ABSTRAK

RIRIS PESTA ULI SIMAMORA. Perbedaan Kemampuan Komunikasi Matematis dan Self-efficacy Siswa yang diberi pembelajaran matematika dengan Pendekatan Matematika Realistik dan Pembelajaran Berbasis Masalah dengan Berbantuan Autograph. Tesis Program Studi Pendidikan Matematika Pasca Sarjana Universitas Negeri Medan 2016.

Kata Kunci: Pendekatan Matematika realistik, Pembelajaran Berbasis Masalah, Autograph, Kemampuan Komunikasi Matematis, Self-efficacy Siswa.

Tujuan dari penelitian ini adalah untuk menganalisis apakah terdapat perbedaan: (1) kemampuan komunikasi matematis antara siswa yang diberi pembelajaran matematika dengan Pendekatan Matematika Realistik (PMR) dan Pembelajaran Berbasis Masalah dengan Berbantuan Autograph di SMA Kelas XI Tahun Ajaran 2016/2017. (2) kemampuan self-efficacy antara siswa yang diberi pembelajaran matematika dengan Pendekatan Matematika Realistik (PMR) dan Pembelajaran Berbasis Masalah dengan Berbantuan Autograph di SMA Kelas XI Tahun Ajaran 2016/2017. (3) Proses jawaban siswa dalam penerapan pembelajaran matematika dengan Pendekatan Matematika Realistik (PMR) dan Pembelajaran Berbasis Masalah dengan Berbantuan Autograph di SMA Kelas XI Tahun Ajaran 2016/2017. Penelitian ini merupakan penelitian semi eksperimen dengan desain *Pretes-Posttest Control Group Design*. Sampel penelitian ini adalah siswa kelas XI SMA Negeri 2 Bandar. Kemudian secara acak dipilih dua kelas dari empat kelas. Kelas eksperimen-1 diberi perlakuan Pendekatan Matematika Realistik Berbantuan Autograph dan kelas eksperimen-2 diberi perlakuan Pembelajaran Berbasis Masalah Berbantuan Autograph. Instrumen yang digunakan terdiri dari: tes kemampuan komunikasi matematis, angket skala self-efficacy siswa. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi, serta koefisien reliabilitas sebesar 0,89 dan 0,92 berturut-turut untuk kemampuan komunikasi matematis dan self-efficacy siswa terhadap matematika. Analisis data dilakukan melalui analisis kovarians (ANAKOVA). Hasil utama dari penelitian ini adalah perbedaan: komunikasi matematis siswa dan self-efficacy siswa terhadap matematika yang diajar melalui Pendekatan Matematika Realistik Berbantuan Autograph berbeda dengan siswa yang diajar dengan Pembelajaran Berbasis Masalah Berbantuan Autograph. Secara deskriptif juga dikaji jawaban dari rumusan masalah yaitu: Proses jawaban siswa yang diajar melalui Pendekatan Matematika Realistik Berbantuan Autograph berbeda dengan siswa yang diajar dengan Pembelajaran Berbasis Masalah Berbantuan Autograph. Berdasarkan hasil penelitian, maka peneliti menyarankan: Pendekatan Matematika Realistik Berbantuan Autograph dengan siswa yang diajar dengan Pembelajaran Berbasis Masalah Berbantuan Autograph dapat dijadikan salah satu alternatif pembelajaran matematika yang inovatif untuk meningkatkan kemampuan komunikasi matematis dan self-efficacy siswa terhadap matematika.

ABSTRACT

RIRIS PESTA ULI SIMAMORA. Differences in Mathematical Communication Skills and Self-efficacy Students who are given mathematics learning with Realistic Mathematics Approach and Problem Based Learning with Autograph Assisted. Thesis of Mathematics Education Program Post-Graduate of Medan State University 2016.

Keywords: Realistic Math Approach, Problem Based Learning, Autograph, Mathematical Communication Skill, Student Self-efficacy.

The purpose of this study is to analyze whether there are differences in (1) the ability of mathematical communication between students who were given mathematics learning with Realistic Mathematics Approach (PMR) and Problem Based Learning with Autograph Assistance in SMA XI Class of Academic Year 2016/2017. (2) the ability of self-efficacy between students who are given mathematics learning with Realistic Mathematics Approach (PMR) and Problem Based Learning with Autograph Assistance in SMA XI Class of the academic Year 2016/2017. (3) The process of student answers in the application of mathematics learning with Realistic Mathematics Approach (PMR) and Problem Based Learning with Autograph Assisted in SMA XI Class of Academic Year 2016/2017. This research is a semi experimental research with Pretes-Posttest Control Group Design design. The sample of this research is the students of class XI SMA Negeri 2 Bandar. Then randomly selected two classes of four classes. The experimental class-1 was treated Autistic Realistic Assisted Autograph Approach and the experimental class-2 were treated by Problem Based Learning Autograph. The instrument used consisted of: mathematical communication ability test, student self-efficacy scale questionnaire. The instrument is said to have fulfilled the terms of content validity, as well as reliability coefficient of 0.89 and 0.92 respectively for mathematical communication and student self-efficacy to mathematics. Data analysis was done through analysis of covariance (ANAKOVA). The main results of this study were the differences: students 'mathematical communication and students' self-efficacy toward mathematics taught through Autistic Realistic Assisted Autograph Approaches were different from those taught by Autograph-Based Problem-Based Learning. Descriptively also reviewed the answer of the problem formulation that is: The process of student answers taught through Autistic Realistic Assisted Autograph Approach differ from students taught by Problem Based Learning Autograph. Based on the results of the research, the researcher suggests: Autistic Realistic Assisted Autograph Approach with students who are taught by Problem Based Learning Autograph can be used as an alternative to innovative mathematics learning to improve mathematical communication ability and student self-efficacy toward mathematics.