

ABSTRACT

Liliana, 2019. *The Development of Research Based Learning Model in Electric Power System Protection Course.*

The limitation of laboratory and learning model resulting in low learning outcome on students, the lack of practical experience gained led to the expected competence in Electric Power System Protection Course has not yet been achieved. To reduce the shortage that occurred in the study then conducted Development Research Based Learning Model (RBL) a valid, practical, and effective.

Development of procedures used in the study adopted from Puslitjaknov, where the Borg stage Gall is reduced to five stages, namely: 1) conduct analysis product, 2) develop early, 3) validation specialists and revision 4) field trials small scale and a revision of the product, and 5) large scale field trials and the final product.

RBL model along with the learning products that consists of the book model, teach, and guide learning modules developed proven valid, practical and effective. After using the Research Based Learning model in learning, an increase in student learning outcome is measured in the assesment of effectiveness trough formative and summative evaluation.

Keywords: *Subject of Electric Power System Protektion, Research Based Learning Model, Effectiveness.*

ABSTRAK

Liliana, 2019. Pengembangan Model *Research Based Learning* pada Mata Kuliah Proteksi Sistem Tenaga Listrik. Disertasi Pascasarjana Fakultas Teknik Universitas Negeri Padang.

Keterbatasan sarana laboratorium dan model pembelajaran mengakibatkan rendahnya hasil belajar pada mahasiswa, minimnya pengalaman praktis yang didapatkan menyebabkan kompetensi yang diharapkan di mata kuliah Proteksi Sistem Tenaga Listrik belum tercapai. Untuk meminimalisir kekurangan yang selama ini terjadi dalam pembelajaran maka dilakukan pengembangan Model *Research Based Learning* (RBL) yang valid, praktis, dan efektif.

Prosedur pengembangan yang digunakan dalam penelitian mengadopsi dari Puslitjaknov, dimana tahap Borg & Gall direduksi menjadi lima tahapan, yaitu: 1) melakukan analisis produk, 2) mengembangkan produk awal, 3) validasi ahli dan revisi, 4) uji coba lapangan skala kecil dan revisi produk, dan 5) uji coba lapangan skala besar dan produk akhir.

Model RBL beserta produk pembelajaran yang terdiri atas buku model, panduan mengajar, dan modul ajar yang dikembangkan terbukti valid, praktis dan efektif. Hasil pembelajaran dengan model RBL ini telah efektif meningkatkan hasil belajar mahasiswa melalui evaluasi formatif dan evaluasi sumatif.

Kata Kunci: Mata Kuliah Proteksi Sistem Tenaga Listrik, Model *Research Based Learning*, Efektif.