

ABSTRAK

ROSMITA SARI SIREGAR. Perbedaan Peningkatan Kemampuan Komunikasi Dan Disposisi Matematis Antara Siswa Yang Diberi Model *Problem Based Learning* dan *Discovery Learning* Di SMP Al- Hidayah Medan. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2016.

Penelitian ini bertujuan untuk mengetahui perbedaan : (1) peningkatan kemampuan komunikasi antara siswa yang diberi model *problem based learning* dan *discovery learning*. (2) peningkatan disposisi matematis antara siswa yang diberi model *problem based learning* dan *discovery learning*, (3) Interaksi antara kemampuan awal matematika (tinggi, sedang, rendah) siswa dengan pembelajaran (model *problem based learning* dan *discovery learning*) terhadap kemampuan komunikasi matematis, (4) Interaksi antara kemampuan awal matematika (tinggi, sedang, rendah) siswa dengan pembelajaran (model *problem based learning* dan *discovery learning*) terhadap disposisi matematis siswa, (5) pola jawaban yang dibuat siswa dalam menyelesaikan masalah pada masing-masing pembelajaran. Penelitian ini merupakan penelitian kuasi eksperimen. Populasi penelitian inisiswa Sekolah Menengah Pertama Al -Hidayahyang terakreditasi B.Pemilihan sampel dilakukan secara random dengan mengacak kelas. Instrumen yang digunakan terdiri dari: (1) tes kemampuan awal matematika siswa (2) tes kemampuan komunikasi, dengan pokok bahasan persegi dan persegi panjang (3) angket disposisi matematis. Adapun tes yang digunakan untuk memperoleh data adalah berbentuk uraian. Data dalam penelitian ini dianalisis dengan menggunakan analisis statistik deskriptif dan analisis inferensial. Analisis deskriptif ditujukan untuk mendeskripsikan pola jawaban siswa pada model *problem based learning* dan *discovery learning*. Analisis inferensial data dilakukan dengan analisis kovarians (ANAKOVA) dan analisis varians (ANAVA). Hasil penelitian menunjukkan bahwa : (1) terdapat perbedaan peningkatan kemampuan komunikasi matematika antara siswa yang diberi model *problem based learning* dan *discovery learning*. Hal ini terlihat dari hasil analisis kovarians (ANAKOVA) untuk F hitung adalah 7,14 lebih besar dari F tabel yaitu 4,00. Konstanta persamaan regresi untuk pembelajaran *problem based learning* yaitu 31,89 lebih besar dari *discovery learning* yaitu 19,28 (2) terdapat perbedaan peningkatan kemampuan disposisi matematis antara siswa yang diberi model *problem based learning* dan *discovery learning*. Hal ini terlihat dari hasil analisis kovarians (ANAKOVA) untuk F hitung adalah 10,95 lebih besar dari F tabel yaitu 4,00. Konstanta persamaan regresi untuk pembelajaran *problem based learning* yaitu 42,69 lebih besar dari *discovery learning* yaitu 30,28.(3) tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan kemampuan komunikasi, (4) tidak terdapat interaksi antara pembelajaran dengan kemampuan awal siswa terhadap peningkatan dsiposisi matematis siswa, (5) Pola jawaban siswa pada pembelajaran *problem based learning* lebih baik dibandingkan dengan *discovery learning*. Berdasarkan hasil penelitian ini, maka peneliti menyarankan agar model *problem based learning* pada pembelajaran matematika dapat dijadikan alternatif bagi guru matematika untuk meningkatkan kemampuan komunikasi dan disposisi matematis siswa sebagai salah satu alternatif untuk menerapkan pembelajaran matematika yang inovatif.

ABSTRACT

ROSMITA SARI SIREGAR. The differences in Enhancement of Ability in Mathematics Communication between Students Given Problem-based Learning and Discovery Learning AtSMP AL-Hidayah Medan. Thesis. Medan: Mathematics Education Study Program Postgraduate School of University of Medan, 2016.

This study was aimed to determine the differences: (1) the enhancement of ability in math communication between students who were given problem-based learning with students who were given discovery learning. (2) the enhancement of ability in math disposition ability between students who were problem-based learning with students who were given discovery learning, (3) the interaction between learning model and early math skills of students mathematical communication (4) the interaction between model of learning and early math skills of students of students' mathematical disposition, (5) the pattern of answers that the students make in solving problems in each lesson. This study was a quasi-experimental research. The population of study was the students of SMP AL-Hidayah Medan with accreditation B. Random sample selection is done by randomizing the class. The instrument used consists of: (1) the test of early mathematics ability (2) the test of communication, with the subject square and rectangular. (3) the observation mathematical disposition. The tests used to obtain the data was the description. The data in this study were analyzed using descriptive statistical analysis and inferential analysis. Descriptive analysis aimed to describe patterns of student answers on the model of problem-based learning and direct instruction. Inferential data analysis performed by analysis of covariance (ANAKOVA) and analysis varians (ANAVA). The results showed that: (1) there is a difference in the enhancement of ability of mathematical communication between students who were given problem-based learning with students who were given discovery learning. It can be seen from the results of analysis of covariance (ANAKOVA) for F count is 7,14 greater than F table is 4,00. Regression equation constants for problem-based learning that is 31,89 greater than discovery learning of 19,28 (2) there is a difference in enhancement of mathematics disposition ability between students who were given problem-based learning and those who were discovery learning. It can be seen from the results of analysis of covariance (ANAKOVA) for F count 10,95 greater than F table is 4,00. Regression equation constants for problem-based learning that is 42,69 greater than discovery learning of 30,28 (3) There is no interaction between the model of learning and early math skills of students to communication abilities of students. (4) There is no interaction between the model of learning and early math skills of students of students' mathematical disposition (5) The pattern of students' answers to the problem-based learning is better than discovery learning. Based on these results, the researcher suggest that the model of problem-based learning in Mathematics learning can be an alternative for Math teachers to improve their mathematical communication and Mathematics students disposition as an alternative for implementing the innovative learning on Mathematics.