Implementation of the Problem Based Learning Model in Improving the Students' Collaboration Skills in Elementary School Thematic Learning

Laili Malikhatun Maghfiroh[1], Astuti Wijayanti[2], Musthofa[3], Nikmatun Sadiyah[4]

[1-2]*Universitas Sarjanawiyata Tamansiswa, Indonesia*
[3-4]*SD Muhammadiyah Ngadiwinatan, Indonesia*
Corresponding Author e-mail: ppg.lailimalikhatunmaghfiroh57@program.belajar.id

1.   Abstract

This research is motivated by the low collaboration skilss of class III students. In the discussion activities which were divided into 4 groups, there was only 1 group which went well by applying the division of tasks. While for the other 3 groups it has not gone well. There were 2 groups where only one student worked on and conveyed the answer when presenting in front of the class while the other students played alone and 1 other group was still working on it until it exceeded the allotted time limit. The purpose of this study was to improve the collaboration skills of third grade students in thematic learning through the Problem Based Learning model in elementary schools. The type of research used in this study was Collaborative Classroom Action Research (PTKK) with the Kemmis and Mc Taggart model in two cycles. Data collection is done by observation and documentation. The data analysis technique used is qualitative and quantitative. The results of this study indicate that the Problem Based Learning model can improve the collaboration skills of third grade students in thematic learning. This can be shown from the percentage of students' collaboration skills which have increased from cycle I to cycle II.

Keywords: *Collaboration Skills, Problem Based Learning, Thematic learning.*

2. Introduction

Education is a conscious and planned effort to create a learning environment that can develop students' potential. The quality of education in Indonesia must always be considered, because quality education will produce human resources who have the potential, ability and intelligence and are able to compete. The educational program itself does not just focus on cognitive aspects, but also focuses on forming attitudes and developing students' skills (Triowathi & Wijayanti, 2018). Education in Indonesia applies thematic learning, namely an integrated learning model that links several subjects that aim to focus material on a particular theme or topic, making it easier for students to understand the material/concept as a whole, deeply and impressively. Thematic learning emphasizes the active involvement of students in the learning process, so that students gain direct experience, and are trained to find out for themselves the knowledge they are learning (Adawiyah et al., 2021). Thematic learning is in line with 21st century learning which develops 4C skills, namely critical thinking, communication, creativity, and collaboration skills.

Based on the results of observations, it shows that not all students are actively involved in group activities. In the discussion activities which were divided into 4 groups, there was only 1 group that went well in the division of tasks. Meanwhile for the other 3 groups it has not gone well, namely there are 2 groups where only one student is working on and delivering the answer when presenting in front of the class while the other students are playing alone and 1 other group is still working on it beyond the allotted time limit. The problem that arises is the problem of collaboration skills. According to Kusnandar (2013), collaboration is a collaboration ability, which is a way of interacting

between several people to achieve certain results. Laelasari, et al. (2017) revealed that collaboration skills refer to the ability of students to communicate dialogically with the aim of exchanging ideas, opinions, views or ideas. Collaboration in class is one of the important social skills for students in the learning process. In collaboration, students can learn from each other's experiences and knowledge, develop critical thinking skills, and improve communication skills. Purwati (2020) concluded that the learning carried out by the teacher should refer to increased student activity and participation. Teachers not only convey knowledge, skills and attitudes to students, but teachers must also be able to bring students to be active in various learning activities such as discovery learning, independent learning, group learning, learning to solve problems, and so on. In other words, teachers should be able to facilitate students to develop collaboration skills through various learning activities that can provide opportunities for students to interact and work together with others.

One learning model that can be applied to overcome the problem of collaboration skills is the Problem Based Learning (PBL) learning model. The Problem Based Learning (PBL) learning model is a learning activity that begins with presenting a problem so that it makes students active in carrying out collaborative skills to be able to solve problems. This PBL learning model was created to develop students' abilities in solving a problem and requires interaction and involvement between students, is able to stimulate students to think, is able to develop independence and learn to work together in groups (Masruroh and Syaiful, 2021). According to Warsono and Hariyanto (2012) the Problem Based Learning learning model has several advantages, including students will get used to dealing with problems and feel challenged to solve problems, foster social solidarity by being accustomed to discussing with their classmates, increasingly familiarizing teachers with students, and allows students to familiarize themselves with applying experimental methods in solving problems.

