

ABSTRAK

Adi Suarman Situmorang, (2013). Peningkatan Kemampuan Pemahaman dan Kreativitas Matematika siswa dengan menggunakan model pencapaian konsep pada kelas X SMA Negeri 5 Medan. Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2012.

Tujuan penelitian dalam desain Eksperimen semu ini menyelidiki Peningkatan Model pencapaian konsep atas kemampuan pemahaman matematis siswa, kemampuan kreativitas matematis siswa, dan Interaksi antara pendekatan pembelajaran dengan kemampuan awal siswa terhadap perbedaan kemampuan pemahaman matematis dan kreativitas matematis siswa. Aktivitas siswa selama proses pembelajaran model pencapaian konsep. Penelitian ini dilaksanakan di SMA Negeri 5 Medan sebanyak 80 siswa yang keseluruhan sebanyak 364 siswa SMA kelas X, Penelitian ini merupakan suatu studi eksperimen dengan desain penelitian *pre-test-post-test control group design*. populasi dalam penelitian ini adalah seluruh siswa kelas 1 (satu) dengan mengambil sampel dua kelas (kelas eksperimen dan kelas kontrol) melalui teknik random sampling. Data diperoleh melalui nilai semester untuk KAM, tes kemampuan pemahaman matematis, tes kemampuan kreativitas matematis. Data dianalisis dengan uji ANAVA dua jalur. Sebelum digunakan uji ANAVA dua jalur terlebih dahulu dilakukan uji homogenitas dalam penelitian dan normalitas dalam penelitian ini dengan taraf signifikan 5%. Hasil analisis data menunjukkan bahwa rata-rata tes kemampuan pemahaman matematis kelas eksperimen adalah 34,64 dan kelas kontrol adalah 22,71 dengan nilai $sig = 0$, dengan $0 < \alpha = 0,05$ maka terdapat perbedaan kemampuan Pemahaman matematik siswa yang diajarkan dengan Model Pencapaian Konsep (MPK) dengan Pendekatan Pembelajaran Konvensional, rata-rata tes kemampuan kreativitas eksperimen dan kontrol adalah 13,3 dan 7,58 dengan p-value (2-tailed) adalah 0, dengan $0 < \alpha = 0,05$ maka terdapat perbedaan kemampuan kreativitas matematik siswa yang diajarkan dengan Model Pencapaian Konsep (MPK) dan Pendekatan Pembelajaran Konvensional, nilai signifikan sebesar 0,062, karena $0,062 > 0,05$ maka tidak adanya interaksi antara pendekatan pembelajaran dengan kemampuan awal siswa terhadap perbedaan kemampuan pemecahan masalah matematik siswa, nilai signifikan sebesar 0,444, karena $0,444 > 0,05$ maka tidak adanya interaksi antara pendekatan pembelajaran dengan kemampuan awal siswa terhadap perbedaan kemampuan kreativitas matematik siswa, Proses penyelesaian masalah yang dibuat oleh siswa dalam menyelesaikan masalah pada Model Pembelajaran (MPK) lebih bervariasi daripada Pendekatan Pembelajaran Konvensional. Temuan penelitian merekomendasikan PMR dijadikan salah satu pendekatan pembelajaran yang digunakan di sekolah utamanya untuk mencapai kompetensi berpikir tinggi.

Kata Kunci : Model pencapaian konsep (MPK), Pemahaman Matematis, Kreativitas matematis.

