# ABSTRAK

**KHAIRUNNISA. Peningkatan Kemampuan Representasi Matematis dan Minat Belajar Matematika Siswa Melalui Pendekatan Realistik Berbasis Budaya Melayu Langkat di MTs Negeri Tanjung Pura Kabupaten Langkat**. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2016.

Penelitian ini bertujuan untuk: (1) Menganalisis peningkatan kemampuan representasi matematis siswa yang diajar melalui pendekatan realistik berbasis budaya Melayu Langkat lebih tinggi daripada siswa yang diajar melalui pembelajaran biasa; (2) Menganalisis peningkatan minat belajar matematika siswa yang diajar melalui pendekatan realistik berbasis budaya Melayu Langkat lebih tinggi daripada siswa yang diajar melalui pembelajaran biasa; (3) Menganalisis interaksi antara pembelajaran dengan kemampuan awal matematika (tinggi, sedang, rendah) siswa terhadap kemampuan representasi matematis siswa; (4) Menganalisis interaksi antara pembelajaran dengan kemampuan awal matematika (tinggi, sedang, rendah) siswa terhadap minat belajar matematika siswa; dan (5) Menganalisis proses jawaban matematika siswa terkait kemampuan representasi matematis pada masing-masing pembelajaran. Penelitian ini merupakan jenis penelitian kuasi eksperimen. Populasi dalam penelitian ini adalah seluruh siswa MTs Negeri Tanjung Pura Kabupaten Langkat pada kelas VII yang terdiri dari 7 kelas parallel dan terpilih secara acak dua kelas. Instrumen penelitian yang digunakan terdiri dari tes kemampuan representasi matematis dan angket minat belajar matematika. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi, serta koefisien reliabilitas sebesar 0,431 dan 0,791 berturut-turut untuk kemampuan representasi matematis dan minat belajar matematika. Analisis data yang digunakan adalah ANAVA dua jalur dan analisis deskriptif proses jawaban matematika siswa. Hasil penelitian menunjukkan bahwa (1) Peningkatan kemampuan representasi matematis siswa yang diajar melalui pendekatan realistik berbasis budaya Melayu Langkat lebih tinggi daripada siswa yang diajar melalui pembelajaran biasa; (2) Peningkatan minat belajar matematika siswa yang diajar melalui pendekatan realistik berbasis budaya Melayu Langkat lebih tinggi daripada siswa yang diajar melalui pembelajaran biasa; (3) Tidak terdapat interaksi antara pembelajaran dengan kemampuan awal matematika (tinggi, sedang, rendah) siswa terhadap peningkatan kemampuan representasi matematis siswa; (4) Tidak terdapat interaksi antara pembelajaran dengan kemampuan awal matematika (tinggi, sedang, rendah) siswa terhadap peningkatan minat belajar matematika siswa; dan (5) Proses jawaban matematika siswa terkait kemampuan representasi matematis pada siswa yang diajar melalui pendekatan realistik berbasis budaya Melayu Langkat lebih baik daripada siswa yang diajar melalui pembelajaran biasa.

**Kata Kunci:** Kemampuan Representasi Matematis, Minat Belajar Matematika, Pendekatan Realistik Berbasis Budaya Melayu Langkat, Pembelajaran Biasa dan Kemampuan Awal Matematika Siswa.

# ABSTRACT

**KHAIRUNNISA. Enhancement of Mathematical Representation Ability and Interest in Mathematics Learning Through Realistic Approach Based on Langkat Malay Culture in MTs Negeri Tanjung Pura of Langkat District .** Thesis. Medan: Mathematics Education Graduate Program State University of Medan, 2016

This research aimed to: (1) Analyze the mathematical representation increased capacity students taught through a realistic approach based Langkat Malay culture higher than students taught through regular learning ; (2) Analyze the increased interest in learning mathematics students taught through a realistic approach based Langkat Malay culture higher than students taught through regular learning; (3) Analyze interaction between the learning with prior knowledge of mathematics (high, medium, low) students' abilities to the ability of students mathematical representation; (4) Analyze interaction between the learning with prior knowledge of mathematics (high, medium, low) students' abilities to the student interest in mathematics learning; as well as the answers to the ability of a mathematical representation of students in each lesson. This study is a quasi-experimental research. The population in this study were all students of MTs Negeri Tanjung Pura Langkat in class VII, comprising 7 parallel classes and randomly selected two classes. The research instrument used consisted of a mathematical representation ability tests and questionnaires interest in learning mathematics. The instrument has been declared eligible content validity, and reliability coefficient of 0.431 and 0.791 respectively for the mathematical representation capability and interest in learning mathematics. The data analysis used was ANOVA two lanes and a descriptive analysis of the answers to math students. The results showed that (1) Increase the ability of students taught mathematical representation through a realistic approach based on Malay culture Langkat higher than students taught through regular learning; (2) Increased interest in learning math students taught through a realistic approach based on Malay culture Langkat higher than students taught through regular learning; (3) There is no interaction between learning approach with prior knowledge of mathematics (high, medium, low) students to increase the ability of students' mathematical representation; (4) There is no interaction between learning approach with prior knowledge of mathematics (high, medium, low) to increase student interest in mathematics learning; and (5) Process answers related to the ability of student mathematics mathematical representations at students who are taught through a realistic approach based Langkat Malay culture better than students taught through regular learning.

**Keywords:** Mathematical Representation Ability, Interest in Mathematics Learning, Realistic Approach Based on Langkat Malay Culture, Regular Learning, and Prior Knowledge of Mathematics Students