Senada Hosnan (in Trianto, 2011: 98) states that the application of the Problem Based Learning learning model consists of five steps, namely: 1) Orientation of students to problems, 2) Organizing students for learning, 3) Guiding individual and group investigations, 4) Developing and presenting work, 5) Analyzing and evaluating problem-solving processes.

Based on the description of the background above, the researcher will examine it through Classroom Action Research with the title "Implementation the Problem Based Learning Model in Improving Students' Collaboration Skills in Elementary School Thematic Learning".

3. Methods

3.1. Participants and context

This type of research is Collaborative Classroom Action Research (PTKK). Collaborative classroom action research using the Kemmis and McTaggart models. The work procedure in this study is a cycle of activities that will be carried out for two cycles with two meetings in each cycle. According to Arikunto (2013: 132), there are four stages used which include planning, action, observation, and reflection.

The subjects of this study were class III students with a total of 21 students, consisting of 10 male students and 11 female students. The object of this study is to focus on students' collaboration skills after the application of the Problem Based Learning model as an effort to improve the collaboration skills of third grade students in thematic learning. The research was carried out in the even semester of the 2022/2023 academic year. The

research phase up to the reporting of research results was carried out for approximately 2 months, from May to June 2023.

3.2. Material

Data collection techniques in this study are observation and documentation. According to Suharsimi Arikunto (2005: 27) observation is a technique that is carried out by making careful observations and systematically recording. The observation used in this study was participant observation, in which the researcher played an active role in observing and following all the activities that were being carried out. Observations were made by observing student learning activities in the learning process assisted by assessment instruments.

Table 1. Student Collaboration Skills Instrument

Indicators	Aspect
Positive interdependence	Working with the division of tasks
	Discuss the results of the division of tasks that have been done
Face to face interaction	Do not play alone when in a group
	Join his group of friends
Responsibility	Complete tasks according to the division of tasks
	Doing assignments on time
Communication skills	Opinion in groups
	Ask friends when you find a problem

3.3. Data Collection and analysis

The data analysis used in this research is qualitative and quantitative. This study refers to the interactive analysis model according to Miles and Huberman (in Sugiyono, 2015: 338), namely the data analysis technique model which has four stages including the stages of data collection, data reduction, data presentation, and drawing conclusions.

## 4.   Results and Discussion

Results

Based on the results of observations, the collaboration skills of class III students in thematic learning increased in cycle 1 and cycle 2 as shown in Table 2.

Table 2. Collaboration Skills Data Analysis

Num	Indicator	Cycle I	Cycle II
1	Positive interdependence	64,29%	76,19%
2	Face to face interaction	73,81%	83,33%
3	Responsibility	66,67%	73,81%
4	Communication skills	69,05%	78,57%
Average student collaboration skilss		**68,45%**	**77,98%**

Based on the table above, it can be seen that collaboration skills in each indicator have increased. Indicators of positive interdependence increased from cycle I 64.29% cycle II to 76.19%. In the face-to-face interaction indicator, the percentage in cycle I was 73.81%, increasing in cycle II to 83.33%. The percentage of indicators of responsibility has increased from 66.67% in cycle II to 73.81% in cycle II. The collaboration skills indicator increased from 69.05% in cycle I to 78.57% in cycle II.

Graph 1. Collaboration Skills Data Analysis
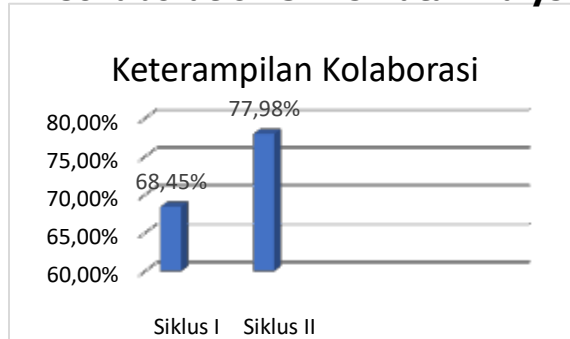
In graph 1 it can be seen the percentage comparison and percentage increase in the collaboration skills of students in cycle I and cycle II. There was an increase in student collaboration skills between cycle I and cycle II of 11.9%.

