Application of the Project Based Learning Model Assisted by Media Pictures to Improve the Collaboration Ability of Class III Elementary School Students

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1. Abstract

This study aims to improve students collaboration skills through the application of a Project Based Learning assisted by Media Pictures. The research was conducted in the form of collaborative classroom action research which involved a class in a primary school in Yogyakarta. This is motivated by the lack of students collaboration skills in group learning activities. This research was conducted in two cycles, with each cycle consisting of planning, implementing, observing and reflecting. Data collection was carried out by conducting interviews, data collection and direct observation during the learning process. The results showed that in the first cycle, an average percentage score of student collaboration skills was 54% and there are 5 students who have less category. Cycle II with an average percentage of 74% and no students who have less category.This study provides evidence that the application of Image Assisted Project Based Learning can improve student collaborative abilities. The results of this study can be used as a reference for teachers and schools in designing learning strategies that encourage collaboration and student involvement in the teaching and learning process.

Keywords***:*** *classroom action research, project based learning, collaborative skills, image media, elementary school.*

2.   Introduction

In today's world of education, collaboration skills are important for student development which involves working in groups, listening to each other and sharing ideas with colleagues. In 21st century education, students are required to have 4C skills, namely Critical Thinking, Creative Thinking, Collaboration, and Communication. One of the abilities students must have includes 4c which is the main topic in this study, namely Collaboration (collaboration/cooperating). Collaboration is a process of cooperation between two or more individuals or groups playing different but complementary roles to achieve common goals. According to Tuti and Mawardi (2019) collaboration skills are group learning processes in which each member contributes information, experiences, ideas, attitudes, opinions, the ability and skills they have to jointly increase mutual understanding of all members. The application of collaboration to students can be done by implementing learning that can make students learn to share tasks fairly, motivate members to be responsible for their duties, and use social skills properly (Puspitasari, 2018). Collaborative ability has five indicators that reflect collaboration skills including, actively contributing in groups, working productively, showing strong flexibility and compromise in groups, responsibility and mutual respect for other group members (Greenstein, 2012). The application of collaboration to students can be done by implementing learning that can make students learn to share tasks fairly, motivate members to be responsible for their duties, and use social skills properly (Puspitasari, 2018). Collaborative ability has five indicators that reflect collaboration skills including, actively contributing in groups, working productively, showing strong flexibility and compromise in groups, responsibility and mutual respect for other group members (Greenstein, 2012). The application of collaboration to students can be

done by implementing learning that can make students learn to divide tasks fairly, motivate members to be responsible for their duties, and use social skills properly (Puspitasari, 2018). Collaborative ability has five indicators that reflect collaboration skills including, actively contributing in groups, working productively, showing strong flexibility and compromise in groups, responsibility and mutual respect for other group members (Greenstein, 2012).

The results of initial observations and interviews conducted in class III in a primary school in found several weaknesses in teaching and learning activities, especially in group discussions. These weaknesses include, when learning is done in groups almost all students use group work time to tell stories with friends, play games, and there is no teamwork. Group work is only done by one or two students. This shows that students' collaboration skills are still low. The results of interviews with the class III teacher said that he was more effective in carrying out learning and assessment individually than in groups, so group learning was rarely carried out. In addition, he said he had never used a project-based learning model because it would take a lot of time.

One learning model that can be used to train students' collaboration skills is Project Based Learning. Project Based Learning is a learning model that directly involves students in producing a project. The project-based learning model is an imaginative learning model, because learning is more focused on students (student centered) and the teacher is only a stimulus and accommodation provider in learning, and students are given the opportunity to work independently in their groups (Trianto, 2014). According to Meilinawati (2018), the benefits of collaboration include: (1) being able to provide quality businesses or services by developing expertise. (2) maximizing effectiveness and productivity in the utilization of

resources so that they can be used efficiently. (3) increase loyalty, professionalism and satisfaction at work. (4) increase cohesiveness between actors involved in it. (5) can provide clarity of individual roles in interactions between members involved in it.

The steps for learning Project Based Learning according to Syahmadi & Kusriandi (2016) are: (1) determining basic questions, (2) compiling project plans, (3) compiling schedules, (4) monitoring/guiding students and project progress, (5) assessment of project results, (6) evaluation of experience.

