet students' needs. The data collected from the interview gave a broader understanding of the dynamics of teaching English in elementary schools and the factors that influenced the affectiveness of learning.

The theoretical concept behind using interviews in this research was based on the cognitive development theories of Lev Vygotsky and Jean Piaget. Vygotsky developed the concept of the Zone of Proximal Development (ZPD), which emphasized that learning happened best when children received proper guidance

and social interaction. This approach was relevant in the interview analysis because it allowed the researcher to understand how much the teacher's guidance contributed to the development of students' language skills. On the other hand, Piaget used interviews as a method to study how children built their understanding through interaction with their environment. Therefore, the interviews in this research not only served as a tool for collecting data but also as an approach to understanding how cognitive and social processes played a role in learning English among young learners.

c. *Instrument focus group discussion (FGD)*

In this research, the focus group discussion (FGD) was used as an instrument to explore a deeper understanding of students' experiences in collaborative learning and how social interaction affected their language skills. The FGD instrument consisted of 10 questions developed based on five main indicators, with each indicator including two questions designed to collect data systematically. The questions were prepared to ensure that the information gathered was relevant to the research objectives and could provide a comprehensive insight into the affectiveness of collaborative learning strategies in improving students' English proficiency. *The FGD instrument framework could be seen in Appendix 8,*

while the instrument used in this research was provided in Appendix 9.

Although this FGD instrument did not go through a formal validation process, its validity was confirmed by experts in the field of education, such as Hamro Qizi and Javlanbek O'g'li (2023). They stated that FGD was an affective method to understand how students' experiences in collaborative learning affected their language skills. Through group discussions, students could express their views, experiences, and challenges they faced during the learning process. This allowed the researcher to identify patterns of social interaction that contributed to the development of students' English proficiency. Therefore, the FGD in this research served as an important instrument to explore students' perceptions and experiences in greater depth.

In addition, previous research by Ramzan, Javaid, and Ali (2023) showed that FGD could be used to explore students' and teachers' perceptions of the affectiveness of collaborative learning in improving English proficiency. This approach was in line with the theory of social constructivism, which emphasized that learning happened through social interaction and sharing knowledge in a supportive environment. By using FGD, this research was able to reveal how students and teachers viewed the benefits and challenges of applying collaborative

learning, which could give implications for developing more affective learning strategies in the context of English language teaching.

D. Data Collecting Technique

The data collection in this research aimed to answer the research questions in depth by using various instruments, namely the English Proficiency Test, questionnaire, observation, interview, Focus Group Discussion (FGD), and documentation. Each instrument was chosen systematically to obtain valid and reliable data about the affectiveness of collaborative learning in improving students' English proficiency. A triangulation approach was used to get accurate results.

1. The first stage of data collection was the pre-test using the English Proficiency Test to measure students' initial abilities in vocabulary, reading, writing, and speaking. This test served as the basis for comparison with the post-test results after the implementation of collaborative learning. The pre-test was analyzed to identify the students' initial proficiency level and the learning gaps that could be improved through collaborative learning strategies.
2. During the implementation of collaborative learning, observations were carried out to understand the learning dynamics directly. Observation sheets were prepared to assess students' participation, interaction, teamwork in groups, and the teacher's role. The purpose of these observations was to obtain empirical data about the affectiveness of this method

in increasing students' engagement in learning English. The observation data were analyzed to identify patterns of interaction.

3. After several sessions of collaborative learning, the students filled out a questionnaire consisting of 30 closed statements using a Likert scale. This instrument measured the students' perceptions about their interest in learning, level of activeness, social interaction, understanding of the material, and satisfaction with collaborative learning. The questionnaire data were analyzed statistically to identify trends in students' perceptions of the benefits and challenges in implementing collaborative learning.
4. To complete the quantitative data, in-depth interviews were conducted with students and teachers in a semi-structured format to explore their experiences, challenges, and strategies in collaborative learning. The purpose of these interviews was to understand the affect of the collaborative approach on students' thinking processes and the development of their language skills. The data were analyzed using thematic analysis to identify the main learning patterns.
5. In addition to individual interviews, this study involved Focus Group Discussions (FGD) to get a wider perspective from the students. The FGD were conducted in small groups and focused on learning experiences, social interaction during collaborative learning, and solutions for overcoming learning challenges. The FGD data were analyzed using descriptive

qualitative methods to understand the students' collective thinking patterns and experiences.

6. After the collaborative learning process was completed, a post-test was given using the same instrument as the pre-test to measure the improvement in students' English proficiency. The post-test results were compared with the pre-test results to analyze the affectiveness of collaborative learning. The data were analyzed using descriptive and inferential statistical methods to find out the significance of the improvement in students' skills after the implementation of the collaborative learning method.
7. As a complement, this research used documentation to record every stage of the research process. The documentation included photos, videos, and written notes related to the pre-test, post-test, collaborative learning, questionnaire completion, interviews, and FGD. This documentation served as visual and written evidence to strengthen the research results and ensure the validity of the data obtained, supporting the understanding of the affectiveness of collaborative learning.

