

# THE INFLUENCE OF COLLABORATIVE LEARNING ON THE SCOPE OF LEARNING PSYCHOLOGY

Izza La Zilza<sup>1</sup>, Alifa Raihan<sup>2\*</sup>, Siti Mayang Sari<sup>3</sup>, Jonni Sitorus<sup>4</sup>

<sup>1234</sup>Universitas Bina Bangsa Getsempena, Indonesia

\*izzalazilza00@gmail.com

## ABSTRACT

This study aims to increase the influence of the collaborative learner model on the scope of student learning psychology, because in the school has not implemented a collaboration learning model. The experimental form of this research is quasi experimental. Data collection techniques use observation, interviews, and documentation. The design of this study uses post-test only control group design, on control and experimental classes, the subject is randomly selected which previously carried out homogeneity tests. The results showed that a significantly grafting collaborative learner model with probability of ( $p = 0,000$ ) on thinking about student crititis with the average cry of critical thinking experimental classes amounted to  $72.56 (\pm 10.16)$  while the critical thinking skills of the control class  $60.52 (\pm 11.96)$ . Based on the analysis of criteria, the experimental class has high critical thinking criteria while control control has the ability of low critical thinking criteria.

*Keywords: Collaborative learning, Learning Psychology.*

## 1. INTRODUCTION

Education is an important aspect in every country. It is the most important thing that should be possessed by everyone. Education is also done consciously and planned to develop one's potential. Education should also be done by socializing between teachers and students, and among students with each other. The success of students in achieving maximum learning outcomes can be influenced by several factors, one of which is related to the implementation of learning in the classroom. Learning outcomes can be interpreted as the skills that students possess after going through the learning process, which include three aspects: the cognitive aspect that relates to the intellectual ability of students, the affective aspect that relates to students' attitudes, and the psychomotor aspect that relates to students' skills (Kadek et al., 2020). The implementation of learning, especially learning together, should involve teachers and students together to achieve the desired learning objectives. One thing that supports the success of education is collaboration. Learning objectives can be achieved if collaborative learning is implemented effectively.

Effective collaborative learning in elementary schools is learning that is designed and implemented with a student-centered activity orientation that helps students to use their skills creatively. Effective learning is related to the implementation of learning where students actively interact with teachers, interact with other students, and interact with the environment in ways that can support the development of students' skills and learning outcomes

Collaborative learning has evolved over the past three decades as an important concept in education. Collaborative learning eliminates passivity and individualism in the classroom. It assumes that students actively interact with each other and with

teachers during the learning process. Collaborative learning is a learning model where students work together in groups to solve problems and share information (Nisa & Dahlan, 2018). In this model, teachers create learning situations that emphasize student interaction, active participation, and interpersonal relationships. Cooperative learning has a significant impact on students' learning psychology. This model helps improve students' learning motivation, strengthens their social and emotional skills, and enhances their conceptual understanding and critical thinking.

The implementation of collaborative learning for fourth-grade elementary school students can have a positive impact on students' psychological well-being, unfortunately, this type of learning is rarely used by teachers even though there are many benefits to be gained by students through collaborative learning, such as active participation in discussions and group activities. This can lead to low academic achievement. Several factors can contribute to low academic achievement in students. such as the lack of student participation in learning, because learning is still being done The implementation of collaborative learning in fourth-grade elementary school students can have a positive impact on the scope of students' psychology. Unfortunately, collaborative learning is rarely used by teachers, even though there are many benefits that students can gain from it. In collaborative learning, students are expected to actively participate in discussions and groups. The lack of student participation in learning, due to lectures and boredom in watching the next class, can cause low student learning outcomes (Kusmariyatni, 2019). By applying collaborative learning, students can develop self-confidence because they will feel valued and that their opinions are considered. Collaborative learning can also help students develop social skills, such as the ability to communicate well, work together in groups, and exchange ideas with their peers. This is very important for developing students' social skills in the future. When students feel that they are part of a group and have responsibilities within the group, they feel motivated to learn. Collaborative learning can also help students develop critical thinking by sharing ideas and contributing to groups (Margunayasa & Suarjana, 2019). This can help students improve their critical thinking skills to make more accurate decisions, and collaborative learning can help students feel closer to their peers and part of their team. This can help students develop a sense of ownership and tolerance for differences to create a more harmonious and friendly learning environment.

