

## ABSTRAK

**NURAINI. NIM. 8166142008.** Pengaruh *Problem based learning* Berbasis *eXe Learning* dan Sikap Ilmiah terhadap Kemampuan Berpikir kritis pada Materi Ikatan Kimia. Tesis Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan. 2019.

Penelitian ini bertujuan untuk menunjukkan; 1) perbedaan kemampuan berpikir kritis kimia peserta didik yang diajarkan menggunakan *Problem based learning* dengan diajarkan menggunakan *konvensional* berbasis *eXe Learning*; 2) Perbedaan kemampuan berpikir kritis kimia peserta didik yang memiliki sikap ilmiah rendah dan sikap ilmiah tinggi; 3) Interaksi antara model pembelajaran dan tingkat sikap ilmiah peserta didik dalam mempengaruhi kemampuan berpikir kritis peserta didik. Penelitian ini di laksanakan SMA N 1 Rambah. Sampel penelitian seluruh peserta didik kelas X MIA semester ganjil. Instrument untuk mengukur hasil belajar kemampuan berpikir kritis peserta didik menggunakan soal pilihan berganda dan untuk mengukur sikap ilmiah menggunakan lembar angket. Penelitian ini di lakukan dengan metode eksperimental. Sampel penelitian yang dibagi dalam dua kelas, dimana kelas pada kelas eksperimen dibelajarkan dengan PBL menggunakan media *eXe Learning* dan pada kelas control dibelajarkan dengan konvensional menggunakan *eXe Learning*. Data hasil analisis secara deskriptif dan inferensial dengan bantuan *SPSS 22* pada tingkat signifikan  $\alpha = 0,05$ . Uji hipotesis yang digunakan adalah ANAVA dua jalur. Hasil penelitian menunjukkan bahwa; 1) Terdapat perbedaan kemampuan berpikir kritis kimia peserta didik yang diajarkan menggunakan model pembelajaran *Problem based learning* dengan yang diajarkan menggunakan model pembelajaran *konvensional* berbasis *eXe Learning*; 2) Terdapat perbedaan kemampuan berpikir kritis kimia peserta didik yang memiliki sikap ilmiah rendah dan sikap ilmiah tinggi; 3) Terdapat Interaksi antara model pembelajaran dan tingkat sikap ilmiah peserta didik dalam mempengaruhi kemampuan berpikir kritis peserta didik

## ABSTRACT

**NURAINI. NIM. 8166142008.** Effect of eXe Learning Based Problem Based Learning and Scientific Attitudes on Critical Thinking Ability in Chemical Bonding Material. Thesist. Program Of Study Education Of Chemist, Pascasarjana Unimed. 2019.

The aim of this research is to show; 1) The differences in critical thinking skills of students was taught by using Problem based learning with those using conventional eXe-based learning; 2) The differences in the student ability critical thinking of chemistry who have low scientific attitudes and high scientific attitudes; 3) The Interaction between the Learning-Based Learning model and the level of scientific attitudes of students in influencing critical thinking skills of student. This research is done at SMA N 1 Rambah. The sample of research are all of student at SMA class X at the first semester. Intrument for measure the result of study from student critical thinking skills using a multiple choice and for measure of the scientific attitude was by questionnaire sheet. This research was conducted with the experimental methods. The sample was divided into two classes, where the experimental class learned with PBL using exe learning and the exe learning class learned with convetional using exe learning. The data were analyzed descriptively and inferensial with the help of *SPSS version 22* at significance level  $\alpha = 0,05$ . The used Hypothesis test is the analysis of variance two way anova. The results showed that ; 1) There are differences in the ability of critical thinking chemistry students who are taught using Problem based learning learning with those taught using conventional learning models based on eXe Learning; 2) There are differences in the ability of critical thinking chemistry of students who have low scientific attitudes and high scientific attitudes; 3) There are interaction between learning model and scienfic attitude in influencing students' critical thinking skills.

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