

ABSTRAK

Siti Zahara H. Harahap, (2014). Peningkatan Kemampuan Penalaran Logis dan Komunikasi Matematis Melalui Model Pembelajaran Kooperatif Tipe *Think Pair Share* (TPS) di SMP Negeri 24 Medan. Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2014.

Tujuan penelitian ini untuk mengetahui apakah : (1) peningkatan kemampuan penalaran logis siswa yang memperoleh model pembelajaran kooperatif tipe TPS lebih tinggi daripada siswa yang memperoleh pembelajaran ekspositori, (2) peningkatan kemampuan komunikasi matematis siswa yang memperoleh model pembelajaran kooperatif tipe TPS lebih tinggi daripada siswa yang memperoleh pembelajaran ekspositori, (3) terdapat interaksi antara model pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan penalaran logis siswa, (4) terdapat interaksi antara model pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan komunikasi matematis siswa, (5) proses penyelesaian masalah yang dibuat siswa dalam menyelesaikan soal pada masing-masing pembelajaran. Penelitian ini dilaksanakan di SMP Negeri 24 Medan dengan sampel 56 siswa. Penelitian ini merupakan suatu studi eksperimen semu dengan *pretest-posttest control group design*. Populasi dalam penelitian ini adalah seluruh siswa kelas VIII yang mengambil dua kelas (kelas eksperimen 1 dan kelas eksperimen 2) melalui teknik random sampling. Instrumen yang digunakan terdiri dari tes kemampuan penalaran logis dan tes kemampuan komunikasi matematis yang berbentuk uraian. Instrumen tersebut dinyatakan telah memenuhi syarat validitas isi dan koefisien reliabilitas. Data dianalisis dengan uji ANAVA dua jalur. Sebelum digunakan uji ANAVA dua jalur terlebih dahulu dilakukan uji normalitas dan uji homogenitas dengan taraf signifikan 5%. Berdasarkan hasil analisis tersebut diperoleh hasil penelitian yaitu : (1) peningkatan kemampuan penalaran logis dan komunikasi matematis siswa yang memperoleh model pembelajaran kooperatif tipe TPS lebih tinggi daripada kemampuan penalaran logis dan komunikasi matematis siswa yang memperoleh pembelajaran ekspositori, (2) tidak terdapat interaksi antara model pembelajaran dengan kemampuan awal matematika siswa terhadap peningkatan kemampuan penalaran logis dan komunikasi matematis siswa, (3) proses penyelesaian jawaban yang dibuat siswa pada model pembelajaran kooperatif tipe TPS lebih baik daripada pembelajaran ekspositori. Berdasarkan hasil penelitian ini, peneliti menyarankan agar model pembelajaran kooperatif tipe TPS dapat dijadikan alternatif bagi guru untuk meningkatkan kemampuan penalaran logis dan komunikasi matematis siswa.

Kata Kunci: Pembelajaran kooperatif tipe TPS, Kemampuan penalaran logis, Kemampuan komunikasi matematis.

ABSTRACT

Siti Zahara H. Harahap, (2014). The Improvement of Logical Reasoning and Mathematical Communication Abilities Through Think Pair Share (TPS) Cooperative Learning Model at SMP Negeri 24 Medan. Thesis. Mathematical Education Study Program Postgraduate State University of Medan.

The objectives of this study are to observe whether : (1) the improvement of students' logical reasoning ability thought by TPS cooperative learning model is higher than those taught by expository learning model, (2) the improvement of students' mathematical communication ability taught by TPS cooperative learning model is higher than those taught by expository learning model, (3) there is interaction between the learning model with students' previous mathematical ability and the improvement of students' logical reasoning ability, (4) There is interaction between the learning model with students' previous mathematical ability and students mathematical communication ability, (5) the process of problem solving made by students in solving made by students in solving questions in each learning. This study was held at SMP Negeri 24 Medan by having 56 students as sample. This study used quasi-experimental method with pretest-posttest control group design. The population of this study was all students of grade VIII taking two classes (experimental 1 class and experimental 2 class) through random sampling technique. The instrument used consisted of the essay of logical reasoning ability test and mathematical communication ability test. The instrument had required content validity and coefficient reliability. Data were analyzed by two ways ANOVA test. Before it was used two-ways ANOVA test the normality and homogeneity tests with significant level 5% had been done. The findings of this study were : (1) the improvement of students' logical reasoning ability and mathematical communication ability taught by TPS cooperative learning model is higher than students' and mathematical communication ability taught by expository learning, (2) there is no interaction between the learning model with previous mathematical ability and the improvement of students' logical reasoning and mathematical communication abilities, (3) the process of problem solving made by students taught by TPS cooperative learning model is better than those taught by expository learning. Based on the findings of this study, the researcher suggests tha TPS cooperative learninh model can be used as an alternative for teachers to improve students' logical reasoning and mathematical communication abilities.

Keywords : TPS Cooperative Learning, Logical Reasoning Ability, Mathematical Communication Ability