

ABSTRAK

NISYDANUL ARIFIN. NIM. 8146142025. Efektivitas Model *Problem Based Learning* (PBL) dengan Metode Penyelesaian Soal Secara Sistematis (PS3) terhadap Hasil Belajar dan Kemampuan Berpikir Kritis Siswa Kelas XII SMA pada Materi Sifat Koligatif Larutan. Tesis. Program Studi Pendidikan Kimia Pascasarjana Universitas Negeri Medan. 2019.

Penelitian ini bertujuan untuk mengetahui efektivitas model *problem based learning* (PBL) dengan metode penyelesaian soal secara sistematis (PS3) terhadap hasil belajar dan kemampuan berpikir kritis siswa kelas XII SMA pada materi sifat koligatif larutan. Penelitian ini dilaksanakan di SMA Taman Siswa Lubuk Pakam. Sampel dalam penelitian ini diambil secara *sampling purposive*. Instrumen penelitian yang digunakan terdiri dari instrument tes berupa soal essay untuk mengetahui hasil belajar dan instrument non-test berupa lembar observasi untuk mengetahui kemampuan berpikir kritis siswa. Teknik analisis data menggunakan uji-t dan uji korelasi dengan program *SPSS 21 For Windows* pada taraf signifikansi $= 0,05$. Hasil penelitian menunjukkan bahwa (1) Hasil belajar kimia siswa yang dibelajarkan menggunakan *Problem Based Learning* (PBL) dengan Metode Penyelesaian Soal Secara Sistematis (PS3) lebih efektif dibandingkan hasil belajar kimia siswa yang dibelajarkan menggunakan *Problem Based Learning* (PBL) tanpa Metode Penyelesaian Soal Secara Sistematis (PS3); (2) Keterampilan berpikir kritis siswa yang dibelajarkan menggunakan PBL dengan metode PS3 lebih efektif dibandingkan keterampilan berpikir kritis siswa yang dibelajarkan menggunakan PBL tanpa metode PS3; (3) Ada korelasi positif antara hasil belajar dengan kemampuan berpikir kritis siswa yang dibelajarkan menggunakan PBL dengan Metode PS3; dan (4) Kemampuan siswa dalam menyelesaikan soal dengan menerapkan PS3 memiliki kriteria: kemampuan menganalisa soal sebesar 94,00% kategori sangat tinggi, kemampuan membuat rencana penyelesaian soal sebesar 78,89% kategori tinggi, kemampuan menyelesaikan soal sebesar 61,67% kategori sedang, dan kemampuan menginterpretasi (memeriksa) kembali sebesar 62,33% kategori sedang.

Kata Kunci : *Problem Based Learning* (PBL), Penyelesaian Soal Secara Sistematis PS3, Keterampilan Berpikir Kritis, Sifat Koligatif Larutan

ABSTRACT

NISYDANUL ARIFIN. NIM. 8146142025. *The Effectiveness Problem Based Learning Model (PBL) with Systematic Quantitative Problem Solving Method (PS3) on Students Learning Outcomes and Critical Thinking Skills Grade XII High School in Colligative Properties of Solution Topic. Thesis. Chemistry Graduate Studies Program, State University of Medan. 2018*

This study aims to determine the effectiveness of the model problem based learning (PBL) with problem resolution method systematically (PS3) on students learning outcomes and the critical thinking skills of grade XII High School in colligative properties of solution topic. This research was conducted in SMA Taman Siswa Lubuk Pakam. The sample in this study were taken by purposive sampling technique. The research instrument used consisted of essay test in order to determine learning outcomes and observation sheets to determine students' critical thinking skills. Data were analyzed using t-test and correlation by SPSS 21 For Windows at a significance level $\alpha = 0.05$. The results showed that (1) Student's outcomes taught with using Problem Based Learning (PBL) with Problem Resolution Method Systematic (PS3) was more effective than the results of studying chemistry students that learned using Problem Based Learning (PBL) without Problem Resolution Method Systematic (PS3); (2) Critical thinking skills of students that learned using PBL with PS3 method was more effective than the critical thinking skills of students that learned using PBL without PS3 method; (3) There is a positive correlation between learning outcomes with the students' critical thinking skills that learned using PBL with PS3 method; and (4) The ability of students to solve problems by applying the PS3 has the following criteria: the ability to analyze a test of 94.00% categorized as very high, problem-solving abilities to plan amounted to 78.89% higher category, ability to solve problems by 61.67% medium category, and the ability to interpret (checking) a return of 62.33% medium category.

Keywords : *Problem Based Learning (PBL), Systematic Quantitative Problem Solving Method (PS3), Critical Thinking Skills, Colligative Properties of Solution*