

## ABSTRACT

**Kristiani Magdalena Simanungkalit.** Application of Mathematics Learning Model Creative Problem Solving that Assisted with Desmos to Improve Students' Critical Thinking Skills of SMKN 14 Medan.

This research aims to know: (1) what actions are taken to improve students' critical thinking skills by applying Creative Problem Solving (CPS) that assisted with Desmos, (2) the improvement of students' critical thinking skills by using the Creative Problem Solving learning model assisted by Website Desmos. The subject of this research is the students of class X TPBO of SMK Negeri 14 Medan in the academic year 2022/2023. The object of this research is students' critical thinking skills by applying the Creative Problem Solving (CPS) learning model and is assisted with to material Linear Equation System of Two Variables in class X TPBO of SMK Negeri 14 Medan. This research used Classroom Action Research as the type of research, that consists two cycles, I and II. The instruments that used are observation, tests, and interview. The result analysis revealed that: (1) the taken actions to improve students' critical thinking skills are applied the synatxes of Creative Problem Solving learning model that assisted with Desmos, and then improve that in the next cycle, such as, the researcher became more assertive, minimized lecturers, and made Desmos more interesting, shared the link with students a day before the class begins, upgraded and changed some parts of Desmos to make it easier to use, prepared rewards to encourage students' liveliness during the learning process, improved the problem in Desmos and worksheets to assist students in understanding, analyzing, and solving the contextual problem, and prepared the new challenging problem to be discussed in the group. (2) there is improvement of students' critical thinking skill after applying those action, such as, the observation for students' critical activities increased from 37,27% in cycle I to 80% in cycle II, with gain index 0,70 (medium), there are 19 out of 31 students (61,29%) have attained the standard of critical thinking skills with mean score 62,60, improved after the execution in cycle II became 27 out of 31 students (87,10%) and mean 81,45, with gain index 0,67 (medium) and the responses of students for interview in cycle II show students' critical thinking skills in solving the problems.

**Key word:** Applying, Creative Problem Solving, Desmos, Students', Critical Thinking Skills.