ABSTRAK

Indriana Susanti. (1603260). Peningkatan Kemampuan Berpikir Aljabar, Representasi Simbolik dan Kemandirian Belajar Siswa Melalui *Flipped Classroom*.

Penelitian ini bertujuan untuk menganalisis peningkatan kemampuan berpikir aljabar, representasi simbolik dan kemandirian belajar siswa melalui pembelajaran *flipped classroom*. Penelitian ini menggunakan kuasi eksperimen dengan disain kelompok kontrol nonequivalen. Populasi dalam penelitian ini adalah semua siswa kelas XI SMA Negeri yang ada di salah satu Kabupaten Subang tahun ajaran 2018/2019 sebanyak 280 siswa. Sampel dalam penelitian ini adalah Siswa kelas XI IPA 2 sebanyak 20 orang siswa dan XI IPA 3 sebanyak 20 orang siswa, dengan pengambilan sampel menggunakan purposif sampling. Data yang digunakan dalam penelitian ini berupa tes dan non tes. Data yang diperoleh selanjutnya dianalisis dengan menggunakan uji statistik parametrik dan non-parametrik. Hasil penelitian menunjukkan bahwa; (1) peningkatan kemampuan berpikir aljabar siswa yang memperoleh pembelajaran *flipped classroom* lebih tingi secara signifikan dibandingkan dengan siswa yang memperoleh pembelajaran konvensional; (2) peningkatan kemampuan berpikir aljabar siswa yang memperoleh pembelajaran *flipped classroom* lebih tingi secara signifikan dibandingkan siswa yang memperoleh pembelajaran konvensional ditinjau dari KMA tertentu; (3) peningkatan kemampuan representasi simbolik siswa yang memperoleh pembelajaran *flipped classroom* lebih tingi secara signifikan dibandingkan dengan siswa yang memperoleh pembelajaran konvensional; (4) peningkatan kemampuan representasi simbolik siswa yang memperoleh pembelajaran *flipped classroom* lebih tingi secara signifikan dibandingkan siswa yang memperoleh pembelajaran konvensional ditinjau dari KMA tertentu; (5) peningkatan kemandirian belajar siswa yang memperoleh pembelajaran *flipped classroom* tidak lebih tingi secara signifikan dibandingkan dengan siswa yang memperoleh pembelajaran konvensional**.**

Kata Kunci: Kemampuan berpikir aljabar, representasi simbolik, kemandirian belajar, *flipped classroom*

ABSTRACT

Indriana Susanti. (1603260). The Students' Enhancement Algebraic Thinking Ability, Symbolic Representation And Self-Regulated In Learning Through Flipped Classroom.

This research aims to analyze the students' enhancement algebraic thinking ability, symbolic representation and self-regulated by using flipped classroom. This research used quasi experiment with nonequivalent control group design. The population of the research was 11th grade students of a senior high school year 2018/2019 in Subang regency as much as 140 students. The sample of research was class sains 2 as much as 20 students and sains 3 as much as 20 students of 11th grade students of a senior high school, where is the sample was selected by purposive sampling. The instruments used in this research are test and non test. The data obtained were then analyzed using parametric and non-parametric statistical test. The result of the research shows that (1) the students' enhancement algebraic thinking ability who worked under flipped classroom lerning are significantly higher than those who worked under conventional learning; (2) the students' enhancement algebraic thinking ability who worked under flipped classroom are significantly higher than those who worked under conventional learning in term of Prior Mathematical Knowledge (PMK) certain; (3) the students' enhancement symbolic representation ability who worked under flipped classroom lerning are significantly higher than those who worked under conventional learning; (4) the students' enhancement symbolic representation ability who worked under flipped classroom are significantly higher than those who worked under conventional learning in term of Prior Mathematical Knowledge (PMK) certain; (5) the students' enhancement self-regulated who worked under flipped classroom learning are not significantly higher than those who worked under conventional learning.

Keywords: algebraic thinking, symbolic representation, self-regulated, flipped classroom