

## ABSTRAK

**Yanthy Leonita Perdana Simanjuntak. “Pengaruh Model *Problem Based Learning* Berbantuan ICT dan Berpikir Kritis Terhadap Kemampuan Pemecahan Masalah Siswa”. Program Pascasarjana Universitas Negeri Medan, 2017.**

Penelitian ini bertujuan untuk mengetahui pengaruh model *problem based learning* berbantuan ICT terhadap kemampuan pemecahan masalah fisika, untuk mengetahui perbedaan kemampuan pemecahan masalah fisika antara siswa yang memiliki kemampuan berpikir kritis kelompok atas dengan siswa yang memiliki kemampuan berpikir kritis kelompok bawah, dan untuk mengetahui interaksi antara model *problem based learning* berbantuan ICT dan berpikir kritis dalam meningkatkan kemampuan pemecahan masalah fisika siswa. Penelitian ini merupakan penelitian *quasi experiment* dengan desain *two group pretest posttest*. Populasi penelitian ini adalah seluruh siswa kelas X SMA YAPIM Medan semester II tahun ajaran 2016/2017. Pemilihan ini diambil secara *clus random sampling* yaitu sebanyak 2 kelas, kelas eksperimen diterapkan model *problem based learning* berbantuan ICT dan kelas kontrol diterapkan pembelajaran konvensional. Instrumen dalam penelitian ini yaitu instrumen kemampuan pemecahan masalah dalam bentuk essay sebanyak 5 soal dan instrumen berpikir kritis dalam bentuk essay sebanyak 7 soal yang telah dinyatakan valid. Data yang dihasilkan dianalisis dengan uji ANAVA. Hasil penelitian menunjukkan bahwa kemampuan pemecahan masalah fisika siswa menggunakan model *problem based learning* berbantuan ICT lebih baik dengan rata-rata 76,94 daripada kemampuan pemecahan masalah fisika siswa yang menggunakan pembelajaran konvensional dengan rata-rata 69,38, kemampuan pemecahan masalah fisika siswa pada kelompok berpikir kritis kelompok atas lebih baik dengan rata-rata 76,87 daripada kemampuan pemecahan masalah fisika siswa pada kelompok berpikir kritis kelompok bawah dengan rata-rata 55,00, dan terdapat interaksi antara model *problem based learning* berbantuan ICT dan pembelajaran konvensional dengan berpikir kritis dalam meningkatkan kemampuan pemecahan masalah fisika siswa. Terdapat pengaruh positif dari model *problem based learning* berbantuan ICT terhadap kemampuan pemecahan masalah dan berpikir kritis fisika siswa.

Kata Kunci: Model *Problem Based Learning* Berbantuan ICT, Berpikir Kritis dan Kemampuan Pemecahan Masalah

## ABSTRACT

**Yanthy Leonita P. Simanjuntak. “The Effect of Problem Based Learning Assisted ICT and Critical Thinking Toward Student’s Problem Solving Ability”. Postgraduate State University of Medan, 2017.**

This study aimed to know the effect of problem based learning assisted ICT to student’s problem solving ability, to know the effect of critical thinking to student’s problem solving ability, and to know the interaction of problem based learning assisted ICT and critical thinking skill toward student’s problem solving ability. This study used a quasi experiment with two group pretest posstest design. The population of this study was all the students grade X in Senior High School YAPIM Medan academic 2016/2017. The sample selection by cluster random sampling, that is experiment class implemented problem based learning assisted ICT and control class implemented conventional learning. The instrument used in this research is the instrument of problem solving skills in the form of essay as much as 5 questions and critical thinking instruments in the form of essay of 7 questions that have been declared valid. The resulting data were analyzed by ANOVA test. The result of this research is concluded that the problem solving ability of physics students using problem based learning model assisted ICT is better with average of 76,94 than student's physics problem solving ability using conventional learning with average 69,38, the students 'physics problem solving skills in the above-average critical thinking group is better with an average of 76.87 than the students' physics problem solving skills in the critical thinking group below the average with an average of 55.00, and there is an interaction between problem-based learning model assisted ICT and conventional learning with critical thinking in improving students' physics problem solving abilities. There is a positive influence of problem based learning model assisted ICT on the ability of problem solving and critical thinking of physics students.

**Keywords:** Problem Based Learning Model Assisted ICT, Critical Thinking and Problem Solving Ability

