DEVELOP LITERACY SKILLS THROUGH PROBLEM BASED LEARNING BY USING GOOGLE JAMBOARD APPLICATION AT SD GAGASCERIA, BANDUNG

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Abstract. Literacy skills do not only develop reading and writing skills. Literacy skills include the ability to interpret, collaborate, solve problems, self-reflect, and communicate. One way to develop this is to use the *Problem Based Learning* method. Managing learning activities with this method is a challenge, especially during this pandemic. With these challenges, the first and third grade teachers at SD GagasCeria carried out lesson study activities. The purpose of this lesson study is to see how the Problem Based Learning method using the Google Jamboard application can develop students' literacy skills. The subjects of this lesson study are third grade students of SD GagasCeria. We use the stages of lesson study activities, namely Plan-Do-See. One teacher becomes a model teacher and another teacher becomes an observer. They observe learning activities through learning video recordings which are then made in the form of learning transcript analysis. The results of the implementation of this lesson study were analyzed using a qualitative descriptive method. From the results of the analysis, it was found that students' literacy skills could be developed. This can be seen from the results of students' thoughts contained in the Google Jamboard and learning transcripts, showing the level of depth of thinking and understanding of students towards texts, images, and situations at hand. The use of the Google Jamboard application can facilitate students to interact with each other which also helps develop literacy skills.

Keywords: Lesson study, literacy, problem based learning, Google Jamboard application.

INTRODUCTION

The reading and writing ability factor of Indonesian people is still lacking, this is evidenced by the results of the Program for International Student Assessment (PISA) survey. PISA is an international assessment method that becomes an indicator to measure the competence of Indonesian students at the global level. For reading competence, Indonesia is ranked 72 out of 77 countries and this has had a stagnant trend in the last 10-15 years.

As a step to overcome this, the government through the Ministry of Education and Culture provides five strategies to carry out holistic learning in order to develop Indonesian people. Two of the five strategies are to replace the national exam with a Minimum Competency Assessment (AKM) which measures school performance based on student literacy and numeracy and also to prepare a mobile-based education platform that aims to develop holistic education that is able to develop Indonesian students into lifelong learners who are competent. and behave in accordance with the values of Pancasila, namely noble character, independence, global diversity, mutual cooperation, creativity, and critical reasoning.

In addition, we also pay close attention to our students at school, especially in this aspect of literacy skills. We observe that during this pandemic, there is a phenomenon that learning activities are still teacher centers and only develop reading and writing skills so that it has an impact on the underdevelopment of student literacy skills in schools.

Based on the above, the management of learning activities that develop literacy is not only developing reading and writing skills. Literacy skills need to develop other aspects of skills as

mentioned by Kern [1], literacy is the practice of interpreting the meaning of texts through social, historical, and cultural situations.

According to Kern, there are seven principles of literacy education, namely literacy involves interpretation, literacy involves collaboration, literacy involves convention, literacy involves cultural knowledge, literacy involves problem solving, literacy involves self-reflection, and literacy involves language use problems. The development of learning activities that include these seven principles is very important because these skills must be mastered by students. There are many ways and methods used to develop it. One of them is by using the Problem Based Learning method which is in line with the 2013 curriculum.

Problem Based Learning whose main focus is solving real problems, the process in which students carry out group work, feedback and discussion. According to Nurhadi [2] "Problem Based Learning is an interaction activity between stimulus and response, a relationship between two directions of learning and the environment". The environment provides input to students in the form of assistance and problems, while the brain's nervous system functions to interpret the assistance effectively so that what is faced can be investigated, assessed, analyzed, and found a good solution. So to develop literacy skills, researchers implemented the Problem Based Learning method through the Google Jamboard application.

The use of the Google Jamboard application in learning activities with the Problem Based Learning method is to facilitate the development of student collaboration skills. With this application, students can provide ideas, opinions, comments, and input to other students.

METHOD

This research was conducted with a qualitative descriptive method with steps using lesson study. This study describes how the Problem Based Learning method was carried out during the pandemic using the Google Jamboard application to develop literacy skills. This study involved six Indonesian language teachers and other teachers at SD GagasCeria. These six Indonesian teachers became a lesson study team that discussed the development of literacy activities during the pandemic. One teacher then becomes a model teacher, and the other teachers become observers. The subjects of this study were third grade students of SD GagasCeria, Bandung. Lesson study is carried out using the steps mentioned by Slamet Mulyana [3] which states that there are 3 steps of lesson study, namely Plan, Do, and See. This activity is carried out in the second semester of the 2020-2021 school year. Data retrieval is done by watching video recordings of learning which are then made learning transcripts and analyzed together.

