

**PERBANDINGAN PENDEKATAN SAINTIFIK DAN PENDEKATAN *RECIPROCAL TEACHING*
DALAM MENINGKATKAN PEMAHAMAN DAN KONEKSI,
SERTA PENCAPAIAN *SELF-CONCEPT* MATEMATIS**

(Studi Kuasi Eksperimen pada Siswa Kelas VIII di Salah Satu SMP di Kota Bandung)

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Abstrak. Kemampuan pemahaman, koneksi, dan *self-concept* matematis merupakan kemampuan matematis yang perlu ditingkatkan. Telah dilakukan studi eksperimen perbandingan pembelajaran dengan pendekatan saintifik dan pembelajaran dengan pendekatan *reciprocal teaching* pada materi lingkaran. Studi ini berfokus untuk melihat perbandingan peningkatan kemampuan pemahaman dan koneksi matematis beserta interaksinya, serta perbandingan pencapaian *self-concept* matematis beserta interaksinya pada siswa yang menggunakan pembelajaran dengan pendekatan saintifik dan pembelajaran dengan pendekatan *reciprocal teaching*. Studi yang dilakukan menggunakan *Pretest Posttest Two Treatment Design* pada kelas VIII di salah satu SMP di kota Bandung, Jawa Barat. Analisis data penelitian dilakukan secara kuantitatif-kualitatif berdasarkan keseluruhan sampel maupun dirinci berdasarkan kategori pengetahuan awal matematis (PAM): tinggi dan rendah. Analisis dilakukan pada peningkatan dan interaksi pada kemampuan pemahaman dan koneksi matematis siswa, serta analisis pada pencapaian dan interaksi pada *self-concept* matematis. Hasil penelitian menunjukkan bahwa terdapat perbedaan peningkatan pada dua kemampuan, yaitu kemampuan pemahaman dan koneksi matematis antara siswa yang memperoleh pembelajaran dengan pendekatan saintifik dan siswa yang memperoleh pembelajaran dengan pendekatan *reciprocal teaching* berdasarkan PAM siswa (tinggi dan rendah). Namun perbedaan hasil terjadi pada pencapaian *self-concept* matematis, yakni tidak terdapat perbedaan pencapaian *self-concept* matematis antara siswa yang memperoleh pembelajaran dengan pendekatan saintifik dan siswa yang memperoleh pembelajaran dengan pendekatan *reciprocal teaching* berdasarkan PAM siswa (tinggi dan rendah). Selanjutnya untuk analisis pengaruh interaksi semua kemampuan menunjukkan tidak terdapat pengaruh interaksi antara pembelajaran (saintifik dan *reciprocal teaching*) dengan PAM siswa (tinggi dan rendah) terhadap peningkatan kemampuan pemahaman dan koneksi matematis ataupun pencapaian *self-concept* matematis siswa.

Kata kunci: *saintifik, reciprocal teaching, peningkatan, pemahaman, koneksi, pencapaian, self-concept*

**A COMPARATIVE STUDY OF SCIENTIFIC AND RECIPROCAL TEACHING APPROACH
IN IMPROVING STUDENTS' MATHEMATICAL UNDERSTANDING AND CONNECTION
AS WELL AS SELF-CONCEPT ACHIEVEMENT**

((A Quasi Experimental Study at Class 8 in a Junior High School in Bandung))

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Abstract. The ability of students' mathematical understanding, connection, and self-concept are mathematical ability which needs improving. Given this thinking, this study try to compare the result of teaching activity which use scientific approach and the one which use reciprocal teaching approach under Circle materials. This study focuses on investigating the comparison of improvement between understanding ability and the mathematical connection together with its interaction, as well as the comparison of mathematical self-concept with its interaction to the students who use scientific approach and the ones who use reciprocal teaching approach. This study employs Pretest Posttest Two Treatment Design at the class VIII in one of junior high schools in Bandung City, West Java. The data collected were analyzed quantitatively and qualitatively based on the whole samples as well the category of prior ability in Mathematics: high and low. The analysis was done on the improvement and the interaction of understanding ability and mathematical connection of the students, as well as at the achievement and the interaction of students' mathematical self-concept. The result of this research showed that there was a different improvement in two abilities namely understanding ability and mathematical connection between students taught by scientific approach and those taught by reciprocal teaching approach based on students' prior ability (high and low). However, different result was found at the mathematical self-concept in which there was no difference of mathematical self-concept between students taught by scientific approach and those taught by reciprocal teaching approach based on the students' prior ability (high and low). Furthermore, the analysis result of interaction among all abilities showed that there was no interaction effect between instruction (scientific approach and reciprocal teaching) and students' prior ability (high and low) toward the improvement of students' understanding ability and mathematical connection as well as mathematical self-concept achievement.

Keywords: *scientific, reciprocal teaching, improvement, understanding, connection, achievement, self-concept*