

ABSTRAK

YUNI NELVIANTI. Peningkatan Kemampuan Representasi dan Disposisi Matematis Melalui Model Pembelajaran Berbasis Masalah di SMA DHARMAWANGSA Medan. Tesis. Medan: Program Studi Pendidikan Matematika Pasca Sarjana Universitas Negeri Medan, 2016.

Kata Kunci: Pembelajaran Berbasis Masalah, Representasi dan Disposisi Matematis

Tujuan penelitian ini untuk mengetahui: (1) Apakah kemampuan representasi matematik siswa yang memperoleh pembelajaran berbasis masalah lebih baik dari pada pembelajaran biasa. (2) Apakah kemampuan disposisi matematis siswa yang memperoleh pembelajaran berbasis masalah lebih baik dari pada pembelajaran biasa. (3) interaksi antara model pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan representasi matematis siswa, (4) interaksi antara model pembelajaran dengan kemampuan awal matematik siswa terhadap peningkatan disposisi matematis siswa (5) peningkatan kemampuan representasi matematik siswa setelah memperoleh pembelajaran berbasis masalah, (6) peningkatan disposisi matematis siswa setelah memperoleh pembelajaran berbasis masalah, (7) bagaimana proses penyelesaian jawaban yang dibuat siswa dalam menyelesaikan masalah mengenai kemampuan representasi pada pembelajaran berbasis masalah dan pembelajaran biasa. Populasi penelitian ini adalah siswa kelas XI IPA SMA Dharmawangsa Medan. Kemudian secara acak dipilih dua kelas berjumlah 60 orang. Kelas eksperimen diberi perlakuan pembelajaran berbasis masalah dan kelas kontrol diberi perlakuan pembelajaran biasa. Instrumen yang digunakan terdiri dari: (1) tes kemampuan representasi matematik, (2) tes angket disposisi matematis. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi, serta koefisien reliabilitas sebesar 0,53 dan 0,81 berturut-turut untuk kemampuan representasi dan disposisi matematis. Analisis data dilakukan dengan uji statistik uji-t dan uji Anava 2 jalur. Hasil penelitian menunjukkan bahwa: (1) Kemampuan representasi matematik siswa yang memperoleh pembelajaran berbasis masalah lebih baik dari pada pembelajaran biasa dengan rata-rata kelas eksperimen 25,600 dan *mean* kelas kontrol 22,900. (2) Kemampuan disposisi matematis siswa yang memperoleh pembelajaran berbasis masalah (PBM) lebih baik dari pada pembelajaran biasa dengan hasil postes disposisi matematis siswa diperoleh *mean* kelas eksperimen 92,400 dan *mean* kelas kontrol 82,870. (3) Tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan kemampuan representasi matematik siswa, (4) Tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan disposisi matematis siswa, (5) Peningkatan kemampuan representasi matematik siswa melalui pembelajaran berbasis masalah. Hal ini terlihat dari hasil analisis uji statistik diperoleh rata-rata *N-Gain* sebesar 0,521, (6) Peningkatan disposisi matematis siswa yang diberi pembelajaran berbasis masalah. Hal ini terlihat dari hasil analisis uji statistik terhadap hasil rata-rata *N-Gain* sebesar 0,571. (7) Proses penyelesaian jawaban siswa yang pembelajarannya dengan menggunakan pembelajaran berbasis masalah lebih baik dibandingkan dengan pembelajaran biasa.

ABSTRACT

YUNI NELVIANTI. Increasing Mathematics Representation Ability and the students mathematics disposition Through Problem-Based Learning Instruction of Dharmawangsa Senior High School in Medan. Tesis. Field: Mathematics Education Program Post-Graduate Studies, State University of Medan, 2016.

Keywords: Problem-Based Learning, Mathematical Representation and the students mathematics disposition

The purpose of this study to determine: (1) whether the mathematical representation ability of students who received problem-based learning is better than the students who received the conventional learning. (2) whether the students mathematics disposition acquire mathematical problem-based learning is better than the students who received the conventional learning. (3) Determine whether there is not an interaction between the learning model with the students' ability of early mathematics towards improving the students' mathematical problem solving ability, (4) Determine whether there is not an interaction between the learning model with the students' ability of early mathematic towards improving the students mathematics disposition (5) increasing mathematical representation ability of students after obtaining problem-based learning (6) increasing the students mathematics disposition after obtaining mathematical problem-based learning. (7) how the process of solution of the answers that the students in solving problems regarding the representation and the students mathematics disposition in problem-based learning and the conventional learning. The study population was the students of class XI SMA Dharmawangsa Medan. Then randomly selected two classes numbered sixty peoples. Experimental class treated problem-based learning and classroom learning control treated normal. The instrument used consists of: (1) Test the mathematical representation ability, (2) Quitoner of the students mathematics disposition. The instrument has been declared eligible content validity, and reliability coefficient of 0.891 and 0.708 respectively for mathematical representation skills and the students mathematics disposition. Data analysis was performed with test analysis T and ANAVA Two-Ways. The results showed that (1) The mathematical problem solving ability of students who received problem-based learning (PBM) is better than the students who received the conventional learning. This is evident from the results of the analysis of the results of statistical test to post-test mathematical representation ability of students were given a problem-based learning obtained a mean grade experiment class 25,600 and the mean control class 22,900. (2) The students mathematics disposition acquire mathematical problem-based learning (PBM) is better than the students who received the conventional learning. This is evident from the results of the analysis of the results of statistical test to post-test students' mathematical the students mathematics disposition were given a problem-based learning obtained mean experimental class 92,400 and the mean control class 82,870. (3) There is not an interaction between the learning model with the

students' ability of early mathematics towards improving the students' mathematical representation ability, (4) There is not an interaction between the learning model with the students' ability of early mathematics towards the improving the students' mathematics disposition. (5) Improving students' mathematical representation ability of students with an average N-Gain 0,521. (6) Improving student's mathematics disposition of students with an average N-Gain 0.571. (7) The process of solution of the answers of students learning by using problem-based learning is better than the conventional learning.



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