Discussion

In this study the implementation of the Problem Based Learning learning model in thematic learning in class III was carried out in two cycles where each cycle consisted of 2 meetings. The learning carried out consists of 5 steps, namely: (a) student orientation on the problem, (b) organizing students in learning, (c) guiding student investigations, (d) developing and presenting work, (e) analysis and evaluation of the process solution to problem.

In cycle I, learning has been carried out well but not optimal. At the problem orientation stage, the teacher conducts questions and answers related to learning material and raises questions as initial problems in learning. However, there are still many students who tend to be silent and only a few students answer questions from the teacher. At the stage of organizing learning, the teacher forms students into heterogeneous groups. When the division of student groups looks rowdy. The group investigation guidance stage, the teacher has not been maximal in providing guidance to each student who has difficulty doing assignments when discussing. Students in collecting information still rely on thematic books only. Students have not actively asked and expressed their opinions when discussing. There were only 2 groups out of 4 groups that had implemented division of tasks. There are still some students who play alone and disturb other groups. The stage of developing and presenting the work, students presenting the work is clear, but there are groups who are not ready to present it even though it has exceeded the allotted time. When students were called on as group

representatives to convey their work, students were not confident and delivered in a low voice. In the analysis and evaluation phase of the problem-solving process, the teacher and students carry out an analysis of the presentation of the work presented, but students have not yet expressed their opinions on the work of other groups in detail.

In cycle II, the implementation of learning and student activities was better than cycle I and experienced an increase. At the problem orientation stage, the teacher conducts question and answer activities on the emergence of problems and also questions and answers about learning material. Students began to actively ask and answer. The stage of organizing learning, the teacher conveys the activities to be carried out clearly and systematically. When the division of student groups is not rowdy. In the investigation guidance stage, the teacher guides students not only to one group, but thoroughly to other group members. When discussing activities, the whole group has implemented the division of tasks. Students in groups participate in discussions and are responsible for their group answers. Students join in their groups and do not disturb other groups. Students actively ask questions and express their opinions when discussing. In the development and presentation stage of the work, students develop the presentation of the work with the group. Students who are appointed as group representatives to present their work immediately come forward and convey it confidently. In the analysis and evaluation phase, students express their opinions on the work of other groups. Students and teachers provide conclusions. In cycle II the teacher integrates learning with technology. The teacher prepares a wordwall quiz for students to work on in groups. Wordwall is an application that can be used as a learning media, learning resource, as well as an assessment tool for teachers and students. The Wordwall web application is used to create fun quiz-based games, design and review assessments in learning (Nur, 2022). Students were very enthusiastic when completing quizzes using the Wordwall application by discussing with their groups. They are very happy when the answer they choose is correct, answers in a short time and gets a high score.

Overall the learning carried out in cycle II went well and had achieved research performance indicators so that the researcher decided to stop the research. In this study, researchers concluded that achieving learning objectives by using the Problem Based Learning (PBL) model could improve students' collaboration skills.

The results of this study are relevant to research conducted by Aspridanel et al (2019) where the results of his research show that the Problem Based Learning (PBL) learning model supports an increase in collaboration skills by means of students showing high enough cooperation in solving problems, compromising each other in making decisions, being responsible for assignments and information provided, flexibility in accepting decisions, seeking information, and not interdependence between students, and communicating in carrying out group collaboration. Supported by research conducted by Fitriyani et al (2019); Hartina et al (2022) & Mardawati et al (2022) which show that the Problem Based Learning (PBL) learning model can improve students' collaboration skills. The Problem Based Learning (PBL) learning model helps students gain essential knowledge and concepts from each learning material they already have, students become more active in participating in the learning process, and helps increase student confidence in learning. Nisa (2020) & Ritonga (2022) state that the Problem Based Learning model is a learning model that is directed at solving various problems, especially those related to subject matter in real life. Therefore, the Problem Based Learning learning model in the thematic learning of class III students is appropriate because the implementation of learning activities begins with presenting problems to students so that students actively collaborate and discuss to be able to solve problems.

5.   Conclusion

Based on the results of the study it can be concluded that the use of the Problem Based Learning model can improve the collaboration skills of students in elementary school thematic learning. This can be shown from the collaboration skills of students who

experienced an increase in cycle I and cycle II, initially the average student collaboration skills in cycle I was 68.45 to 77.98 in cycle II. The Problem Based Learning learning model is able to improve students' collaboration skills in thematic learning because it includes problem solving activities that encourage students to collaborate with other students.

6.   Acknowledgement

7.   References

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