

# **RANCANG BANGUN MULTIMEDIA PEMBELAJARAN INTERAKTIF GAME LABIRIN BERBASIS MODEL *PROBLEM BASED LEARNING* PADA MATA PELAJARAN JARINGAN KOMPUTER**

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## **ABSTRAK**

Pembuatan multimedia ini dilatar belakangi pada mata pelajaran Jaringan dasar yang dianggap cukup sulit dan membutuhkan visualisasi nyata. Penelitian ini bertujuan untuk menghasilkan produk berupa multimedia pembelajaran interaktif *game* labirin berbasis model *problem based learning* pada mata pelajaran jaringan komputer di SMK serta mengetahui respon siswa terhadap multimedia yang dibangun. Model yang digunakan dalam penelitian ini adalah model *Problem Based Learning* (PBL) maka dari itu semua tahapan mengacu pada model *problem based learning*. Proses yang dilakukan peneliti dalam merancang dan membangun multimedia ini dilakukan melalui lima tahapan yaitu analisis (pengguna, materi, analisis kebutuhan multimedia *game* di lapangan, analisis perangkat lunak dan analisis perangkat keras), desain (perancangan materi, penerapan alur model *Problem Based Learning* dalam multimedia, pembuatan *flowchart*, *storyboard*, antarmuka, DFD, kamus data dan PSPEC), pengembangan (pengujian multimedia dan validasi ahli), implementasi (uji coba produk di lapangan) dan penilaian. Multimedia yang telah dibangun diuji cobakan secara terbatas kepada 30 orang siswa SMK Negeri 4 Bandung Prodi Teknik Komputer Jaringan. Hasil penelitian yang dilakukan adalah sebagai berikut : 1) multimedia dinyatakan layak digunakan dan dikategorikan sangat baik berdasarkan validasi ahli materi 90% dan ahli media yaitu 87,32%. 2) Respon yang diperoleh dari siswa dapat dikategorikan sangat baik dengan presentase 80,02%.

Kata Kunci : multimedia berbasis *game*, model *problem based learning*, *game* labirin.

# **DESIGN AND DEVELOPMENT OF INTERACTIVE MULTIMEDIA LEARNING MAZE GAME BASED ON PROBLEM BASED LEARNING MODEL ON COMPUTER NETWORK SUBJECT**

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## **ABSTRACT**

*The background of this multimedia research is computer network subject which assumed to be difficult and need to be visualized. The Research purpose is to develop a product that is an interactive multimedia learning maze game based on problem based learning on computer network subject in SMK and to know students responses to multimedia which is developed. The Method to reach research purpose is problem based learning (PBL) method so that all of development phases refer to problem based learning method. There are five phases in the design and development of this multimedia, that is analysis (general, users, materials, multimedia requirement analysis on field, , software analysis, and hardware analysis), design (material design, implementation of Problem Based Learning model flow on multimedia, flowchart design, storyboard, interface, DFD, data dictionary and PSPEC), development (multimedia judgment and expert validation), implementation (product testing on field) and evaluation. The developed multimedia is finitely tested on 30 students in SMK Negeri 4 Bandung computer network engineering major. Result of this research is : 1)multimedia stated to be feasible to use and categorize as very good based on material expert validation 90% and media validation 87,32%. 2)Response from student can be categorized as very good eith 80,02% presentage.*

*Keyword : game based multimedia, problem based learning method, maze game.*