RESULTS AND DISCUSSION

Problem Based Learning is a learning model that involves students to solve a problem through the stages of the scientific method so that students can learn knowledge related to the problem and at the same time have the skills to solve problems. From a pedagogical perspective, Problem Based Learning is based on constructivism learning theory with the following characteristics:

1. Understanding is obtained from interaction with problem scenarios and the learning environment.
2. Struggling with problems and the problem inquiry process creates cognitive dissonance that stimulates learning.
3. Knowledge occurs through a collaborative process of social negotiation and evaluation of the existence of a point of view.

Based on the theory [4], the characteristics of the Problem Based Learning model are as follows:

1. Learning is student-centered.

The learning process in problem based learning focuses more on students as learning people. Therefore, Problem Based Learning is also supported by constructivism theory where students are encouraged to be able to develop their own knowledge.

2. Authentic problems form the organizing focus for learning.

The problem presented to students is an authentic problem so that students are able to easily understand the problem and can apply it in their professional life later.

3. New information is acquired through self-directed learning.

In the problem solving process, students may not know and understand all the prerequisite knowledge, so students try to find their own through the source, either from books or other information.

4. Learning occurs in small groups.

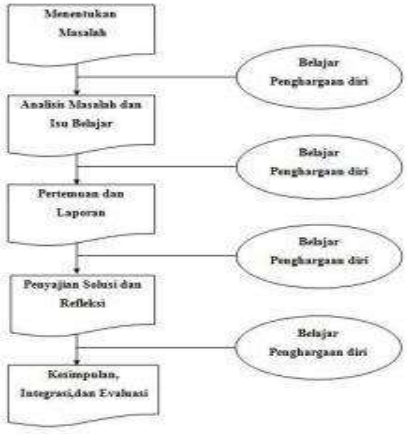
In order for scientific interaction and exchange of ideas to occur in an effort to build knowledge collaboratively, Problem Based Learning is carried out in small groups. The group created demands a clear division of tasks and clear goal setting.

5. Teachers act as facilitators.

In the implementation of Problem Based Learning, the teacher only acts as a facilitator. However, even so the teacher must always monitor the progress of student activities and encourage students to achieve the targets to be achieved.

The flow of the Problem Based Learning process can be seen in Figure 1 below: Figure 1: The process flow of the Problem Based Learning model involves students in self-chosen investigations that allow students to interpret and explain real-world phenomena and build their understanding of these phenomena.

Figure 1: Process flow of the Problem Based Learning model



Problem Based Learning involves students in self-selected investigations that enable students to interpret and explain real-world phenomena and build their understanding of these phenomena.

Then [6] suggested that the steps of Problem Based Learning are presented in Table 1 below.

Table 1: Steps of Problem Based Learning

No	Indikator	Tingkah laku guru
1.	Student orientation on problems	Explain the learning objectives, explain the necessary logistics, and motivate students to engage in problem solving activities.
2.	Organizing students to learn	Help students define and organize learning tasks related to the problem.
3.	Guiding individual/group experiences	Encourage students to collect appropriate information, carry out experiments to get explanations and solve problems.
4.	Develop and present the work	Assist students in planning and preparing appropriate works, such as reports, and assisting them with various assignments with their friends.

5.	Analyze and evaluate the problem solving process	Helping students to reflect or evaluate their investigations and the processes they use.

When the teacher team plans the learning design, the steps above serve as a guide in selecting and determining the learning design. So that literacy skills can be developed. The teacher team made a learning design as illustrated in the chart below.

Gambar 2. Desain pembelajaran

Based on the learning design, several media were designed that would be shown to students as well as a series of questions that were expected to trigger students' depth of thinking and also develop students' literacy skills. The series of questions are adjusted to the given media, such as observing pictures, reading texts, discussing in groups, and presenting in the class. The questions are made by taking into account the level of thinking. The following is an overview table of the questions given.

Table 2: Teacher Question Series

No.	Thinking level	Questions
1.	C1 Find, know, mention	Try any pictures in the picture on this first page of Google Jamboard? Is there a problem with this picture?
2.	C1 Find, know, mention	Please try to see if the story is as you imagined or thought before. Is the story the same as what the children tell?
3.	C2 Understanding	If we were the Bima figures who saw the incident, what solutions could be given?
4.	C2 Understand and C3 apply	Try to find the best solutions to the given problem!
5.	C6 Evaluation	What can we do as road users to prevent this from happening?
6.	C6 Evaluation	What is the best solution for this problem? What should Nugi's father and the boys do?

We apply this learning design as well as a series of questions in the learning design using the Google Jamboard application. In the first stage, the teacher presents the image on the Google Jamboard and the first question. At this stage, the teacher asks students to write down their predictions, what problems occur in the picture. The picture shows an event that occurred on the highway. Then the teacher asked, 'Try to see what pictures are in the picture on the first page of Google Jamboard?' "Is there a problem with this picture?" The teacher found that some students were able to interpret the meaning of the picture and express the approximate problem in it. This can be seen from the predictions that students write using sticky notes on the Google Jamboard application. Students explain the meaning of the pictures given in writing, but some of them have not been able to write completely. For example, there are students who write "The story is that there are people who want to cross to the place in front and then suddenly there is a car that goes fast even though there is a symbol that people can walk because the driver of the car was sleepy and the person was hit and went to the hospital". However, there are also students who write "The symbol of the foot walk backwards."