In general, the use of collaborative learning can have a positive influence on the scope of learning psychology for fourth

grade elementary school students. This can help students develop social skills, critical thinking, and learning skills that will be needed in the future. Therefore, teachers and educators should consider integrating cooperative learning into the teaching and learning process in the classroom to improve the quality of education and the future of students. Collaborative learning is a teaching method that places cooperation as the key to a group's success in achieving shared goals. Working together, building together, learning together, advancing together, and succeeding together are key ideas in collaborative learning. Learning psychology is a practical science that seeks to explain learning in accordance with the principles scientifically established and facts about human behaviour (Kadek et al., 2020).

## 2. METHODS

This study is a type of quasi-experimental research, which involves applying the collaborative learning model to the experimental group and a conventional learning model, in the form of instructional videos and question-and-answer sessions, to the control group. Quasi-experiment is defined as an experiment that has a treatment, effect size, experimental units, but does not use randomization to make comparisons to conclude changes caused by treatment (Abraham & Supriyati, 2022). The sample in this study consists of two classes, namely class IV A as the experimental group and class IV B as the control group, which were previously subjected to homogeneity testing on the average scores of the final semester examination of the 2021/2022 academic year in the subject of Biology. The homogeneity test is used to determine the homogeneity of the class scores.

The research subjects were grade IV (IV A and IV B) students of SD Negeri 45 Banda Aceh for the 2021/2022 academic year on the material Classification of Plant and Animal Creatures. The research design used a post-test only control group design. In groups control and experimental groups, subjects were selected randomly. This design can be seen in Table 1.

**Table 1. Research Design**

| Class      | Treatment | Post-test |
|------------|-----------|-----------|
| Experiment | X1        | 01        |
| control    | X2        | 02        |

Where:

O1 : Experimental post-test results

O2 : Control class post-test results

X1 : learning with a collaborative model

X2 : learning with conventional models

### 2.1 Data Collection Methods

In this study, observations were made by direct observation by observers to observe learning activities in both the control class and the experimental class. Observation aims to observe students' affective attitudes during the learning process.

Interviews were conducted with the fourth grade homeroom teacher and the students of the experimental class (IV A) at SDN

45 Banda Aceh. The interviews were conducted to find out about the teaching and learning activities, methods, and learning models used, conditions of students in the learning process, student and teacher responses to the collaborative learning model applied in class.

Documentation data in this study included the names of research subjects, namely the names of class IV students at SDN 45 Banda Aceh for the 2021/2022 school year, science learning schedules, daily test scores on previous material, photos and videos of learning activities during research.

In addition, the sample determination was conducted on all fourth-grade students at SDN 45 Banda Aceh, which consisted of four classes, namely IV A, IV B, IV C, IV D. The sample determination was based on the homogeneity test results using the data of the final semester exam scores of the 2021/2022 academic year, followed by the random sampling method. Based on the homogeneity test results, a probability of  $> 0.05$  was obtained, which was  $0.102$  ( $p = 0.102 > 0.05$ ), meaning that the four classes had homogeneous data of the final semester exam scores of the 2021/2022 academic year. The next step was to conduct random sampling using the lottery technique. Based on the lottery results, IV A was chosen as the experimental group, and IV B was chosen as the control group

### 2.2 Data Analysis

The analysis of the data used in the research for the data obtained during the research is as follows: To find out differences in students' critical thinking skills using collaborative learning models and conventional models were analyzed using an independent sample t-test using the SPSS for Windows version 17.0 program accompanied by with analysis based on criteria in classes that use collaborative learning models and conventional models. There are criteria for critical thinking skills on Table 2.

**Table 2. Criteria for Critical Thinking Ability**

| Critical thinking value | Criteria  |
|-------------------------|-----------|
| 81,28-100               | Very high |
| 62,52-81,27             | High      |
| 43,76-62,51             | Low       |
| 25- 43,75               | Very low  |

## 3. RESULTS & DISCUSSION

### 3.1 Collaborative implementation results

Collaborative activities carried out in this study consisted of three stages, namely learning planning carried out together with other teachers, the implementation of learning was observed by observers to observe the activities carried out by students during learning, and then reflecting on the learning that had been carried out.