E. Data Analysis

1. Analisis Data Kuantitatif

The first step in the quantitative data analysis was to conduct a Paired Sample t-Test, which aimed to measure whether there was a significant difference between the pre-test and post-test results. This test was used to analyze

changes in scores within the same group before and after the intervention. According to Pallant (2020), the Paired Sample t-Test was a statistical method used to compare the average scores of two related groups, such as in this study, which tested the difference in students' scores before and after applying the learning strategy. The calculation of this test was done using the following formula:

$$t = \frac{\bar{D}}{s_D / \sqrt{N}}$$

Here are the explanations for the formula components:

T	:	He t-value, used to measure the difference in means between two related groups (pre-test and post-test).
	:	The mean difference, representing the average difference between pre-test and post-test scores. Here, D is the individual difference between each pair of pre-test and post-test scores.
s_D	:	The standard deviation of the differences, measuring the spread or variability of the score differences.
N	:	The sample in the study.
	:	The square root of the sample size, used to adjust data variation based on the number of participants.

The second step in quantitative data analysis is conducting a descriptive statistical test to analyze the questionnaire results. According to Sugiyono (2017),

descriptive statistics aim to describe or analyze a set of data so that it is easier to understand. This analysis includes central tendency measures, such as mean, median, and mode, which help illustrate the data distribution patterns. The questionnaire in this study uses a Likert scale with the following rating criteria:

1 = Strongly Disagree

2 = Disagree

3 = Agree

4 = Strongly Agree

Next, the total score is categorized into different levels to simplify data interpretation. The categories are as follows:

Table 3.1
Interpretation Categories

No.	Percentage (%)	Category
1	76% – 100%	Very high
2	51% – 75%	High
3	26% – 50%	Low
4	0% – 25%	Very low

This categorization aims to classify participants' response levels based on the questionnaire analysis results. This approach allows for a more systematic and comprehensive data interpretation, making it easier to identify response trends. Below are the descriptive statistical formulas used in this study, as explained by Sugiyono (2017):

Mean (Average): $\bar{X} = \frac{\sum X}{N}$

Median:

a. If N is odd:

$$Me = N \frac{N+1}{2}$$

b. If N is even:

$$Me = \frac{X_{\frac{N}{2}} + X_{\frac{N}{2}+1}}{2}$$

Modus: Mo = the most frequently occurring value

Explanation:

$\bar{X}$: Average (Mean)

N : Number of data points (respondents)

X : Data values (e.g., questionnaire scores)

Me : Median (middle value)

Mo : Mode (most frequently occurring value)

1. Qualitative Data Analysis

The qualitative data in this study were analyzed using the three stages proposed by Miles and Huberman (1994). These stages include:

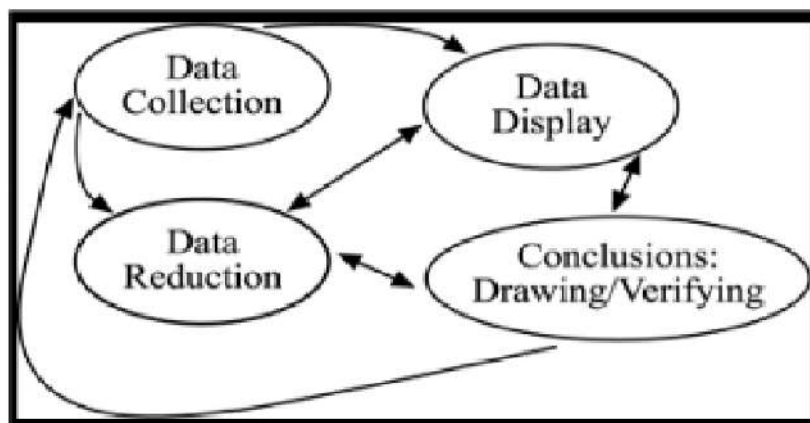


Chart 3.1
Data Analysis

a. Data Reduction

The process of selecting, categorizing, and focusing on relevant data from interviews, observations, and Focus Group Discussions (FGD). This stage includes recording statements from students and teachers regarding the challenges in collaborative learning.

b. Data Presentation

Organizing data in the form of narratives, matrices, tables, or diagrams to facilitate the analysis and interpretation of research findings.

c. Conclusion Drawing and Verification

The process of drawing conclusions from the analysis by comparing findings from various data sources using triangulation techniques to ensure the validity and reliability of the research results.