

## ABSTRAK

Wahyu Indrianus, “**Pengembangan Modul Elektronik Pada Mata Kuliah Gambar Teknik 1 di Prodi Pendidikan Vokasional Konstruksi Bangunan Universitas Negeri Jakarta**”. Skripsi. Jakarta: Program Studi Pendidikan Vokasional Konstruksi Bangunan, Fakultas Teknik, Universitas Negeri Jakarta. 2020.

Penelitian ini dilatar belakangi oleh perkembangan teknologi dan informasi yang cepat dalam berbagai aspek termasuk dalam bidang pendidikan, penggunaan metode yang kurang bervariasi, kurangnya penggunaan media pembelajaran. Modul elektronik dapat meningkatkan efektivitas dan fleksibilitas pembelajaran, tidak terkait ruang dan waktu, serta dapat menjadikan proses pembelajaran lebih menarik dan tidak cepat bosan. Banyak peserta didik beranggapan bahwa mata kuliah menggambar teknik merupakan mata kuliah yang sulit dan tidak menarik. Pengamatan yang dilakukan di dalam kelas pada mata kuliah Gambar Teknik 1 di semester 111 menunjukkan bahwa penggunaan media dan penyajian materi masih terbatas, serta penggunaan modul elektronik belum tersedia pada mata kuliah Gambar Teknik 1. Berdasarkan analisis kebutuhan, diperlukan pengembangan bahan ajar berupa modul elektronik pada mata kuliah Gambar Teknik 1.

Penelitian ini bertujuan untuk menghasilkan menghasilkan produk berupa bahan ajar modul elektronik Gambar Teknik 1 yang dapat di akses secara online melalui situs *e-learning* PTB UNJ yang sedang dikembangkan oleh Program Studi Pendidikan Vokasional Konstruksi Bangunan, Universitas Negeri Jakarta. Penelitian dilakukan menggunakan metode Penelitian dan Pengembangan (Research and Development) yang mengacu pada model *Four-D*. Penelitian dilakukan melalui 4 (empat) tahapan pengembangan yaitu, *Define* (Pendefinisian), *Design* (Perancangan), *Develop* (Pengembangan), dan *Disseminate* (Penyebaran).

Hasil pengembangan modul elektronik tersebut dibuat dalam 6 (enam) modul yang ditampilkan secara online melalui situs *e-learning* PTB UNJ dan ditambahkan video pembelajaran/video tutorial serta evaluasi di setiap bab materi. Berdasarkan hasil validasi oleh ahli materi, mendapat persentase kelayakan sebesar 70,833% dalam kriteria “layak”, dan hasil validasi oleh ahli media mendapat persentase kelayakan sebesar 74,118% dalam kriteria “layak”. Pada uji efektivitas menunjukkan bahwa hasil *pre-test & post-test* mendapatkan peningkatan nilai sebesar 16,67%, serta hasil penilaian pengguna mendapatkan rerata nilai sebesar 4,15 dan termasuk dalam kategori “baik”. Sehingga modul elektronik tersebut sudah dapat digunakan sebagai sumber belajar mata kuliah Gambar Teknik 1.

Kata kunci: Pengembangan, Modul Elektronik, Gambar Teknik 1

## ABSTRACT

Wahyu Indrianus, "*Electronic Module Development in Engineering Drawing Course 1 in Vocational Education Study Program in Building Construction, State University of Jakarta*". Thesis. Jakarta: Building Vocational Education Study Program, Faculty of Engineering, State University of Jakarta. 2020.

*This research is motivated by the rapid development of technology and information in various aspects including in the field of education, the use of less varied methods, the lack of use of instructional media. Electronic modules can increase the effectiveness and flexibility of learning, not related to space and time, and can make the learning process more interesting and not get bored quickly. Many students assume that drawing engineering courses are difficult and unattractive courses. Observations made in the classroom in Engineering Drawing 1 in semester III show that the use of media and presentation of material is still limited, and the use of electronic modules is not yet available in Engineering Drawing 1 courses. Based on the needs analysis, it is necessary to develop teaching materials in the form of electronic modules in the Engineering Drawing course 1.*

*This study aims to produce a product in the form of instructional materials for Electronic Engineering Drawing module 1 which can be accessed online through the e-learning site PTB UNJ which is being developed by the Vocational Education Building Study Program, Jakarta State University. The study was conducted using the Research and Development method which refers to the Four-D model. The study was conducted through 4 (four) stages of development, namely, Define, Design, Develop, and Disseminate.*

*The results of the electronic module development are made in 6 (six) modules which are displayed online through the PTB UNJ e-learning site and added learning videos / video tutorials and evaluations in each material chapter. Based on the results of the validation by material experts, a percentage of eligibility of 70.833% was in the "feasible" criteria, and the results of the validation by the media experts obtained a percentage of eligibility of 74.118% in the "feasibility" criteria. The effectiveness test shows that the results of the pre-test & post-test get an increase in value of 16.67%, and the user assessment results get an average value of 4.15 and included in the category of "good". So that the electronic module can be used as a learning resource for Engineering Drawing 1 course.*

*Keywords: Development, Electronic Modules, Technical Drawing 1*