One of the advantages of Project Based Learning is that it can improve collaboration and student learning outcomes, this is in accordance with the results of research conducted by Pratiwi Ardianti, and Kanzunnudin (2018) entitled "Increasing Collaboration Capability through the Project Based Learning Model assisted by Edutainment in Social Studies Learning" . In his research it was stated that the Project Based Learning model can build collaboration, actively involve students and make learning not boring. Study. Project Based Learning can also increase student creativity and collaboration, this is in accordance with the results of research that has been conducted by Kusairi (2019) which states that the advantages of the Project Based Learning model include increasing student creativity, improving students' thinking skills,

However, even though Project Based Learning has been recognized as an effective learning model, there are still major challenges in ensuring students are fully engaged in effective collaboration and communication processes. Sometimes students can be passive without actively contributing to the group. Therefore, the use of image media as a support in the Project Based Learning model can be a potential solution. Image media can provide a visual or physical stimulus that helps students collaborate, communicate and solve

problems more concretely.

Based on the description above, a class action research was carried out with the aim of finding out how the application of the Image Media Assisted Project Based Learning model was carried out as an effort to improve the collaboration skills of class III elementary school students.

3. Methods

This type of research is Classroom Action Research (CAR). Classroom action research uses the PTK model from Suharsaimi Arikunto. Classroom action research is a study that is carried out repeatedly by a teacher or a group of teachers in the context of their own class, with the aim of improving and enhancing the quality of learning (Arikunto, 2013). The work procedure in this study is a cycle of activities that will be carried out for two cycles, each cycle of two meetings. According to Arikunto (2013: 132), there are four stages used in each cycle including planning, action, observation, and reflection.

The subjects in this study were class III students at SDN Terbansari 1, with a total of 27 students consisting of 16 male students and 11 female students. This research was carried out in the second semester of the 2022/2023 school year. The research phase up to the reporting of research results was carried out for approximately 3 months, namely April 2023 to June 2023. The model for the cycle stages in classroom action research is shown in Figure 1.
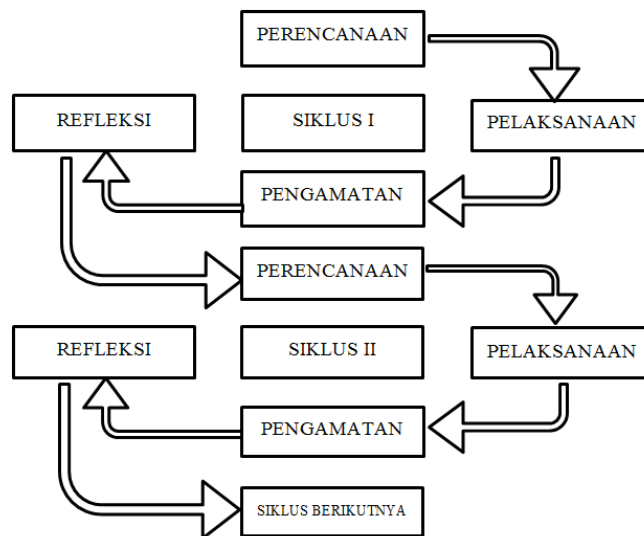
Figure 1. Stages of classroom action research

Data collection techniques in this study were observation, interviews and documentation. The data taken by this observation method are in the form of student learning activities in the learning process and the implementation of action activities carried out by the teacher in learning using the Project Based Learning (PJBL) model assisted by Image Media.

There are two data analyzes used in this study, namely, quantitative and qualitative data analysis.The indicator of success in this study was an increase in the average percentage of students' collaboration skills during learning in each cycle. The average percentage of students' collaboration abilities must be achieved at 60% with no students getting the less category in collaboration abilities in each cycle. The increase in students'

collaboration skills was marked by an increase in the average score of collaboration skills in cycle I and cycle II.

4.   Result and Discussion

Classroom action research that was carried out in class III SD Negeri Terbansari 1 was carried out in 2 cycles. The collaboration ability observed consisted of several indicators, namely actively contributing with group mates, working productively, being responsible, showing flexibility, and showing respect (Greenstein, 2012: 28). Collaborative ability assessment is carried out by direct observation during the learning process. The following is a description of the results obtained during the implementation of the research.

4.1 Cycle I

Cycle I consisted of 2 meetings which were held on May 19 and 23 may 2023. Collaborative ability scores were obtained from observation sheets carried out by the teacher during learning. The number of students observed in cycle I was 27 students. Based on the data analysis that has been done, the average percentage score for class collaboration skills is 54% with the following details:

Table 1. Results of the analysis of the collaboration abilities of third grade elementary school students in cycle I

Score Percentage	Category	The number of students
80% - 100%	Very good	0
60% - 80%	Good	3
40% - 60%	Enough	19
20% - 40%	Not enough	5
0% - 20%	Very less	0

Based on the table, it was found that the results of the analysis of students' collaboration abilities which had been carried out in cycle I, found students in the less category as many as 5 students. Meanwhile, 19 students were in the sufficient category regarding the results of their collaboration abilities. Then as many as 3 students in the good category.