Based on the results of the first meeting at the planning stage, it was discussed about the learning steps in the lesson plan, the media used, time management during learning. This is intended to make discussions more efficient and effective. During the implementation phase of the learning process, the teacher conducted the teaching in accordance with what was agreed upon with the core team during the planning phase. After the

implementation of the teaching, the core team conducted a reflection on the learning process. Based on observations, it was found that students began to concentrate when the teacher asked questions, but their concentration decreased during group formation and the distribution of worksheets. The solution obtained based on the discussion during the implementation phase was to overcome the lack of concentration of students by giving appreciation and motivation to the students. During the reflection phase of the learning process, feedback was also obtained from the observers that in the next learning session, it would be better to focus the students' attention before the teaching and provide more thorough and mature guidance to each group.

### 3.2 Critical Thinking Ability Analysis

Critical thinking skills in this study were measured using student worksheets. The indicators of critical thinking skills that are assessed are asking questions, analyzing problems, solving problems, and concluding. The average value of each indicator can be seen in Table 3.

Table 3. The average critical thinking ability of the control class and the experimental class for each indicator

Based on the average results for each indicator of critical thinking in Table 3, it was found that all critical thinking indicators, namely making questions, analyzing problems, solving problems, concluded that the experimental class had a higher score than the control class. Furthermore, the Independent sample t-test was carried out to determine differences in students' critical thinking abilities between the control class and the experimental class. The results of the Independent sample t-test can be seen in Table 4.

Based on the results of the Independent sample t-test, a significance value of less than 0.05 was obtained, namely 0.00. These results mean that H0 is rejected and H1 is accepted, which means that there is a significant difference between the critical thinking skills of students in the control class and the experimental class, with an average critical thinking ability of the experimental class of 72.56 ( $\pm 10.16$ ) while the control class of 60.52 ( $\pm 11.96$ ). Table 5 below shows the criteria for critical thinking skills based on the average value.

**Table 3. Criteria for the critical thinking ability of the control class and the experimental class based on the average critical thinking ability**

| Class      | The number of students | Mean $\pm$ SD     | Criteria |
|------------|------------------------|-------------------|----------|
| Control    | 3<br>8                 | 60.52 $\pm$ 11.96 | Low      |
| Experiment | 3<br>6                 | 72.56 $\pm$ 10.16 | High     |

Based on the analysis of criteria, the experimental class has a high level of critical thinking ability, while the control class has a low level of critical thinking ability.

### 3.3 Observation Results

Observations made in this study were observations of students' affective learning outcomes, observations of student activities when learning took place in the experimental class, observations of teaching implementation. Observation of

student activities during learning is carried out in the experimental class using observation sheets of the implementation of collaborative learning. Based on the results of observations, students in the experimental class were better able to interact well with their friends during learning. This is because in the experimental class students share the knowledge they have to solve problems together. Observation of the implementation of teaching was carried out by the homeroom teacher IV of SDN 45 Banda Aceh. Based on the results of observing the implementation of teaching, it shows that the teacher has carried out learning steps that are in accordance with the lesson plan that has been prepared.

Based on the analysis of criteria, the experimental class has a high level of critical thinking ability, while the control class has a low level of critical thinking ability.

### 3.4 Documentation results

Documentation in this study was in the form of a list of grade IV science semester final test scores at SDN 45 Banda Aceh, photos and videos of teaching and learning activities in the control class and the experimental class.

### 3.5 Interview result

Interviews in this study were conducted with class IV teachers at SDN 45 Banda Aceh and with experimental class students. Based on the results of interviews before conducting research with fourth grade teachers at SDN 45 Banda Aceh explained that the method often used in learning was group discussion on certain subjects. In group discussion learning students have not been fully active and responsible in doing the assignments given. Students are still lazy to read and lack motivation in learning. Based on the results of interviews with students in the experimental class, it was stated that the collaborative learning model applied in class made it easier for them to do the assignments given by the teacher and they became more understanding in understanding the material provided. Based on the results of interviews with fourth grade teachers at SDN 45 Banda Aceh after research stated that collaborative learning increases overall student participation and responsibility in group discussions. But there are some students who are still passive and confused in the discussion. According to the homeroom teacher, this is because passive students are not used to actively participating in group discussions and often entrust group assignments to more dominant students.

