ABSTRAK

Muhammad Iqbal Daulay, Nim: 8166122016. PENGEMBANGAN MODEL PEMBELAJARAN BERBASIS *COMPUTER-BASED INSTRUCTION* PADA MATA PELAJARAN JARINGAN TRANSMISI TENAGA LISTRIK SISWA SMK NEGERI 1 PERCUT SEI TUAN. Tesis : Program Pascasarjana Universitas Negeri Medan, 2020.

Penelitian ini dilatar belakangi dari masalah keterbatasan fasilitas peralatan pembelajaran praktek mata pelajaran jaringan transmisi tenaga listrik siswa jurusan Teknik Jaringan Tenaga Listrik program studi keahlian Teknik Ketenagalistrikan SMK Negeri 1 Percut Sei Tuan dengan sistem pembelajaran yang belum sesuai dan kerjasama dengan dunia usaha/ industri yang belum memadai serta memerlukan biaya praktik yang tidak sedikit. Studi ini bertujuan untuk: (1) mengembangkan secara sistematis model pembelajaran berbasis CBI pada mata pelajaran jaringan transmisi tenaga listrik siswa SMK Negeri 1 Percut Sei Tuan, (2) untuk mengetahui keefektifan pengembangan model pembelajaran berbasis CBI pada mata pelajaran jaringan transmisi tenaga listrik siswa SMK Negeri 1 Percut Sei Tuan, (3) untuk melihat motivasi siswa SMK Negeri 1 Percut Sei Tuan dengan pengembangan model pembelajaran berbasis CBI pada mata pelajaran jaringan transmisi tenaga listrik siswa SMK Negeri 1 Percut Sei Tuan. Jenis penelitian ini adalah penelitian dan pengembangan produk Borg and Gall yang dipadu dengan model pembelajaran Dick and Carey. Model pengembangan produk pembelajaran ini merupakan model yang tersusun secara terprogram dan sistematis sesuai dengan desain pengembangan Alessi & Trollip. Model meliputi lima tahapan, yakni: (1) melakukan penelitian pendahuluan, (2) pengumpulan bahan, (3) membuat desain *software*, (4) membuat dan memproduksi *software*, (5) *review* dan uji coba produk. Subjek uji coba produk dalam penelitian ini terdiri dari: 2 (dua) ahli desain pembelajaran, 2 (dua) ahli konten/ materi, 2 (dua) ahli konstruksi rekayasa perangkat lunak, 3 (tiga) siswa kelas XI jurusan Teknik Jaringan Tenaga Listrik program studi keahlian Teknik Ketenagalistrikan SMK Negeri 1 Percut Sei Tuan untuk uji coba perorangan, 9 (sembilan) siswa kelas XI jurusan Teknik Jaringan Tenaga Listrik program studi keahlian Teknik Ketenagalistrikan SMK Negeri 1 Percut Sei Tuan. Hasil penelitian menunjukkan: (1) validasi ahli desain pembelajaran secara keseluruhan menunjukkan nilai rata-rata 3,97 kategori layak, (2) validasi ahli konten/ materi secara keseluruhan menunjukkan nilai rata-rata 4,32 kategori sangat layak, (3) validasi ahli konstruksi rekayasa perangkat lunak secara keseluruhan menunjukkan nilai rata-rata 4,38 kategori sangat layak, (4) uji coba perorangan secara keseluruhan menunjukkan nilai rata-rata 3,97 kategori layak, (5) uji coba kelompok kecil secara keseluruhan menunjukkkan nilai rata-rata 3,56 kategori layak. Hasil validasi produk pengembangan model pembelajaran berbasis CBI pada mata pelajaran jaringan transmisi tenaga listrik siswa SMK Negeri 1 Percut Sei Tuan jurusan Teknik Jaringan Tenaga Listrik program studi keahlian Teknik Ketenagalistrikan untuk peningkatan hasil proses pembelajaran menunjukkan kelayakan untuk dikembangkan.

Keyword: Model pembelajaran berbasis CBI, Model pemrosesan informasi, SMK.

ABSTRACT

Muhammad Iqbal Daulay, *Student ID Number: 8166122016. DEVELOPMENT OF COMPUTER-BASED INSTRUCTION-BASED LEARNING MODELS IN THE STUDENTS OF THE ELECTRIC POWER TRANSMISSION NETWORK OF VOCATIONAL SCHOOL 1 PERCUT SEI TUAN. Thesis: Postgraduate Program, State University of Medan, 2020.*

This research is motivated by the problem of limited practical learning equipment facilities for the subject of electricity transmission networks for students majoring in Electrical Power Network Engineering study program Electrical Engineering expertise at SMK Negeri 1 Percut Sei Tuan with unsuitable learning systems and inadequate collaboration with the business/ industry world and requires a significant cost of practice. This study aims to: (1) systematically develop a CBI-based learning model in the subject of the electric power transmission network for students of SMK Negeri 1 Percut Sei Tuan, (2) to determine the effectiveness of developing a CBI-based learning model on the subject of the electric power transmission network for SMK students Negeri 1 Percut Sei Tuan, (3) to see the motivation of students of SMK Negeri 1 Percut Sei Tuan with the development of a CBI-based learning model on the subject of electric power transmission networks for students of SMK Negeri 1 Percut Sei Tuan. This type of research is the research and development of Borg and Gall's products combined with the Dick and Carey learning model. This learning product development model is programmed and systematic by the Alessi & Trollip development design. The model includes five stages, namely: (1) conducting preliminary research, (2) collecting materials, (3) making software designs, (4) creating and producing software, (5) reviewing and testing products. The subject of product testing in this study consisted of 2 (two) instructional design experts, 2 (two) content / material experts, 2 (two) software engineering construction experts, 3 (three) class XI students majoring in Electrical Power Network Engineering program. Electrical Engineering expertise study at SMK Negeri 1 Percut Sei Tuan for individual trials, 9 (nine) class XI students majoring in Electric Power Network Engineering study program Electrical Engineering expertise at SMK Negeri 1 Percut Sei Tuan. The results showed: (1) the validation of the learning design expert as a whole showed an average score of 3.97 in the feasible category, (2) the validation of the content / material experts as a whole showed an average score of 4.32 in the very feasible category, (3) the validation The software engineering construction experts as a whole showed an average value of 4.38 very feasible categories, (4) individual trials as a whole showed an average value of 3.97 in the feasible category, (5) small group trials as a whole showed an average of 3.56 decent categories. The results of product validation for the development of a CBI-based learning model in the subject of electric power transmission networks in students of SMK Negeri 1 Percut Sei Tuan, Department of Electrical Power Network Engineering, Electrical Engineering Expertise Study Program, shows the results of the feasibility to be developed.

Keyword: CBI-based learning model, information processing model, SMK.