There are several students who have a less category in collaboration skills because they are still individual. In groups there are active students and passive students, active students tend to dominate the group. In addition, when carrying out project planning discussions in groups, it was seen that only a few students were active while the others were busy talking with other friends.

The learning process using the Project Based Learning model in cycle 1 goes according to the plans that have been made. Students can understand the explanation given by the teacher and can understand the LKPD well. With this project-based learning, it can improve the ability of good collaboration and teamwork, this can strengthen previous research conducted by Kurniawan and Haryanto (2019) regarding the characteristics of Project Based Learning, namely: (1) emphasizing meaningful and contextual learning, (2) encouraging students to think critically and creatively, (3) facilitating collaboration and teamwork, (4) emphasizing the development of higher-order thinking skills, (5) increasing the development of effective self-skills.

In the first cycle, the collaboration ability of students was still below the success indicator, namely 54% and there were 5 students who were in the less category, so this research was continued in cycle II. Before entering cycle II, the researcher reflected on the learning in cycle I which had been carried out with colleagues. This reflection aims to find

out the weaknesses and strengths in learning cycle I, so that learning cycle II can provide the best results.

4.2 Cycle II

Cycle II consisted of 2 meetings held on May 26 and May 30, 2023. Collaborative ability scores were obtained from observation sheets carried out by teachers and colleagues during learning. The number of students who were observed in cycle II were 27 students. Based on the results of the data analysis that has been carried out, the average percentage score for class collaboration skills is 74%, with the following details:

Table 2. Results of Collaboration Ability Analysis of Class III Elementary School Students Cycle II

Score Percentage	Category	The number of students
80% - 100%	Very good	5
60% - 80%	Good	17
40% - 60%	Enough	5
20% - 40%	Not enough	0
0% - 20%	Very less	0

Based on the table it is known that in the very good category there are 5 students, 17 students in the good category, and 5 students in the moderate category in collaboration abilities. In cycle II there were no students who had a poor category in collaboration skills. This is because students are able to work in groups productively and well. Students are able to actively contribute in making projects and presenting the work that has been carried

out. This is in accordance with the results of research conducted by Robbins & Hoggan (2019) which states that collaborative learning will involve students actively in the learning process.

The increase in collaboration skills in cycle II was also influenced by the Project Based Learning stage which involved the collaboration of each group member starting from the project preparation stage to the presentation. Through the activities of the Project Based Learning learning model students are able to respect each other's different opinions from each group member to find solutions to project implementation. Students collaboratively carry out projects very well.

In cycle II, the average score for the collaboration ability score was above the success indicator, namely 74% and there were no students who had a less category. So that this research has been going well, and there has been an increase in students' collaboration skills in cycle I and cycle II. Thus this research has fulfilled the indicators of success and achieved the research objectives that have been set. So, the researcher decided to stop the research because the actions taken had reached the research performance indicators.

In addition to an increase in students' collaboration abilities, there was also an increase in students' cognitive learning outcomes which were carried out based on filling out or answering written test questions given by the teacher. Following are the results of the data analysis of students' cognitive learning outcomes in table 3.

Table 3. Cognitive learning outcomes of third grade elementary school students in cycle I and cycle II

Cycle	Cognitive Learning Outcomes
Cycle I	48.15%
Cycle II	73.71%

Based on the table above, it can be seen that the cognitive learning outcomes of students in cycle I show an average percentage of 48.15% being low qualified. In cycle II it shows an increase from cycle I which is equal to 73.71% in the high category.

The use of the Picture-Assisted Project Based Learning model has a positive influence on increasing student collaboration skills. This is caused by the advantages of the Project Based learning learning model, including the results of projects that involve collaboration between group members so that student collaboration skills increase. By learning using the Project Based Learning learning model assisted by Image Media, students can get a more meaningful learning experience because learning is done through projects that are related to real life.

5. Conclusion

Based on the results of classroom action research, it can be concluded that the use of the Project Based Learning learning model assisted by Image Media can improve the collabability of third grade elementary school students. This can be shown by students who have increased in cycle I and cycle II. Student collaboration skills have increased from cycle I with an average percentage of 54% and there are 5 students who have less category. Cycle II with an average percentage of 74% and no students who have less category.

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