ABSTRAK

CUT IZZAH FARAHIYA. Perbedaan Peningkatan Kemampuan Komunikasi dan Disposisi Matematis antara Siswa yang Diberi Pembelajaran *Problem Based Learning* dengan Siswa yang Diberi Pembelajaran *Realistic Mathematics Education* di MTsN Ulumul Qur'an Langsa. Tesis. Program Studi Pendidikan Matematika Pasca Sarjana Universitas Negeri Medan. 2015.

Penelitian ini bertujuan untuk mengetahui: (1) perbedaan peningkatan kemampuan komunikasi matematik siswa yang diajarkan melalui model PBL dengan siswa yang menggunakan model RME, (2) perbedaan peningkatan disposisi matematis siswa yang diajarkan melalui model PBL dengan siswa yang menggunakan model RME, (3) aktivitas siswa selama proses pembelajaran melalui penerapan model PBL dan siswa yang diajarkan melalui model RME; dan 4) respon siswa terhadap penerapan model PBL dan model RME. Teknik pengambilan sampel dalam penelitian ini dilakukan secara acak (*cluster random sampling*), dua kelas yang terpilih adalah kelas VIII-2 MTsN Ulumul Qura'an Langsa sebagai kelas eksperimen$_1$ dan kelas VIII-5 MTsN Ulumul Qura'an Langsa sebagai kelas eksperimen$_2$, kelas eksperimen$_1$ diberi perlakuan pembelajaran *problem based learning*, kelas ekseperimen$_2$ diberi perlakuan pembelajaran *realistic mathematics education*. Instrumen yang digunakan dalam penelitian ini yaitu instrumen kemampuan komunikasi matematis dan angket disposisi matematis yang telah dinyatakan valid dan reliabel. Analisa data dilakukan dengan ANAVA dan secara deskriptif. Dari hasil penelitian dapat disimpulkan: (1) terdapat perbedaan yang signifikan terhadap peningkatan kemampuan komunikasi matematik antara siswa yang diberi pembelajaran model *problem based learning* (PBL) dengan siswa yang diberi pembelajaran *realistic education mathematics* (RME), (2) terdapat perbedaan yang signifikan terhadap disposisi matematis antara siswa yang diberi pembelajaran model *problem based learning* (PBL) dengan siswa yang diberi pembelajaran *realistic education mathematics* (RME), (3) Pada pengamatan observasi aktivitas siswa pada pembelajaran *problem based learning* (PBL) kategori aktivitas siswa sudah memenuhi kriteria persentase waktu ideal, demikian juga pada kelas yang diberi pembelajaran dengan menggunakan pembelajaran *realistic mathematics education* (RME) telah memenuhi kriteria persentase waktu ideal aktivitas siswa; dan 4) Hasil respon siswa terhadap model *problem based learning* (PBL) menunjukkan respon yang positif dengan perolehan rerata total sebesar 90,4%, demikian juga halnya dengan siswa yang diberi pembelajaran dengan *realistic mathematics education* (RME) menunjukan adanya respon positif terhadap proses pembelajaran yang diberikan dengan perolehan rerata total sebesar 93,34%.

Kata Kunci: *Problem Based Learning* **(PBL),** *Realistic Mathematics Educatio* **(RME), Kemampuan Komunikasi Matematis, Disposisi Matematis.**

ABSTRACT

CUT IZZAH FARAHIYA. Differences Improvement of Communications Ability and Mathematical Disposition Students who Given by Learning Problem Based Learning and Students who Given by Realistic Mathematics Education in MTsN Ulumul Quran Langsa. Thesis. Medan: Department of Educational Mathematics Post-Graduate State University of Medan, 2015.

This study aims to determine: (1) differences in improvement of communication capabilities mathematics students taught through the model PBL with students who use the model RME, (2) differences in the increase in the disposition of mathematical students taught through the model PBL with students who use the model RME, (3) the activity of students during the learning process through application of the model PBL and students are taught through the model RME; and 4) The students' response to the application of PBL models and models RME. The sampling technique in this research is done randomly (cluster random sampling), two classes were chosen is a class VIII-2 MTsN Ulumul Qura'an Langsa as eksperimen$_1$ class and class VIII-5 MTsN Ulumul Qura'an Langsa as eksperimen$_2$ class, class eksperimen$_1$ untreated learning problem based learning, classroom learning ekseperimen$_2$ treated realistic mathematics education. Instruments used in this research instrument mathematical communication skills and mathematical disposition questionnaire that has been declared valid and reliable. The data were analyzed with ANOVA and descriptive. From the research results can be concluded: (1) there is a significant difference to improving the communication skills of mathematics among students who were learning model of problem-based learning (PBL) with students who were learning realistic education mathematics (RME), (2) there is a significant difference against disposition mathematically between students who were learning model of problem-based learning (PBL) with students who were learning realistic education mathematics (RME), (3) On the observation of student activity observation on learning problem based learning (PBL) category of student activity meets the criteria percentage of time ideal, as well as in a class by learning using learning realistic mathematics education (RME) has met the criteria for an ideal percentage of time the student activity; and 4) The results of the students' response to the model of problem-based learning (PBL) showed a positive response to the acquisition of the average total of 90.4%, as well as with students who were learning with realistic mathematics education (RME) showed a positive response to the learning process given the average total acquisition amounted to 93.34%.

Keywords: Problem Based Learning (PBL), Realistic Mathematics Education (RME), Communication Mathematics Ability, Mathematical Disposition.