By using the sticky notes feature in the Google Jamboard application, students can see and read each other's writings with their friends so that this is able to encourage students to find out more by observing the pictures in more detail. There is also a discussion where each student can explain the reasons and the underlying things in writing the predictions of the problems given. Students learn to see a problem from a variety of perspectives. This can help students to further develop their ability to interpret an image.

The second stage, the teacher gives a text that explains the problem contained in the picture. The teacher asked, "Please try to see if the story is as you imagined or thought before. Is the story the same as what the children told?" "Then, what is the problem with this picture and text?' At this stage students are asked to read the text carefully. Students are also expected to understand the problems contained in the text given. We found that most of the students were able to identify the problem correctly. Students' interpretation of the text is helped by observations on pictures and discussions that have been carried out previously. After students are able to formulate problems, the next step is for students to write down alternative problem solving that can be proposed and discussed at the next stage.

Then in the third stage, students in groups collaborate to solve problems by proposing alternative solutions that have been made previously. Each group consists of 3-4 students. Here the teacher found that some of the students who looked active when writing down alternative problem solving on Google Jamboard could discuss to determine a good solution. Students can elaborate any ideas given in group discussions. For some students, who previously were not actively involved when writing alternative problem solving, it turns out that they can also discuss well. This is because they have read the ideas and opinions written by their friends on Google Jamboard first. The exchange of ideas to inspire each other between students is needed to develop literacy skills.

Finally, the stage of students must be able to use spoken language to communicate the results of their discussions well. Students present the results of the discussion and explain how the decision-making process is carried out. From the results of student discussions in small groups, students re-discuss, evaluate, and reflect on the results of problem solving. At this stage, the teacher finds that students can evaluate and reflect more deeply. Students can relate what is happening in the problem with what they can do as an individual to avoid the problem.

From the four stages above, the teacher pays attention to the learning process that occurs, and has made students think more deeply. When only observing the image, they can find the data contained in the image. When studying a text that describes what is happening in the picture and the problem, students can show their understanding by showing the problem that is happening. Students can also give their opinion by using understanding and relating it to their personal experience. In the next stage, students can provide solutions and alternative solutions to problems by reflecting on their own experiences and evaluating the problems that have occurred.

CONCLUSIONS AND SUGGESTIONS

Based on the definition of literacy skills and also the characteristics of the problem based learning method in the description above, it can be concluded that the Problem Based Learning method using the Google Jamboard application can develop students' literacy skills. Literacy skills which include aspects involving interpretation, conventions, collaboration, problem solving, self-reflection, and using language can be facilitated through the Problem Based Learning method using the Google Jamboard application. With the current pandemic situation, the management of activities can be carried out in a series of asynchronous and synchronous activities. The use of the Google Jamboard application can be used to facilitate this. The first and second stages, namely the interpretation and problem identification stages, can be carried out asynchronously where students can work at different times and are adapted to students' circumstances. Then for the next stage it can be done synchronously or face to face directly or virtual. Finally, it is hoped that this activity can provide alternative choices for all elementary school teachers. This activity can be carried out by all subjects, especially in Indonesian language learning activities.

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REFERENCES

[1] Student, Indonesia. 2017. “Pengertian Literasi Menurut Para Ahli.” https://www.academia.edu/34331758/9_Pengertian_Literasi_Menurut_Para_Ahli_Lengkap_Pengertian_Literasi_Menurut_Para_Ahli, diakses pada tanggal 29 Agustus 2021 pukul 22.00
[2] Guru, Ruang. 2017. “Metode Pembelajaran Problem Base Learning dapat Meningkatkan Keaktifan Siswa” https://www.ruangguru.com/blog/tingkatkan-keaktifan-siswa-dengan-metode-pembelajaran-problem-based-learning, diakses pada 29 Agustus pukul 20.00
[3] Adhi, Ginanjar. 2021. “Lesson Study”. https://www.tripven.com/lesson-study/, diakses pada 29 Agustus 2021
[4] Model Pembelajaran Problem Base Learning (Berbasis Masalah). https://mas-alahrom.my.id/abstract/jurnal/model-pembelajaran-problem-based-learning-berbasis-masalah
[5] Rusman.(2010). Model-model pembelajaran mengembangkan profesionalisme guru, Jakarta: PT Rajagrafindo Persada. 230-234.
[6] Ibrahim, Muslimin. (2012). Pembelajaran berdasarkan masalah (ed ke-2). Surabaya: Unesa University Press.