Implementation problem based learning model using zoom meeting application

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Abstract: This study aims to determine the implementation of online learning with the problem based learning model in class V of Dempet 1 Public Elementary School. The research method used is qualitative, namely the research is carried out in natural conditions (natural setting). The research location is in class V Dempet 1 State Elementary School, Dempet District, Demak Regency. Data collection techniques using interviews, observation and documentation. The data analysis used Milles and Huberman techniques, namely data collection, data reduction, data verification and conclusions. The results showed that online learning with a problem-based learning model in class V Dempet 1 Elementary school ran smoothly according to the learning tools (RPP and SYLABUS) and in accordance with the steps of the problem based learning model. Learning is carried out by forming groups then solving problems related to the material presented by the teacher. Students are required to identify problems, analyze and find answers.

1. Introduction
The crisis caused by the Covid-19 virus has become a global pandemic, a virus that attacks the respiratory organs. This reality has resulted in changes to a new system order so that people can adapt to this virus by applying the new normal concept, in which the government implements the herd immunity system (natural selection of body immunity against viruses). Of the many fields and professions that have felt the impact of this pandemic, the most pronounced impact is in the world of education where previously face-to-face learning has now been transferred to online learning or distance learning (PJJ) according to the direction of the Father of the Ministry of Education, Nadiem Makarim.

The offline system is a distance learning that is independent from the internet or in other words, offline using printed media and electronic devices. Unlike offline, which requires the internet, this learning is dominated by teaching devices such as modules, worksheets, and textbooks, radio, and national TV broadcasts specifically for education. This learning makes it easier for students who do not have devices so that they can still participate in learning activities even though they are not as efficient as online learning.

The Online System is an internet-based distance learning which uses learning tools with online application media such as Zoom, Whatsapp, Google Classroom, Edmodo, Google Meet, and the like. In its implementation, learning with this system requires an internet network and data packages because it is focused on the application of E-Learning, this system clearly makes it easy for students and teachers. From the student's point of view, they don't need to carry large and thick books to study a material, just looking for and downloading e-books or learning videos. They can easily study anytime anywhere without fear of losing or missing the material because it can be stored. As for the teacher, the teacher is not always the reference source of learning so that students are given the
opportunity to learn independently, the learning system is flexible, and the teacher can increase innovativeness in presenting material content to students.

Even though online learning, the learning process is still using this 2013 curriculum where the learning process must be active. It is hoped that there will be active interaction between students and teachers, besides changing teacher learning to be student-centered. One of the competencies in the 2013 curriculum that students must master is critical thinking skills [1]. Developing students’ critical thinking skills in the learning process is an effort to improve student learning outcomes [2].

By combining online learning and critical thinking students can thrive when teachers use innovative learning. Based on the Ministry of Education and Culture [1], regarding the standard of the process, there are four innovative lessons that can empower students’ critical thinking. One of them is problem-based learning (Problem Based Learning). This study attempts to determine the implementation of problem based learning (PBL) on students' critical thinking skills. Problem based learning is a learning process that begins with problems found in a work environment. Problem based learning is closely related to the ability to think critically [3] Problem based learning is learning that uses real problems found in the environment as a basis for acquiring knowledge and concepts through the ability to think critically and solve problems.

In [4] research, the difference between students' critical thinking using Inquiry Based Learning and Problem Based Learning in terms of reflective and impulsive cognitive styles, Volume 15, Number 1, p-ISSN: 2528-5742, October 2018. Based on the results of research and discussion, The conclusion is that there is no difference in critical thinking of grade VII students of SMP Negeri 7 Tuban between those using Inquiry Based Learning and Problem Based Learning in science lessons on the subject of Global Warming. [5] (Journal) "The Effectiveness of Problem-Based Learning (PBL) and Guided Inquiry on Students’ Mathematical Critical Thinking Ability”. Journal of Mathematics and Mathematics Education ISSN (Online): 2685-3892 Vol. 1, No. 4, July 2019. Based on the results of the research and discussion in this study, it can be concluded that PBL and Guided Inquiry learning are effective on students' mathematical critical thinking skills. [6] conducted a research with the title "Effect Of Problem Based Learning (Pbl) s Of Critical Thinking Ability Students On The Early Mathematics Ability". The results showed an increase in students' critical thinking skills. [7] The research approach used is quantitative with pre-experimental design type, and design research using Nonequivalent Control Group Design”. Then it can be concluded that the influence of the application of the Problem Based Learning of activity and skills of critical thinking students of grade V in Elementary School Pajaran 01 Saradan Madiun. Research on the comparison of Problem Based Learning and Guided Inquiry learning models has been carried out on students' critical thinking skills in the material reaction rate. This research was conducted to determine the most appropriate learning model for the material reaction rate towards students' critical thinking skills. The results showed that the data were normally distributed in both classes. Based on the paired sample t test pretest-posttest in the two classes shows that there are differences in critical thinking skills at the beginning and end of learning.

[8] research analyzed differences in students' physics problem-solving skills in problem-based learning and conventional learning models, differences in students' physics problem solving skills between students who had above average thinking abilities and students who had below average critical thinking skills. -average, as well as the interaction between the learning model and the ability to think critically in influencing students' physics problem solving skills. The results showed that the physics problem solving skills of students who used the problem-based learning model were better than conventional learning, the physics problem solving skills of students with critical thinking abilities were above average showing differences and better results than students with critical thinking skills. below average, and there is an interaction between problem-based learning models and critical thinking skills in influencing students' physics problem solving skills.

