

Improving Mathematical Communication Ability and Self Regulation Learning Of Junior High Students by Using Reciprocal Teaching

Abdul Qohar, Utari Sumarmo

Abstract

This paper presents the findings from a posttest experiment control group design by using reciprocal teaching, conducted in Indonesia University of Education to investigate students' ability in mathematical communication and self regulated learning. Subject of the study were 254 of 9th grade students from three junior high schools of high, medium, and low level in Bojonegoro, East Java. The instruments of the study were an essay mathematical communication test, and a self regulated learning scale. The study found that reciprocal teaching took the best role among school cluster and students' prior mathematics ability on students' mathematical communication ability and self regulated learning as well. The other finding were there was interaction between school cluster and teaching approaches, but was no interaction between students' prior mathematics ability and teaching approaches on mathematical communication ability and self regulated learning. Moreover, there was association between mathematical communication and self regulated learning

Keywords: Reciprocal Teaching, Mathematical Communication, Self Regulated Learning

Abstrak

Makalah ini melaporkan temuan dari suatu eksperimen dengan disain tes akhir dan kelompok control yang memberikan reciprocal teaching dan bertujuan mengembangkan kemampuan komunikasi matematis dan kemandirian belajar siswa. Penelitian melibatkan 254 siswa kelas 9 dari tiga SMP yang mewakili sekolah klaster atas, sedang dan bawah di Bojonegoro Jawa Timur. Instrumen penelitian ini adalah tes komunikasi matematis dan satu set skala kemandirian belajar. Penelitian menemukan bahwa pembelajaran reciprocal teaching memberikan peran terbesar dibandingkan dengan klaster sekolah, level kemampuan awal matematika siswa, dan pembelajaran konvensional terhadap pencapaian kemampuan komunikasi matematis dan kemandirian belajar siswa. Temuan lainnya adalah, terdapat interaksi antara pembelajaran dan klaster sekolah, namun tidak terdapat interaksi antara pembelajaran dan kemampuan awal matematika terhadap kemampuan komunikasi matematis dan kemandirian belajar. Selanjutnya, ditemukan pula asosiasi antara kemampuan komunikasi matematis dan kemandirian belajar.

Kata kunci: Reciprocal Teaching, Komunikasi Matematis, Kemandirian Belajar