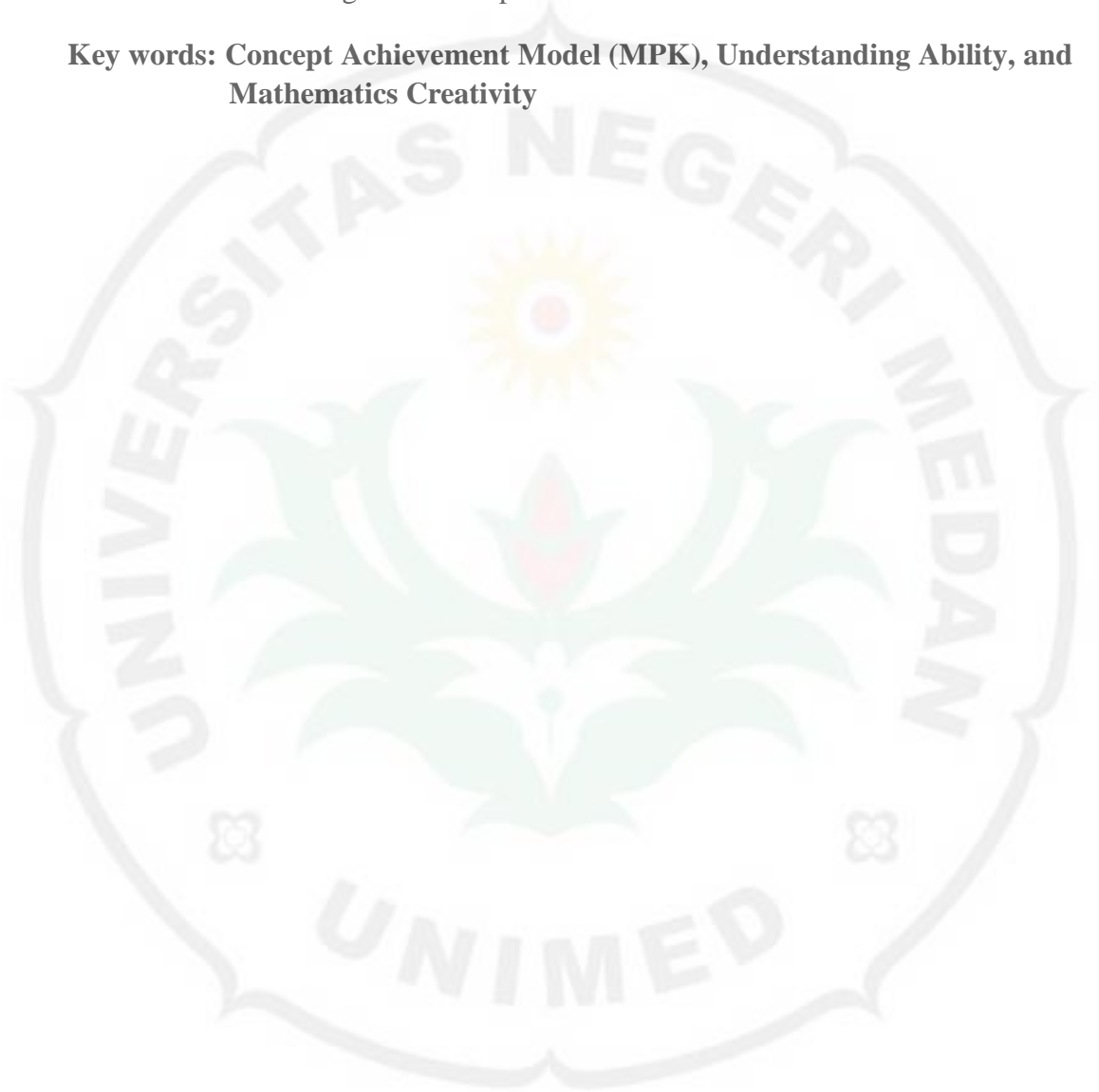
ABSTRACT

Adi Suarman Situmorang, (2012). Improvement Understanding Ability and Creativity on Mathematics for Students by Using Concept Achievement Model on Class X SHS 5 Medan. Thesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2012.

The objective of the research in an semi experimental design is to investigate the improvement of concept achievement model in to the understanding ability of students on matemetics, the creativity of students on matemetics, and the interaction between learning with basic performance towards their understanding and creativity ability on mathematics. Students learning activities during the implemetation of the model was recorded. The research was conducted in Senior High School (SHS) 5 Medan. The sample was selected 80 students from 340 population of Class X SHS students. The research was carried out by using pre-test-post-test control group design. The sample were selected randomly from year X SHS students, and then they were grouped ino two groups which were named as experimental class and control class. The data for studentst KAM was chosen based on their semester achievement, while the other data were obtained by using mathematics performance test and mathematics creativity test. The data was analyzed by using two side ANAVA test. The homogeneity tes and normality test at 5% significancy were performed before applied the ANAVA test for implementation. The reseults showed that the avarage for students performance on Understanding Ability on mathematics was 34.64 for experimental class, it was higher than that 22.71 for control class, both are at sig = 0, with $0 < \alpha = 0.05$. The result indicate that there was differences in students' understanding ability on mathematics for those are taught by using Concept Achievement Model (CAM) with conventional teaching. The avarage for Creativity ability for experimental and control groups were successively 13.3 and 7.58 with p-value (2-tailed) is 0, with $0 < \alpha = 0,05$. There was a different in students Creativity ability when they were taught using Concept Achievement Model (CAM) compared with conventional teaching, where the significance level is 0.062 since $0.062 > 0,05$. There was no interaction between teaching implementation with students basic ability towards the variation in the students ability on solving mathematics problems, where the significancy is obtained 0.444 since $0.444 > 0.05$. There was no interaction between teaching implementation by using students' basic performance towards the difference in mathematics Creativity ability of the students. The process on solving mathematics problems generated by the students in implementing the Concept Achievement Model were vary compared to those with conventional teaching. The recomendation from the reseach results was

hoping that the Concept Achievement Model (CAM) can be implemented into SHS schools to achieve a high level competence in mathematics.

Key words: Concept Achievement Model (MPK), Understanding Ability, and Mathematics Creativity



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