

ABSTRAK

NURLINA ARIANI HRP. Peningkatan Kemampuan Representasi Matematis dan Motivasi Belajar Siswa SMP Negeri Melalui Model Pembelajaran Berbasis Proyek (*Project Based Learning*). Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2015.

Tujuan dari penelitian ini untuk mengetahui: (1) peningkatan kemampuan representasi matematis siswa yang diajar dengan model pembelajaran berbasis proyek dengan pembelajaran biasa, (2) peningkatan motivasi belajar siswa yang diajar dengan model pembelajaran berbasis proyek dengan pembelajaran biasa, (3) interaksi antara model pembelajaran berbasis proyek dan kemampuan awal matematik terhadap kemampuan representasi matematis siswa (4) interaksi antara model pembelajaran berbasis proyek dan kemampuan awal matematik terhadap motivasi belajar siswa. Penelitian ini dilaksanakan di SMP Negeri 1 Torgamba sebanyak 70 siswa. Penelitian ini merupakan suatu studi eksperimen dengan desain penelitian *pre-test-post-test control group design*. Populasi dalam penelitian ini adalah seluruh siswa kelas VII (tujuh) dengan mengambil sampel dua kelas (kelas eksperimen dan kelas kontrol) melalui teknik *purposive sampling*. Instrumen yang digunakan terdiri dari: tes kemampuan representasi matematis dan angket motivasi belajar siswa. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi, serta koefisien reliabilitas. Data dianalisis dengan uji ANAVA dua jalur. Sebelum digunakan uji ANAVA dua jalur terlebih dahulu dilakukan uji normalitas dalam penelitian dan homogenitas dalam penelitian ini dengan taraf signifikan 5%. Berdasarkan hasil analisis tersebut diperoleh hasil penelitian yaitu: (1) peningkatan kemampuan representasi matematis siswa yang memperoleh model pembelajaran berbasis proyek lebih tinggi daripada siswa yang memperoleh pembelajaran biasa, (2) peningkatan motivasi belajar siswa yang memperoleh model pembelajaran berbasis proyek lebih tinggi daripada siswa yang memperoleh pembelajaran biasa, (3) tidak terdapat interaksi antara model pembelajaran dengan kemampuan awal matematik siswa terhadap kemampuan representasi matematis siswa, (4) tidak terdapat interaksi antara model pembelajaran dengan kemampuan awal matematik siswa terhadap motivasi belajar siswa. Temuan penelitian merekomendasikan model pembelajaran berbasis proyek dijadikan salah satu model pembelajaran yang digunakan di sekolah utamanya untuk mencapai kompetensi kreatif, variatif dan inovatif.

Kata Kunci: Model Pembelajaran Berbasis Proyek, Kemampuan Representasi Matematis dan Motivasi Belajar Siswa.

ABSTRACT

NURLINA ARIANI. Increasing the Ability of Mathematical Representation and Student's Motivation Learning by Using Project-Based Learning Model in Junior High School. Post Graduate Program of Medan University, 2015.

The aim of this research was to determine: (1) increase the ability of the mathematical representation of students who were taught by the model of project-based learning with learning usual, (2) an increase in student motivation taught by a model project-based learning with learning regular, (3) the interaction between models project-based learning and early math abilities on the ability of students' mathematical representation (4) the interaction between the model of project-based learning and early math abilities of the students' motivation. The research was conducted in SMP Negeri 1 Torgamba as many as 70 students. This study is an experimental study with pre-test research design-posttest control group design. The population in this study were all students of class VII (seven) to take samples of two classes (experimental group and control group) through purposive sampling technique. The instrument used consisted of: testing the ability of the mathematical representation and student motivation questionnaire. The instrument has been declared eligible content validity and reliability coefficients. Data were analyzed with ANOVA two lanes. Before use ANOVA two lanes first tested in research normality and homogeneity in this study with a significant level of 5%. Based on the results of the analysis obtained results of the study are: (1) increase the ability of the mathematical representation of students who obtain a model of project-based learning is higher than students who received teaching ordinary, (2) increase students' motivation to obtain model of project-based learning is higher than students who obtaining regular learning, (3) there is no interaction between learning model with early mathematical ability of students to the mathematical representation of the ability of students, (4) there is no interaction between learning model with early mathematical ability of students to the students' motivation. The research findings recommend a project-based learning model used as one of the learning models used in primary schools to achieve creative competence, varied and innovative.

Keywords: Project Based Learning Model, Ability of Mathematical Representation and Student's Motivation Learning.