2. Method
This research uses qualitative methods, namely research that intends to understand the phenomena of what the research subjects experience holistically, and by means of descriptions in the form of words and language, in a special natural context and by utilizing various scientific methods [9] The reason for using this method is that the researcher intends to gain a deeper understanding of the implementation of learning with the Problem Based Learning model. The type of research used is
descriptive research. According to [10] descriptive research is a research method that seeks to describe and interpret objects according to what they are. This research is also often called non-experimental, because in this study the researcher did not control and manipulate the research variables. Therefore, in this study the researcher described and interpreted the implementation of the PBL learning model in the fifth grade science subject at Dempet 1 Elementary School, Kec Dempet. The purpose of qualitative research is to find the meaning of a particular social phenomenon or situation that often has multiple meanings that are difficult for researchers to understand. Data mining used interviews, observation and documentation, while the data analysis techniques in this study used descriptive techniques from [11].

The validity of the data used triangulation techniques. Data validity checking techniques that utilize something other than the data for the purposes of checking or comparing the two data [9].

3. Result and discussion

Based on the implementation of the problem based learning model in online learning in class V Dempet 1 Elementary School runs according to the learning tools (RPP and SYLABUS) and is in accordance with the steps / syntax of the problem based learning model. Learning is carried out by forming groups for each study group at the closest home. The next step is to solve problems related to the material presented by the teacher. Students are required to identify problems, analyze and find solutions to these problems, all teacher learning instructions are carried out through the zoom application. With stages

Table 1. The stages of implementing learning from PBL at Dempet 1 elementary school

| No | Stages                      | Activities                                                                 |
|----|-----------------------------|-----------------------------------------------------------------------------|
| 1  | Learning Preparation        | 1. Preparation of lesson plans and syllabus learning tools, schedules       |
|    |                             | 2. Determine the learning model                                             |
|    |                             | 3. Determine the learning material                                          |
|    |                             | 4. Prepare technology tools for online needs                                 |
|    |                             | 5. Determine the learning objectives                                         |
|    |                             | 6. Determine the allocation of time                                          |
| 2  | Implementation of Learning  | 1. The teacher delivers PBL learning syntax through the zoom meeting application. |
|    |                             | 1. The teacher sends material in the form of Zoom videos and whatshap group support applications |
|    |                             | 3. Students form groups according to the location of their nearest house     |
|    |                             | 4. Teachers and students in groups have an intractive dialogue through the zoom meeting application, the teacher directs, motivates and provides learning implementation techniques. |
| 3  | Evaluation of learning outcomes | 1. The teacher sends test practice questions in the whatshap group.            |
|    |                             | 2. Students work on and send back to whatshap group                          |
|    |                             | 3. Researchers evaluate all learning devices and student learning outcomes   |

Figure 1. Learning by Zoom
Based on the results of the observation that the class V teacher provided directions on how to take part in the PBL model. It can be seen in the video that the teacher provides an explanation of the material presented after the teacher delivers the learning model through the Zoom application, there are some students who ask questions through voice recordings or by typing on the WhatsApp application, it is also seen that in the learning the students respond quickly by replying or commenting on those who anything in the video starts from asking questions that don't understand to agreeing to take part in the lesson. This is in accordance with Smith [12] explaining that problem based learning has advantages, namely increasing problem-solving skills, easier remembering, increasing understanding, increasing understanding that is relevant to the world of practice, encouraging thinking, building leadership skills and collaboration, study skills, and motivate students.

The results of this study are reinforced by research from [13] The research results show that the implementation of learning using the Problem Based Learning learning model can increase learning activeness and learning outcomes of class XII students in PKK subjects at Hidayatus Sholihin Vocational High School. And research by [14] Increasing Motivation to Learn Science through Project Based Learning Models during the Covid-19 Pandemic for Students of Gunungsari 4 Junior High School. The results of this study indicate that students are motivated to carry out project work carried out, which is carried out without any burden and produces maximum results, as well as being an assessment of the science practice exam at the end of studying at school. The results of this study are in accordance with the results of previous research that PBL is able to improve student learning outcomes even in the midst of an outbreak and using online learning.

4. Conclusion

Based on the findings, it can be concluded that The implementation of the problem based learning model in online learning in class V Dempet 1 Elementary School runs according to the learning tools (RPP and SYLABUS) and in accordance with the steps / syntax of the problem based learning model. Learning is carried out by forming groups for each study group at the closest home. The next step is to solve problems related to the material presented by the teacher. Students are required to identify problems, analyze and find solutions to these problems, all teacher learning instructions are carried out through the zoom application.

The critical thinking skills of fifth grade students of Dempet 1 Elementary School experienced a significant increase after learning using a problem-based learning model. Based on the observation sheet, students' thinking ability is in good category. This is based on several indicators including the ability of students to recognize problems, find ways to deal with problems, collect and compile the necessary information and analyze data, assess facts and evaluate questions, recognize logical
relationships between problems, draw the necessary conclusions, make appropriate assessments in everyday life. Implementation of problem-based learning models in online learning in class V Dempet 1 Elementary School runs according to learning tools (RPP and SYLABUS) and is in accordance with the steps / syntax of problem-based learning models learning. Learning is carried out by forming groups, each study group at the closest home. The next step is to solve problems related to the material presented by the teacher. Students are required to identify problems, analyze and find answers to these problems, all teacher learning instructions are carried out through the zoom application.

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