

ABSTRACT

Aswardi, 2021. *Development of Blended-Project based learning Model for Power Electronics Practicum in the Industrial Revolution Era 4.0.*

This research is motivated by the results of student learning in the power electronics practicum learning process is not optimal. Therefore, an active and innovative learning model is needed. This study aims to develop a blended-project based learning model of power electronics practicum course in the era of the industrial revolution 4.0. valid, practical and effective.

The development procedure used in this study refers to the ADDIE (Analysis, Design, Development, Implementation and Evaluation) research and development model. The five ADDIE steps developed are: 1) Analysis, namely the first step of preliminary research or needs analysis, 2) Design, namely the second step of planning or designing the Blended-Project based learning model, 3) Development, namely the third step of developing the model by testing validity with Focus Group Discussion (FGD) for the resulting model product, 4) Implementation, which is the fourth step to test the practicality and effectiveness of learning using the Blended-Project based learning model, and 5) Evaluation, the fifth step to see whether the learning model being built is successful or not .

This research produces a blended-project based learning model of power electronics practicum in the era of the industrial revolution 4.0. Based on the results of research and development (R&D) it can be concluded that a valid, practical and effective blended-project based learning model of power electronics practicum course in the era of the industrial revolution 4.0 can improve student learning outcomes.

Keywords: *Blended-Project based learning Model, Power Electronics Practicum, Industrial Revolution 4.0.*

ABSTRAK

Aswardi, 2021. Pengembangan Model *Blended-Project based learning* Praktikum Elektronika Daya di Era Revolusi Industri 4.0. Disertasi Pascasarjana Fakultas Teknik Universitas Negeri Padang.

Penelitian ini dilatarbelakangi oleh hasil belajar mahasiswa pada proses pembelajaran praktikum elektronika daya belum optimal. Oleh karena itu dibutuhkan model pembelajaran yang aktif dan inovatif. Penelitian ini bertujuan untuk mengembangkan model *blended-project based learning* mata kuliah praktikum elektronika daya di era revolusi industri 4.0. yang valid, praktis dan efektif.

Prosedur pengembangan yang dipakai dalam penelitian ini merujuk pada model penelitian dan pengembangan ADDIE (*Analysis, Design, Development, Implementation dan Evaluation*). Kelima langkah ADDIE tersebut yang dikembangkan yaitu: 1) *Analysis* yaitu langkah pertama penelitian pendahuluan atau analisis kebutuhan (*need analysis*), 2) *Design* yaitu langkah kedua perencanaan atau desain model *Blended-Project based learning*, 3) *Development* yaitu langkah ketiga pengembangan model dengan menguji validitas dengan *Focus Group Discussion* (FGD) untuk produk model yang dihasilkan, 4) *Implementation* yaitu langkah keempat menguji praktikalitas dan efektifitas pembelajaran menggunakan model *Blended-Project based learning*, dan 5) *Evaluation* yaitu langkah kelima melihat apakah model pembelajaran yang sedang dibangun berhasil atau tidak.

Penelitian ini menghasilkan model *blended-project based learning* praktikum elektronika daya di era revolusi industri 4.0. Berdasarkan hasil penelitian dan pengembangan (R&D) dapat disimpulkan bahwa model *blended-project based learning* mata kuliah praktikum elektronika daya di era revolusi industri 4.0 yang valid, praktis dan efektif dapat meningkatkan hasil belajar mahasiswa.

Kata kunci: Model *Blended-Project based learning*, Praktikum Elektronika Daya, Revolusi Industri 4.0.