RANCANG BANGUN MULTIMEDIA PEMBELAJARAN INTERAKTIF GAME BERBASIS MODEL *EXPLICIT INSTRUCTION* PADA MATA PELAJARAN SISTEM OPERASI DI SMK

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ABSTRAK

Sumberbelajarmenjadisalahsatusorotanutamadalam proses pembelajaran, penggunaansumberbelajar yang masihkurang optimal danmetodebelajar yang hanyaberpusatpada guru dinilaimenjadisalahsatualasanrendahnya rata-rata prestasibelajar. Dengansemakinberkembangnyateknologiseharusnyapenggunaansumberbelajarlebihberkembang juga, contohnyatadariperkembanganteknologidalampendidikanadalah multimedia dimanadidalamnyatelahmengintegrasikanbanyak media. Salah satu model multimedia pembelajaranadalahdalambentuk*games*.

Tujuandaripenelitianiniadalahmerancangdanmembangun multimedia pembelajaraninteraktif*game* berbasis model *Explicit Instruction* (EI) padamatapelajaransistemoperasi di SMK sertamengetahuiresponsiswaterhadap multimedia yang dibangun. Proses penyampaianmateridalam multimedia mengacupadasemuatahapan yang terdapatdalam model EI. Penelitian yang dilakukanmenggunakanmetodepenelitian*Research and Development* (R&D). Proses yang dilakukandalammerancangdanmembangunmultimediapembelajaraninteraktif*game*berbasis model EI dilakukanmelalui lima tahapanyaituanalisis (umum, pengguna, materi, analisiskebutuhan multimedia *game* di lapangan, analisisperangkatlunakdananalisisperangkatkeras), desain (perancanganmateri, penerapanalur model EI dalam multimedia, pembuatan*flowchart, storyboard,* antarmuka, DFD, kamus data dan PSPEC), pengembangan (pengujian multimedia danvalidasiahli), implementasi (ujicobaproduk di lapangan)danpenilaian. Selanjutnya multimedia yang telahdibangundiujicobakansecaraterbataskepada 33 orang siswa SMK Negeri 2 Bandung Prodi TeknologiKomputerdanInformatika (TKI). Hasilpenelitian yang telahdilakukanadalahsebagaiberikut: 1) multimedia pembelajarandinyatakanlayakdigunakandandikategorikansangatbaikberdasarkanvalidasiahlimateriyaitu 83,75% danahli media yaitu 90,66%, 2) respon yang diperolehdarisiswadapatdikategorikansangatbaikyaitudenganpresentase 82,27%.

Kata Kunci: multimedia pembelajaran, model EI, R&D

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DESIGN AND DEVELOPMENT OF EXPLICIT INSTRUCTION-BASED GAME INTERACTIVE MULTIMEDIA LEARNING ON OPERATING SYSTEM SUBJECT IN VOCATIONAL SCHOOL

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ABSTRACT

Learning resources becomes one of the major highlights in the learning process, the use of learning resources which are still less than optimal and learning methods which were teacher centered considered to be on of the reason for the low average in learning achievement. With the development of technology, learning resources should more developed as well, a real development of technology in education is to integrate a lot of media to be a multimedia. One of the model instructional design of multimedia is in the games form. The aim of this research was to design and to develop explicit instruction-based game interactive multimedia learning on operating system subject in vocational school and then to know the feasibility of multimedia that has been developed and the students' response for that. The process of content transfer in multimedia refers to all the stages contained in explicit instruction model. Research conducted using research methods Research and Development (R&D). Process which was undertaken in designing and developing explicit instruction-based game interactive multimedia learning conducted through five stages: analysis (general, users, materials, analysis of game multimedia needs on the field, software and hardware analysis), design (design of materials, application of EI in multimedia, flowcharts, storyboards, interface, data flow diagram, data dictionary and program spesification), development (multimedia testing and judgment expert), implementation (product trials in the field) and assessment. Furthermore, multimedia has been developed was limited exercised to 33 students of SMKN 2 Bandung. Results of the research that has been done is as follows: 1) learning multimedia declared fit for use and got excellent categorized based expert validation material is 83.75% and 90,66 namely media experts, 2) students response can be categorized as very good with 82.27% percentage.

Keywords: multimedia learning, EI model, R&D