

**THE IMPLEMENTATION OF PROBLEM BASED LEARNING MODEL WITH
OPEN-ENDED APPROACH TO IMPROVE THE STUDENTS'
MATHEMATICAL CREATIVE THINKING ABILITY
IN SMP NEGERI 1 SIPAHUTAR**

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ABSTRACT

The root of this research is the low of students' mathematical creative thinking ability. This research aims to improve the students' activity and the students' mathematical creative thinking ability by applying problem based learning model with open-ended approach. Problem is identified based on initial observation result that consisted of mathematical prior test and interview with one of mathematics teacher at SMP Negeri 1 Sipahutar. Mathematical prior test is done to know the creative thinking ability and as references for grouping students in problem based learning that will be done next.

To support the improvement of cretive thinking ability, researcher develops lesson plan, students activity sheet, and creative thinknig ability test. This research is Class Action Research (CAR), which is implemented in SMP Negeri 1 Sipahutar. The subject in this research was the students in class IX-3 academic year 2017/2018 that have 30 students.

The object of this research is the implementation of problem based learning model with open-ended approach. The indicator of success is there are minimum 70% of students that follows the test, achieve the criteria of creative thinking ability with minimal score 2,51 in predicate B- or in High criteria of creative thinking ability.

This research consisted of 2 cycle and both cycle consisted of 2 meetings. The activity category of students in cycle 1 that reached only three category then in cycle 2 all the activity cateory of students had reached. Students' mathematical creative thinking ability test conducted at the end of each cycle. The result of this research could be seen : (1) The result of students' mathematical creative thinking ability test in cycle I, students that completed are 14 and students that not completed are 16. The classical completeness in cycle 1 is 47%. (2) The result of students' mathematical creative thinking ability test in cycle II, students that completed are 23 and students that not completed are 7. The classical completeness in cycle 2 is 77%. (3) Learning by using Poble based learning model with open-ended approach could make the students' activity was good categories in learning, and (4) Learning by using Poble based learning model with open-ended approach can improve the students' mathematical creative thinking ability.

Keywords : PBL, Open-ended, Creative Thinking