### 3.6 Discussion

This study aims to determine the effect of collaborative learning models on students' critical thinking skills. The implementation of this research was carried out in two meetings in the control class and the experimental class with a time allocation of  $2 \times 40$  minutes for each meeting.

The collaborative learning model is carried out in the experimental class (IV A). Collaborative learning model is a learning model in which students study together in groups but each has the task and responsibility of each to achieve the same learning goals. The collaborative learning model applied in this experimental class consists of three stages, namely learning planning which is carried out together with other teachers, the implementation of learning is observed by observers to observe the activities carried out by students during learning, and then

reflection is carried out on the learning that has been implemented. The implementation of collaborative learning has several stages, namely orientation, making groups, giving tasks, facilitated collaboration, evaluation. Implementation of learning in the control class using conventional learning models, namely learning videos and lectures. Therefore, cooperative learning strategies are expected to improve the quality of learning (Ananda, 2019).

Critical thinking skills measured in this study include the ability to ask questions, analyze problems, solve problems, and draw conclusions. Based on the results of the value data for each indicator of critical thinking ability in Table 3, the results obtained for all indicators of critical thinking ability in this study, it is known that the experimental class has a higher score than the control class.

The average result of the critical thinking ability of the control class was 60.52 which was classified as having low critical thinking ability criteria and the experimental class' mean critical thinking ability was 72.56 which was classified as having high critical thinking ability criteria. These results indicate that the experimental class has an average critical thinking ability that is greater than the control class. An adequate mindset when solving problems is a mindset that includes critical, systematic, logical and creative thinking (Mursidik et al, 2015). This shows that applied collaborative learning can improve students' critical thinking skills. This is because collaborative learning involves several students to discuss together in solving problems and assignments given by the teacher where this learning can stimulate student learning abilities. Collaborative learning can improve critical thinking skills through discussion, classifying thoughts, evaluating other people's thoughts, solving problems, and creating new thoughts by working with others.

Based on the results of the independent sample t-test statistical test on students' critical thinking skills, a significance value of 0.000 was obtained. These results mean that there is a significant difference between the critical thinking skills of students in the control class and the experimental class. This is reinforced by the results of the analysis of the criteria for critical thinking skills in the experimental class which show that the control class has the criteria for low critical thinking skills and the experimental class has the criteria for high critical thinking skills.

Collaborative learning is learning where students learn from each other and work together in small groups to increase the achievement of learning outcomes together in the learning process. In collaborative learning there is an exchange of thoughts between members in a group where this not only increases students' interest in learning but also improves critical thinking skills. Sharing knowledge in collaborative learning provides opportunities for students to be involved in discussions, responsible for their own learning success so as to stimulate themselves to become critical thinkers.

Collaborative learning can improve students' critical thinking skills because in this learning students' thinking abilities develop optimally in ZPD (Zone Proximal Development) with the help of the teacher's role as a learning partner and facilitator of the learning process. Zone Proximal Development (ZPD) is the distance between the actual level of development, namely the ability to solve problems independently and the level of potential

development, namely the ability to solve problems under adult guidance or through collaboration with more capable colleagues. Based on this, collaborative learning is able to improve students' critical thinking skills.

Based on the research that has been done, the suggestions that can be put forward are that collaborative learning should be carried out on an ongoing basis so that students become accustomed to it and group discussions run effectively. It is better if before collaborative learning, better conditioning is done to the group leader in leading the discussion so that students within the group are more coordinated. It is better if the teacher implements a collaborative learning model on an ongoing basis at least once in one semester.

#### 4. CONCLUSION

In conclusion, this study aims to increase the influence of the collaborative learner model on the scope of student learning psychology, because in the school has not implemented a collaboration learning model. The experimental form of this research is quasi (pseudo eksperimen). Data collection techniques use observation, interviews, and documentation. The design of this study uses post-test only control group design, on control and experimental classes, the subject is randomly selected which previously carried out homogeneity tests. The results showed that a significantly grafting collaborative learner model with probability of ( $p = 0,000$ ) on thinking about student crititis with the average cry of critical thinking experimental classes amounted to 72.56 ( $\pm 10.16$ ) while the critical thinking skills of the control class 60.52 ( $\pm 11.96$ ). Based on the analysis of criteria, the experimental class has high critical thinking criteria while control control has the ability of low critical thinking criteria.

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