

ABSTRAK

LAILI HABIBAH PASARIBU. Penerapan Model Pembelajaran kooperatif Tipe STAD Berbantuan *Software Autograph* untuk Meningkatkan Kemampuan Komunikasi dan *Self-Efficacy* Siswa di SMP Kota Padangsidimpuan. Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan. 2012.

Kata kunci: Pendekatan Kooperatif Tipe STAD, Komunikasi Matematika, *Self-efficacy*, *Software Autograph*

Penelitian ini bertujuan untuk mengetahui: (1) Apakah terdapat perbedaan kemampuan komunikasi siswa pada masing-masing pembelajaran (2) Apakah terdapat perbedaan *self-efficacy* siswa pada masing-masing pembelajaran (3) Apakah terdapat peningkatan kemampuan komunikasi dan *self-efficacy* matematik siswa pada masing-masing pembelajaran (4) Ada interaksi antara pendekatan kooperatif tipe STAD dengan kemampuan awal matematik (KAM) terhadap peningkatan komunikasi matematika siswa, (5) Ada interaksi antara pendekatan kooperatif tipe STAD dengan kemampuan awal matematik (KAM) dalam peningkatan *self-efficacy* siswa, (6) Proses penyelesaian jawaban siswa pada masing-masing pembelajaran.

Penelitian ini merupakan penelitian kuasi eksperimen. Populasi penelitian ini siswa kelas IX yang berakreditasi A di kota Padangsidimpuan. Secara acak dipilih dua sekolah sebagai subjek penelitian yaitu SMPN 1 dan SMP Nurul Ilmi. Kelas eksperimen diberikan perlakuan pendekatan kooperatif tipe STAD berbantuan *software Autograph* dan kelas kontrol diberi perlakuan pembelajaran biasa berbantuan *software Autograph*. Instrumen yang digunakan terdiri dari: tes kemampuan komunikasi dan *self-efficacy* dinyatakan telah telah memenuhi syarat validatas isi serta koefisien reliabilitas sebesar 0,73. Hasil penelitian menunjukkan bahwa: (1) Tidak terdapat perbedaan kemampuan komunikasi matematika siswa pada masing-masing pembelajaran (2) Terdapat perbedaan kemampuan *self-efficacy* siswa masing-masing pembelajaran (3) Terdapat peningkatan kemampuan komunikasi matematika dan *self-efficacy* siswa pada masing-masing pembelajaran, (4) Tidak Terdapat interaksi antara pendekatan pembelajaran kooperatif tipe STAD dengan kemampuan awal matematik (tinggi, rendah) dalam meningkatkan kemampuan komunikasi siswa, (5) Tidak Terdapat interaksi antara pendekatan pembelajaran kooperatif tipe STAD dengan kemampuan awal matematik (tinggi, rendah) dalam meningkatkan *self-efficacy* siswa, (6) Proses penyelesaian jawaban siswa yang diajar dengan pembelajaran kooperatif tipe STAD yang menggunakan *software Autograph* lebih bervariasi proses penyelesaian jawaban siswa yang diajar dengan pembelajaran biasa yang menggunakan *software Autograph*. Berdasarkan temuan penelitian, disarankan sbb: Pembelajaran menggunakan kooperatif tipe STAD berbantuan *software Autograph* pada pembelajaran matematika yang menekankan kepada kemampuan komunikasi dan *self-efficacy* siswa dapat dijadikan sebagai salah satu alternatif untuk menerapkan pembelajaran matematika yang inovatif khususnya dalam mengajarkan materi statistik di kelas IX. Pada pembelajaran biasa hendaknya guru dapat memberikan motivasi lebih kepada siswa untuk dapat mengajak siswa dalam penekanan “*process of doing mathematics*” dengan memberikan lembar aktivitas yang dikerjakan oleh siswa sendiri.

ABSTRACT

LAILI HABIBAH PASARIBU. The application of Cooperative Learning Model Type STAD Software-assisted Autograph to improve Communication Skills and Self-Efficacy of Students in Junior High School Of Padangsidempuan. Thesis. Study Programs Postgraduate Mathematics Education State University of Medan, 2012.

Keywords: The approach of Cooperative Type STAD, Communication Mathematics, *Self-efficacy, software Autograph*

This research aimed at to know: (1) Whether there are differences in the ability of communication students in each learning (2) Whether there are differences in *self-efficacy* of students in each learning (3) Whether there is increased communication skills and *self-efficacy* on students ' mathematical each learning (4) there is an interaction between type of cooperative approaches with mathematical ability early STAD (KAM) to increased communication of mathematics students, (5) there is a cooperative approach to the interaction between the types of mathematical ability early with STAD (THURS) in increased *self-efficacy* of student (6) the process of solving students ' answers on the respective instruction. This research was quasi experimental research. The population of this research grade IX accredited A Padangsidempuan in the city. Randomly selected two schools as a subject of research i.e. SMP 1 and JUNIOR Nurul Ilmi. Experimental class given the type of cooperative approach to treatment STAD software-assisted Autograph and control classes were given the usual learning software-assisted treatment Autograph. Instruments used include: test communication skills and self-efficacy is declared to have been been eligible validatas the contents as well as the reliability coefficient of 0.73. The results showed that: (1) there is no difference in math communication skills of students in each learning (2) there are differences in the ability of self-efficacy of students individual learning (3) there is an increase in math communication skills and self-efficacy of students in each learning, (4) there was no interaction between the cooperative learning approach with early type mathematical ability STAD (high, low) in improving students ' communication skills, (5) there is no interaction between the cooperative learning approach with early type mathematical ability STAD (high, low) in improving self-efficacy of the students, (6) the process of settlement of the answers that students taught with cooperative learning type STAD who use software Autograph more varied resolution process answers to students who were taught with the usual learning using software Autograph. Based on research findings, it is recommended: Learning to use the software-assisted cooperative type STAD Autograph on learning mathematics that emphasizes the communication skills and *self-efficacy* of students can serve as an alternative to implement innovative math learning especially in teaching statistical material in class IX. On learning usual should be the teacher could provide motivation more to the students to be asked the students in emphasis "process of doing mathematics " by giving sheets of the activity of work to be done by the students themselves.