ABSTRAK

ISMAINI SITOMPUL. Perbedaan Kemampuan Representasi *Visual Thinking* Matematis dan kemandirian belajar antara siswa yang diberi Pendekatan *Open Ended* dan Pembelajaran *Kooperatif* tipe *Jigsaw* siswa kelas VII MTsS Laboratorium UIN SU Medan. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan. 2017.

Tujuan penelitian ini adalah (1) Untuk mengetahui perbedaan kemampuan representasi *visual thinking* antara siswa yang diberi pembelajaran *open-ended* dengan siswa yang diberi pembelajaran *Kooperatif* tipe *jigsaw*. (2) Untuk mengetahui perbedaan kemandirian belajar antara siswa yang diberi pembelajaran *open-ended* dengan siswa yang diberi pembelajaran *kooperatif* tipe *jigsaw*. (3) Untuk mengetahui proses penyelesaian jawaban siswa yang diberi pembelajaran *open-ended* dengan pembelajaran kooperatif tipe jigsaw. Jenis penelitian ini adalah *quasi eksperiment*. Populasi penelitian ini adalah seluruh siswa kelas VII MTsS Laboratorium UIN SU Medan. Sampel penelitian ini adalah, Kelas VII-1 (37 siswa) diajarkan dengan pembelajaran *Kooperatif* tipe *Jigsaw* dan kelas VII-2 (37 siswa) diajarkan dengan Pendekatan *Open Ended*. Instrumen yang digunakan terdiri dari tes kemampuan representasi *visual thinking* dan angket kemandirian belajar siswa. Analisis yang dilakukan menggunakan ANAVA Dua Jalur. Hasil penelitian menunjukkan bahwa: (1) Terdapat perbedaan kemampuan representasi *visual thinking* antara siswa yang diberi pendekatan *open ended* dan pembelajaran *kooperatif* tipe *jigsaw* dengan nilai F_{hitung} = 6,038 > F_{tabel}= 3,57 dan dengan `sig = 0.000, karena taraf signifikan lebih kecil dari 0,05, sehingga H_o ditolak dan H_1 diterima. (2) Terdapat perbedaan kemandirian belajar antara siswa yang diberi pendekatan *open ended* dan pembelajaran *kooperatif* tipe *jigsaw* dengan nilai F_{hitung} = 3,8 12 > F_{tabel} = 3,57 dan dengan `sig = 0.000, karena taraf signifikan lebih kecil dari 0,05, sehingga $H_o$ditolak dan H_1 diterima. (3) Penyelesaian jawaban siswa pada pembelajaran *open ended* lebih beragam dibandingkan dengan pembelajaran *kooperatif* tipe jigsaw.

Kata kunci: Pembelajaran *Open Ended*, Pembelajaran *Kooperatif* Tipe *Jigsaw*, kemampuan Representasi *Visual Thinking* dan kemandirian belajar siswa

ABSTRACT

ISMAINI SITOMPUL. Differences in Visual Representation Thinking Ability Mathematical and learning independence between students who were given Open Ended Approach and Cooperative Learning type Jigsaw students of class VII MTsS Laboratory of UIN SU Medan. Thesis. Medan: Postgraduate Mathematics Education Program State University of Medan. 2017.

The purpose of this research is (1) To know the difference of visual thinking ability between students who are given open-ended learning with students who are given cooperative learning jigsaw type (2) To know the difference of learning independence between students who are given open-ended learning with students who are given Jigsaw type cooperative learning. (3) To know process the completion of student answer who were given Open Ended Approach and Cooperative Learning type Jigsaw. This type of research is quasi experiment. The population of this research is all students of class VII of MTsS Laboratory of UIN SU Medan. The sample of this research is, Class VII-1 (37 students) taught by Jigsaw Cooperative type and VII-2 class (37 students) taught with Open Ended Approach. The instrument used consisted of the test of visual thinking representation ability and student self study independence questionnaire. Analysis performed using ANAVA. The results showed that: (1) F_{count} = 6,038 >F_{table}= 3,57 and with `sig = 0.000, because significant smaller than 0,05, so $H_o$rejected and H_1accepted,There is a significant influence on visual thinking ability of students were taught by given open-ended learning with students who are given cooperative learning jigsaw type. (2) F_{count} = 3,812 > F_{table}= 3,57 and with `sig = 0.000, because significant smaller than 0,05, so $H_o$rejected and H_1accepted, There is a significant influence of student were taught learning independence between students who are given open-ended learning with students who are given Jigsaw type cooperative learning**.** (3) The completion of student answer on open ended learning is more diverse than jigsaw type cooperative learning.

Keywords: Open-Ended Approach, Jigsaw Type Cooperative Learning, Visual Thinking Representation Ability, Learning Independence