

ABSTRAK

Rahma Nasir. (1605578). Peningkatan Kemampuan Penalaran Proporsional dan *Mathematical Resilience* Siswa melalui *Schema-Based Instruction*.

Penelitian ini bertujuan untuk menganalisis peningkatan kemampuan penalaran proporsional antara siswa yang belajar dengan *schema-based instruction* (SBI) dan pembelajaran konvensional, secara keseluruhan serta ditinjau dari kategori Kemampuan Matematis Awal (KMA). Desain penelitian yaitu *Nonequivalent Pretest and Posttest Control Group Design* dan *Postresponse Only Control Design*. Sampelnya adalah 40 siswa dan populasi seluruh siswa kelas VII SMPN di Sulawesi Selatan. Materi penelitian yaitu perbandingan. Pengumpulan data menggunakan instrumen tes uraian, angket dan lembar observasi. Hasil penelitian menunjukkan bahwa: 1) peningkatan kemampuan penalaran proporsional siswa yang belajar dengan SBI lebih tinggi secara signifikan daripada siswa yang belajar dengan pembelajaran konvensional; 2) peningkatan kemampuan penalaran proporsional siswa yang belajar dengan SBI lebih tinggi secara signifikan daripada siswa yang belajar dengan pembelajaran konvensional ditinjau dari kategori KMA tinggi dan sedang. Sedangkan pada kategori KMA rendah, peningkatan kemampuan penalaran proporsional siswa yang belajar dengan SBI tidak lebih tinggi secara signifikan daripada siswa yang belajar dengan pembelajaran konvensional; 3) pencapaian *mathematical resilience* siswa yang belajar dengan SBI tidak lebih baik secara signifikan daripada siswa yang belajar dengan pembelajaran konvensional. Siswa KMA rendah membutuhkan lebih banyak waktu untuk latihan agar dapat meningkatkan penalarannya.

Kata kunci: *Schema-Based Instruction*, Kemampuan Penalaran Proporsional, *Mathematical Resilience*, Perbandingan.

ABSTRACT

Rahma Nasir. (1605578). The Enhancement of Students' Proportional Reasoning and Mathematical Resilience through Schema-Based Instruction.

The aim of this study is to analyze the enhancement of students' proportional reasoning and mathematical resilience between students who studied by schema-based instruction and conventional learning, both as a whole and in terms of the category of Early Mathematical Ability (KMA). This research used quantitative approach with quasi experimental method of *Nonequivalent Pretest and Posttest Control Group Design*. Forty students involved among all the students in the seventh grade in one of the junior high school in South Sulawesi. The students learned comparison. An essay test was administered to measure students' proportional reasoning, and mathematical resilience data were obtained by questionnaire and observation sheet. The results showed that: 1) the enhancement of the students' proportional reasoning who studied by schema-based instruction is significantly higher than students who studied by conventional learning; 2) the enhancement of the students' proportional reasoning who studied by schema-based instruction is significantly higher than students who studied by conventional learning in terms of high and medium KMA category. In terms of low KMA category, the enhancement of the students' proportional reasoning who studied by schema-based instruction is not significantly higher than the students who studied by conventional learning; 3) the achievement of students' mathematical resilience who studied by schema-based instruction is not significantly better than the students who studied by conventional learning. The results confirm that the schema-based instruction can improve students' proportional reasoning. Students with low KMA need more time to practice to increase their proportional reasoning.

Keywords: Schema-Based Instruction, Proportional Reasoning, Mathematical Resilience, Comparison.