

## ABSTRAK

**Al Khudri Sembiring**, Pengaruh Model Pembelajaran Terhadap Penguasaan Konsep dan Keterampilan Proses Sains Mahasiswa pada Matakuliah Ilmu Pengetahuan Lingkungan di Universitas Lancang Kuning Pekanbaru 2015.

Tujuan penelitian ini adalah untuk mengetahui: (1) Pengaruh model *Project Based Learning* menggunakan *Mind map*, model *Project Based Learning* menggunakan *Concept map*, dan pembelajaran konvensional terhadap penguasaan konsep pada mahasiswa program studi pendidikan Biologi FKIP Universitas Lancang Kuning Pekanbaru, (2) Pengaruh model *Project Based Learning* menggunakan *Mind map*, model *Project Based Learning* menggunakan *Concept map*, dan pembelajaran konvensional terhadap keterampilan proses sains mahasiswa program studi pendidikan Biologi FKIP Universitas Lancang Kuning Pekanbaru. Metode penelitian yang digunakan adalah *quasi* eksperimen bentuk *pretest* dan *posttest control group desing* yang melibatkan Mahasiswa pendidikan biologi semester II Tahun Akademik 2014/2015 yang terdiri dari tiga kelas yaitu kelas B sebagai kelas eksperimen 1 berjumlah (20), kelas A kelas eksperimen 2 berjumlah (23), dan kelas C sebagai kelas kontrol berjumlah (20). Instrument penelitian ini terdiri dari tes yang sudah distandarisasi. Teknik analisis data digunakan *software* SPSS versi 18 dan hipotesis di uji menggunakan teknik Analisis Kovariat (Anakova) dengan uji lanjut *Least Signifikan Difference* (LSD). Hasil penelitian menunjukkan bahwa: (1) Terdapat pengaruh model pembelajaran terhadap penguasaan konsep mahasiswa ( $P = 0.000$ ). Tidak terdapat perbedaan antara mahasiswa yang dibelajarkan dengan *Project Based Learning* menggunakan *Mind map* dengan yang diberikan dengan model *Project Based Learning* menggunakan *Concept map* ( $P = 0.521$ ) tetapi keduanya berbeda signifikan dengan pembelajaran konvensional ( $P = 0.000$ ). (2) Terdapat pengaruh model pembelajaran terhadap keterampilan proses sains mahasiswa ( $P = 0.000$ ). Tidak terdapat perbedaan antara mahasiswa yang dibelajarkan dengan *Project Based Learning* menggunakan *Mind map* dengan yang diberikan dengan model *Project Based Learning* menggunakan *Concept map* ( $P = 0.760$ ) tetapi keduanya berbeda signifikan dengan pembelajaran konvensional ( $P = 0.000$ ). Dari hasil penelitian dapat disimpulkan bahwa model *Project Based Learning* menggunakan *Mind map* dan model *Project Based Learning* menggunakan *Concept map* lebih baik dari pembelajaran konvensional.

**Kata Kunci:** *project based learning, penguasaan konsep, keterampilan proses sains*

## **ABSTRACT**

**Al Khudri Sembiring**, The Effect of Learning Model on Under-graduate Students' Concept Mastery and Science Process Skill, at Environmental Science Course at Universitas Lancang Kuning Pekanbaru 2015.

The aim of this study is to understand (1) the effect of Project based learning using Mind-map, Project based learning using concept map, and conventional learning on undergraduate student concept mastery at Biology study program FKIP Universitas Lancang Kuning Pekanbaru; (2) the effect of Project based learning using Mind-map, Project based learning using concept map, and conventional learning on undergraduate student process science skill at Biology study program FKIP Universitas Lancang Kuning Pekanbaru. This quasy – experiment was conducted in form of *pretest* dan *posttest control group desing*, which involve second semester undergraduate students Academic year 2014/2015, consisted of Class B as experimental class (20 students), Class A, second class experiment (23 students), and Class C as control class (20 students). The research instruments used in this study was a standardized test. The data were analyzed using SPSS v.18 software and the ANCOVA was used for hypotheses testing, followed by *Least Signifikan Difference* (LSD) test. The results showed that: (1) Learning model had significantly affecting undergraduate students' concept mastery ( $P = 0.000$ ). There were no significant difference between those who were taught with project based learning using mind-map and those who were introduced with project based learning using concept map ( $P = 0.521$ ) but the two models were significantly differ with conventional learning ( $P = 0.000$ ). (2) Learning model had significantly affecting undergraduate students' science process skills ( $P = 0.000$ ). There were no significant difference between those who were taught with project based learning using mind-map and those who were introduced with project based learning using concept map ( $P = 0.760$ ) but the two models were significantly differ with conventional learning ( $P = 0.000$ ). It can be concluded that project based learning using mind map and project based learning using concept map is better than conventional learning

**Keywords:** *project based learning, concept mastery, science process skills*

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