ABSTRAK

Widi Aulia Widakdo. (2018). Perbandingan Pencapaian Kemampuan Pemecahan Masalah dan Peningkatan Kemampuan Representasi Matematik Siswa SMA melalui Model Pembelajaran *Project Based Learning* dan *Discovery Learning*.

Penelitian ini bertujuan untuk menelaah perbedaan pencapaian kemampuan pemecahan masalah dan peningkatan kemampuan representasi matematik siswa yang mendapat pembelajaran melalui model *project based learning* dibandingkan dengan siswa yang mendapat pembelajaran melalui model *discovery learning*. Populasi pada penelitian ini adalah seluruh siswa kelas X di salah satu SMA Negeri di Parongpong, Bandung Barat. Sampelnya adalah 32 orang siswa yang mendapatkan pembelajaran dengan model *project based learning* dan 30 orang siswa yang mendapatkan pembelajaran dengan model *discovery learning*. Metode penelitian yang digunakan pada penelitian ini adalah kuasi eksperimen. Instrumen tes yang digunakan adalah soal postes untuk kemampuan pemecahan masalah, soal pretes dan postes untuk kemampuan representasi matematik. Berdasarkan hasil dan pembahasan dapat disimpulkan bahwa: (1) Tidak terdapat perbedaan pencapaian kemampuan pemecahan masalah antara siswa yang mendapat pembelajaran melalui model *project based learning* dan *discovery learning*; (2) Terdapat perbedaan pencapaian kemampuan pemecahan masalah antara siswa dengan Kemampuan Awal Matematis (KAM) tinggi, sedang dan rendah yang mendapat pembelajaran melalui model *project based learning* dan *discovery learning*; (3) Tidak terdapat perbedaan peningkatan kemampuan representasi matematik antara siswa yang mendapat pembelajaran melalui model *project based learning* dan *discovery learning;* (4) Terdapat perbedaan peningkatan kemampuan representasi matematik antara siswa dengan KAM tinggi yang mendapat pembelajaran melalui model *project based learning* dan *discovery learning;* (5) Tidak terdapat perbedaan peningkatan kemampuan representasi matematik antara siswa dengan KAM sedang dan rendah yang mendapat pembelajaran melalui model *project based learning* dan *discovery learning*.

Kata Kunci: Kemampuan pemecahan masalah, kemampuan representasi matematik, *project based learning, discovery learning*

ABSTRACT

Widi Aulia Widakdo. (2018). The Difference of Students' Mathematical Problem Solving and Representation Ability in Senior High School by Using Project Based Learning and Discovery Learning.

The purpose of this research was to analyze the difference of students' mathematical problem solving ability achievement and students' mathematical representation ability improvement by using instruction of project based learning and discovery learning. The population of this research was 10th grade students of a senior high school in Parongpong, Bandung Barat. This research was given to 32 students using project based learning and 30 students using discovery learning. The method that used in this research was quasi experiment using pretest instrument to measure the student's mathematical representation ability, and posttest instrument to measure the students' mathematical problem solving ability achievement and representation ability improvement. This research showed that (1) There was no difference in students' mathematical problem solving ability from students that used project based learning and discovery learning; (2) There was no difference in students' mathematical problem solving from students which had high, middle and low prior knowledge that used project based learning and discovery learning; (3) There was no difference in students' representation ability from students that used project based learning and discovery learning; (4) There was difference in students' representation ability from students which had high prior knowledge that used project based learning and discovery learning; (5) There was no difference in students' representation ability from students which had middle and low prior knowledge that used project based learning and discovery learning;

Keyword: Mathematical problem solving, mathematical representation ability, project based learning, discovery learning.