ABSTRAK

Haryati. Pengaruh Model Pembelajaran Terhadap Kemampuan Berpikir Tingkat Tinggi, Keterampilan Proses Sains, dan Sikap Ilmiah Siswa Pada Materi Ekologi di Kelas X SMA Negeri 1 Kuala. *Tesis*. Program Pscasarjana Universitas Negeri Medan, 2017.

Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran terhadap: (1) kemampuan berpikir tingkat tinggi; (2) keterampilan proses sains; (3) sikap ilmiah siswa di kelas X SMA Negeri 1 Kuala. Metode penelitian menggunakan kuasi eksperimen dengan sampel penelitian sebanyak 3 kelas yang ditentukan secara cluster random sampling. Kelas X-2 dibelajarkan dengan model pembelajaran *Problem Based Learning*, kelas X-4 dibelajarkan dengan model *Guide Discovery*, dan kelas X-1 (kontrol) dibelajarkan dengan model pembelajaran konvensional. Instrumen penelitian menggunakan instrumen tes hasil kemampuan berpikir tingkat tinggi, instrumen keterampilan proses sains dengan menggunakan tes essay, dan instrumen tes sikap ilmiah siswa dengan menggunakan angket. Teknik analisis data menggunakan Analisis Kovariat (Anacova) pada taraf signifikan α = 0,05 dengan bantuan SPSS 22,0. Hasil penelitian menunjukkan: (1) ada pengaruh yang signifikan model pembelajaran terhadap kemampuan berpikir tingkat tinggi siswa (F= 4,371; P= 0,039). Hasil kemampuan berpikir tingkat tinggi siswa yang dibelajarkan dengan model *Problem Based Learning* (86,55 ± 4,0) signifikan lebih tinggi dibandingkan dengan model *Guided Discovery* (83,83 ± 3,3), maupun model konvensional (80,61 ± 3,3); (2) ada pengaruh yang signifikan model pembelajaran terhadap keterampilan proses sains (F= 6,106; P= 0,015). Keterampilan proses sains yang dibelajarkan dengan model *Problem Based Learning* (85,50 ± 4,2) signifikan lebih tinggi dibandingkan dengan model *Guided Discovery* (83,31 ± 4,4), maupun model konvensional (81,26 ± 3,1); (3) ada pengaruh yang signifikan model pembelajaran terhadap sikap ilmiah siswa (F= 6,299; P= 0,014). Sikap ilmiah siswa yang dibelajarkan dengan model pembelajaran *Problem Based Learning* (83,26 ± 3,2) signifikan lebih tinggi dibandingkan dengan model *Guided Discovery* (82,97 ± 2,6); maupun model konvensional (80,82 ± 2,4). Sebagai tindak lanjut dari hasil penelitian ini diharapkan kepada guru untuk dapat menerapkan model pembelajaran *Problem Based Learning* pada materi ekologi dalam upaya meningkatkan hasil kemampuan berpikir tingkat tinggi, keterampilan proses sains, dan sikap ilmiah siswa.

Kata kunci: Pembelajaran *Problem Based Learning*, *Guided Discovery*, Kemampuan Berpikir Tingkat Tinggi, Keterampilan Proses Sains, Sikap Ilmiah.

ABSTRACT

Haryati. The Effect of the learning on the Higher order Thinking, Science Process Skills and Scientific Attitude Biology of The Student the material Ecology in SMA Negeri 1 Kuala. *Thesis*. Graduated Program State University of Medan. 2017.

This research was aimed to determine the effect of the learning model on: (1) higher order thinking, (2) science process skill, and (3) scientific attituden in SMA Negeri 1 Kuala. The research applied experimental queasy method research with 3 classes which were choosed by using *cluster random sampling* technique. The class X-2 learn with problem based learning model, class X-4 with guided discovery model, and while class X-1 (control) with conventional model. The research instrument were the test of higher order thinking, science process skills in essay test and scientific attitude in questionnaire. The data analysis technique used *Covariat Analysis* at the level of significance $\alpha = 0.05$ by using SPSS 22.0. The results showed that: (1) there was significant effect of learning model on students' higher order thinking (F= 4.317; P= 0.039). The learning outcomes learn by problem based learning model (86.55 ± 4.0) was significant higher than guided discovery model (83.83 ± 3.3), and conventional model (80.61 ± 3.1); (2) There was significance effect of learning model on students' science process skills (F= 6.106; P= 0.015). The students' science process skill learn by problem based learning model (85.50 ± 4.2) was significant higher than guided discovery model (83.31 ± 4.4), and conventional model (81.26 ± 3.1); (3) There was significant effect of learning model on scientific attitude (F= 6.299; P= 0.014), the students' scientific attitude skills by learn guided discovery (83.26 ± 3.2) was significance higher than guided discovery (82.97 ± 2.6); and conventional model (80.82 ± 2.4). As the follow up of these research results, it is expected to the teachers to be able to use problem based learning model in material ecology as the effort to improve the students' higher order thinking, science process skills and scientific attitude.

Keywords: Problem Based Learning,, Guided Discovery Higher Order Thinking, Science Process Skill, Scientific Attitude