

ABSTRAK

ANIM. Perbedaan kemampuan komunikasi matematis dan kemandirian belajar siswa melalui model pembelajaran inkuiri dan model pembelajaran ekspositori menggunakan media *Software-Autograph*. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2016.

Penelitian ini bertujuan untuk mengetahui: (1) Perbedaan kemampuan komunikasi matematik antara siswa yang memperoleh pembelajaran melalui Model Pembelajaran Inkuiri berbantuan *Autograph* dan siswa yang memperoleh model pembelajaran Ekspositori berbantuan *Autograph*, (2) Interaksi antara model pembelajaran dan kemampuan awal matematika siswa (tinggi, sedang dan rendah) terhadap kemampuan komunikasi matematik siswa, (3) Perbedaan kemandirian belajar siswa yang memperoleh pembelajaran melalui Model Pembelajaran Inkuiri berbantuan *Autograph* dan siswa yang memperoleh model pembelajaran Ekspositori berbantuan *Autograph* (4) Interaksi antara model pembelajaran dan kemampuan awal matematika siswa (tinggi, sedang dan rendah) terhadap kemandirian belajar siswa.

Penelitian ini merupakan penelitian semi eksperimen. Populasi penelitian ini adalah siswa kelas X SMA Negeri 5 Pematangsiantar, dengan analisis ANAVA dua jalur. Hasil penelitian menunjukkan bahwa (1) Terdapat perbedaan kemampuan komunikasi matematik siswa antara siswa yang memperoleh model pembelajaran inkuiri berbantuan *autograph* dengan siswa yang memperoleh model pembelajaran ekspositori berbantuan *Autograph*, (2) Terdapat interaksi antara model pembelajaran yang digunakan dan kemampuan awal matematika siswa terhadap kemampuan komunikasi matematik siswa (3) Terdapat perbedaan kemandirian belajar siswa antara siswa yang memperoleh model pembelajaran inkuiri berbantuan *Autograph* dengan model pembelajaran ekspositori berbantuan *Autograph*, (4) Terdapat interaksi antara model pembelajaran yang digunakan dan kemampuan awal matematika siswa terhadap kemandirian belajar siswa.

Kata Kunci: Model Pembelajaran Inkuiri dan Ekspositori, *Software Autograph*, Kemampuan Awal Matematika, Kemampuan Komunikasi Matematis, Kemandirian Belajar Siswa.

ABSTRACT

ANIM. The difference in mathematical communication ability and independence of student learning through inquiry learning model and the model of expository using media *Autograph Software* . Thesis. Medan: Study Program of Mathematics Education Post Graduate State University of Medan, 2016.

This study aimed to determine: (1) The difference in mathematic communication skills between students who acquire learning through Inquiry Learning Model assisted by Autograph and students who obtain teaching Expository model assisted by Autograph, (2) the interaction between the learning model and the students' early mathematics ability (high, medium and low) to the students' mathematics communication skills, (3) the difference of learning independence of students who acquire learning through Inquiry Learning Model assisted by *Autograph* and students who obtain Expository teaching model assisted by *Autograph* (4) the interaction between the learning model and the early students' mathematics ability (high, medium and low) to the independence of student learning.

This research was semi-experimental. The study population was class X of SMA Negeri 5 Pematangsiantar, with two lanes ANOVA analysis. The results showed that (1) There were differences in students' mathematic communication skills among students who received inquiry learning model assisted by Autograph to students who obtained an expository model assisted by Autograph, (2) There was interaction between the learning model used and the students' early mathematics ability to the students' mathematic communication, (3) There was difference in the independence of student learning between students who received inquiry learning model assisted by Autograph with the model of expository assisted by Autograph, (4) There was interaction between the learning model used and the students' early mathematics ability to the independence of student learning.

Key Words: Inquiry and Expository Learning Model, Autograph Software, early mathematical ability, mathematical communication ability, independence of students' learning.