

## ABSTRAK

**Nurdalilah, (2013).** Perbedaan Kemampuan Penalaran Matematika dan Kemampuan Pemecahan Masalah Pada Pembelajaran Berbasis Masalah dan Pembelajaran Konvensional di SMA Negeri 1 Kualuh Selatan. Tesis Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2013.

Tujuan dalam penelitian eksperimen semu ini menyelidiki perbedaan: (1) Kemampuan penalaran matematika pada pendekatan PBM dan pembelajaran secara konvensional, (2) Kemampuan pemecahan masalah pada pendekatan PBM dan pembelajaran secara konvensional, (3) Interaksi antara pendekatan pembelajaran dan kemampuan awal siswa terhadap kemampuan penalaran matematika, (4) Interaksi antara pendekatan pembelajaran dan kemampuan awal siswa terhadap kemampuan pemecahan masalah. Instrumen yang digunakan dalam penelitian ini adalah: (1) Tes kemampuan penalaran matematika, (2) Tes kemampuan pemecahan masalah. Pokok bahasan yang diajarkan adalah trigonometri dan tes berbentuk uraian. Populasi dalam penelitian ini adalah seluruh siswa SMA Negeri 1 Kualuh Selatan, sampel eksperimen berjumlah 37 orang dan sampel kontrol berjumlah 37 orang siswa. Data dianalisis dengan uji ANAVA dua jalur. Diperoleh rata-rata tes kemampuan penalaran matematika kelas eksperimen 11,87 dan rata-rata tes kemampuan penalaran matematika kelas kontrol 10,15. Rata-rata tes kemampuan pemecahan masalah kelas eksperimen 32,85 dan rata-rata tes kemampuan pemecahan masalah kelas kontrol 26,92. Setelah dilakukan uji-t diperoleh t hitung pada kemampuan penalaran matematika 3,563 dan t hitung pada kemampuan pemecahan masalah 7,179.

**Kata Kunci : Pendekatan pembelajaran Matematika (PBM), Penalaran Matematika, Pemecahan Masalah.**

## ABSTRACT

**Nurdalilah, (2013).** The Difference of Mathematics Logical Ability and Problem Solving Ability on Problem Based Learning and Conventional Learning at State Senior High School 1 Kualuh Selatan. Thesis Mathematics Education Study Program Postgraduate School State University of Medan, 2013.

This apparent experimental research aims to observe the difference of: (1) Mathematics logical ability on the teaching learning process approach and conventional learning, (2) Problem solving ability on the teaching learning process approach and conventional learning, (3) Interaction between learning approach and students initial ability on Mathematics logical ability, (4) Interaction between learning approach and students initial ability on problem solving ability. The instruments used in this research were: (1) Mathematics logical ability test, (2) Problem solving ability. The teaching materials taught were trigonometry and essay test. The population of this research was all students of state senior high school 1 Kualuh Selatan with experimental sample was 37 students and control sample was 37 students. The data were analyzed by using two way ANAVA. The average of experimental analyzed class mathematics logical ability test is 11,87 and the average of control class mathematics logical ability test is 10,15. The average of experimental class problem solving ability test is 32,85 and the average of control class problem solving ability test is 26,92. After t test applied, it was obtained that t observed on mathematics logical ability is 3,563 and t observed on problem solving ability is 7,179.

**Key words: Mathematics learning Approach, Mathematics Logic and Problem Solving**