

ABSTRAK

Melinda Yanuar. (1502226). Kemampuan Berpikir Reflektif Matematis dan *Habits of Striving for Accuracy and Precision* dalam Pembelajaran dengan Pendekatan *Rigorous Mathematical Thinking*.

Kemampuan berpikir reflektif matematis merupakan kompetensi yang harus dimiliki siswa, namun kenyataan di lapangan menunjukkan bahwa kemampuan berpikir reflektif matematis masih belum memuaskan. Pembelajaran dengan pendekatan *Rigorous Mathematical Thinking* (RMT) diterapkan dengan harapan untuk meningkatkan kemampuan berpikir reflektif matematis dan *habits of striving for accuracy and precision* siswa. Tujuan penelitian ini adalah untuk menelaah pencapaian dan peningkatan kemampuan berpikir reflektif matematis berdasarkan pembelajaran dan Kemampuan Awal Matematis (KAM), serta menelaah pencapaian dan peningkatan *habits of striving for accuracy and precision* berdasarkan pembelajaran. Penelitian ini merupakan penelitian eksperimen semu dengan desain kelompok kontrol non-ekuivalen. Pelaksanaan penelitian dilakukan pada siswa kelas VII di salah satu SMP Negeri di kota Serang. Instrumen yang digunakan dalam penelitian ini berupa instrumen tes kemampuan berpikir reflektif matematis dan skala *habits of striving for accuracy and precision* siswa. Analisis data kuantitatif dilakukan dengan menggunakan SPSS 17, sehingga diperoleh kesimpulan: pencapaian dan peningkatan kemampuan berpikir reflektif matematis siswa yang mendapatkan pembelajaran dengan pendekatan RMT lebih baik daripada siswa yang mendapatkan pembelajaran konvensional, pencapaian dan peningkatan kemampuan berpikir reflektif matematis siswa kategori KAM tinggi yang mendapatkan pembelajaran dengan pendekatan RMT lebih baik daripada siswa kategori KAM tinggi yang mendapatkan pembelajaran konvensional, pencapaian dan peningkatan kemampuan berpikir reflektif matematis siswa kategori KAM sedang yang mendapatkan pembelajaran dengan pendekatan RMT lebih baik daripada siswa kategori KAM sedang yang mendapatkan pembelajaran konvensional, pencapaian dan peningkatan kemampuan berpikir reflektif matematis siswa kategori KAM rendah yang mendapatkan pembelajaran dengan pendekatan RMT lebih baik daripada siswa kategori KAM rendah yang mendapatkan pembelajaran konvensional, serta pencapaian dan peningkatan *habits of striving for accuracy and precision* siswa yang mendapatkan pembelajaran dengan pendekatan RMT lebih baik daripada *habits of striving for accuracy and precision* siswa yang mendapatkan pembelajaran konvensional.

Kata kunci: Pendekatan *Rigorous Mathematical Thinking* (RMT), kemampuan berpikir reflektif matematis dan *habits of striving for accuracy and precision*.

ABSTRACT

Melinda Yanuar. (1502226). Mathematical Reflective Thinking Ability and Habits of Striving for Accuracy and Precision in Learning with Rigorous Mathematical Thinking Approach.

Mathematical reflective thinking ability is a competence that must be possessed by students, but the reality in the field shows that the ability to think reflectively mathematically is still not satisfactory. Rigorous Mathematical Thinking (RMT) approach is applied with the hope to improve mathematical reflective thinking and habits of striving for accuracy and precision of students. The purpose of this study are examining the achievement and improvement of reflective mathematical thinking ability based on learning and KAM, and to examining the achievement and improvement of habits of striving for accuracy and precision based on learning. This research is a quasi experiment with non-equivalent control group design. Implementation of this research was conducted on grade VII students in one of junior high school in Serang city. The instrument used in this research is a test instrument of reflective mathematical thinking and habits of striving for accuracy and precision of students. Quantitative data analysis is done by using SPSS 17, so it can be concluded: the achievement and improvement of reflective mathematical thinking ability of students who get learning with RMT approach are better than students who get conventional learning, achievement and improvement of reflection mathematical ability of high KAM category students who get the learning with the RMT approach better than the high KAM category students who received conventional learning, achievement and improvement of students' reflective mathematical thinking ability in the middle KAM category who were learning with RMT approach better than the middle KAM category students who were getting conventional learning, achievement and improvement of reflective mathematical thinking ability of low KAM category students who get the learning with RMT approach are better than low KAM category students who get conventional learning, and the achievement and improvement of the habits of striving for accuracy and precision of students who get learning with RMT approach are better than the habits of striving for accuracy and precision of students receiving conventional learning.

Key word: Rigorous Mathematical Thinking approach, mathematical reflective thinking ability, habits of striving for accuracy and precision.