

## ABSTRAK

**M.KOSMAS SIAHAAN. Perbedaan Kemampuan Pemecahan Masalah Matematik dan Kemampuan Berpikir Kreatif Siswa SMA Dengan Pendekatan Pembelajaran *Open-Ended* dan Pembelajaran Konvensional.** Tesis. Medan : Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2013.

Penelitian ini bertujuan untuk mengetahui perbedaan : (1) kemampuan pemecahan masalah matematik antara siswa yang diberi pembelajaran *Open-Ended* dengan siswa yang diberi pembelajaran konvensional. (2) kemampuan berpikir kreatif matematik antara siswa yang diberi pembelajaran *Open-Ended* dengan siswa yang diberi pembelajaran konvensional. (3) respon siswa terhadap pembelajaran matematika yang diberi pembelajaran *open-ended*. Penelitian ini merupakan penelitian quasi eksperimen. Populasi penelitian ini adalah siswa SMA Cahaya Medan. Pemilihan sampel dilakukan secara random dengan mengacak kelas. Instrumen yang digunakan terdiri dari : (1) tes kemampuan pemecahan masalah (2) tes kemampuan berpikir kreatif (3) angket respon siswa dengan pokok bahasan persamaan kuadrat dan fungsi kuadrat. Adapun tes yang digunakan untuk memperoleh data adalah berbentuk uraian. Data dalam penelitian ini dianalisis dengan menggunakan analisis statistik deskriptif dan analisis inferensial. Analisis deskriptif ditujukan untuk mendeskripsikan respon siswa pada pembelajaran *open-ended*. Analisis inferensial data dilakukan dengan analisis kovarians (ANAKOVA). Hasil penelitian menunjukkan bahwa : (1) terdapat perbedaan kemampuan pemecahan masalah matematik antara siswa yang diberi pembelajaran *open-ended* dengan pembelajaran konvensional. (2) terdapat perbedaan kemampuan berpikir kreatif antara siswa yang diberi pembelajaran *open-ended* dengan pembelajaran konvensional. (3) Respon siswa terhadap pembelajaran *open-ended* adalah positif. Berdasarkan hasil penelitian ini, maka peneliti menyarankan agar pembelajaran *open-ended* pada pembelajaran matematika dapat dijadikan alternatif bagi guru matematika untuk meningkatkan kemampuan pemecahan masalah matematik dan kemampuan berpikir kreatif matematik siswa sebagai salah satu alternatif untuk menerapkan pembelajaran matematika yang inovatif.

## ABSTRACT

**M.KOSMAS SIAHAAN.** The Differences of Mathematics Problem Solving Ability and Creative Thinking Ability of Senior High School Students through Open-Ended Learning and Conventional Learning Approach. Thesis. Medan : Mathematics Education Study Program Postgraduate School of University of Medan, 2013.

This study was aimed to determine the differences : (1) the ability of math problem solving ability between students who were given open-ended learning with students who were given conventional learning. (2) the ability of creative thinking between students who were given open-ended learning with students who were given conventional learning. (3) student's response toward mathematics who were given *open-ended* learning. This study was a quasi-experimental research. The population of study was the students of SMA Cahaya Medan. Random sample selection is done by randomizing the class. The instrument used consists of : (1) the test of problem-solving abilities (2) the test of ability of creative thinking (3) Student's response. The test used to obtain the data was the description. The data in this study were analyze using descriptive statistical analysis and inferential analysis. Descriptive analysis aimed to describe the student's activity and student's response toward open-ended learning. Inferential data analysis performed by analysis of covariance (ANACOVA). The result showed that : (1) there is a difference of problem solving thinking between students who were given mathematics open-ended learning with students who were given conventional learning. (2) there is a difference of creative ability thinking between students who were given mathematics open-ended learning with students who were given conventional learning. (3) the student's response toward mathematics who were given open-ended learning is positive. Based on these results, the researcher suggest that the model of open-ended learning in mathematics learning can be alternative for math teachers to improve their creative thinking and mathematics students problem solving as an alternative for implementing the innovative learning on mathematics.