

ABSTRAK

Matakuliah Pemrograman Berorientasi Objek (PBO) adalah salah satu matakuliah wajib yang harus ditempuh mahasiswa Prodi Pendidikan Informatika. Terdapat beberapa permasalahan yang terjadi dalam pelaksanaannya, yaitu kurangnya media pembelajaran, kurangnya keaktifan mahasiswa, dan perlunya ilustrasi terhadap materi yang disampaikan. Hal ini menyebabkan kurang maksimalnya proses penyerapan materi oleh mahasiswa pada matakuliah PBO. Dengan memperhatikan karakteristik peserta didik dan kebutuhan pengguna, penelitian ini bertujuan untuk mengembangkan, menguji kelayakan, dan mengetahui respon pengguna pada media yang akan dikembangkan yaitu Pengembangan *Game* Edukasi 3D *Factory Developer* Menggunakan Metode *Forward Chaining* Dan Pendekatan Metafora Pada Pemrograman Berorientasi Objek. Penelitian ini merupakan penelitian pengembangan yang menggunakan model pengembangan Kemp dan Dayton yang terdiri dari sembilan tahapan yaitu (1) Tujuan umum, (2) Tujuan khusus, (3) Karakteristik peserta didik, (4) Isi materi, (5) *Treatment*, (6) *Storyboard*, (7), Naskah, (8) *Developing, editing, and mixing*, dan (9) *Testing and revising*. Produk yang dihasilkan penelitian ini berupa *game* edukasi berbasis *android* untuk matakuliah PBO. Penilaian yang diperoleh dari uji ahli materi menunjukkan kelayakan sebesar 99% memiliki kualifikasi sangat layak, uji ahli media sebesar 93% memiliki kualifikasi sangat layak, uji coba perorangan sebesar 87% memiliki kualifikasi sangat layak, uji coba kelompok kecil sebesar 85% memiliki kualifikasi sangat layak, dan uji coba kelompok besar sebesar 85% memiliki kualifikasi sangat layak. Sehingga dapat disimpulkan bahwa *game* edukasi *Factory Developer* menggunakan metode *Forward Chaining* dan pendekatan Metafora layak digunakan sebagai media pembelajaran pada matakuliah Pemrograman Berorientasi Objek Program Studi Pendidikan Informatika.

Kata Kunci : *Game, Forward Chaining, Metafora, PBO.*

ABSTRACT

The Object Oriented Programming (OOP) course is one of the compulsory subjects that must be taken by students of Informatics Education Study Program. There are several problems that occur in its implementation, namely the lack of learning media, lack of student to be active, and the need for illustrations of the material presented. This results in a less than optimal process of absorbing material by students in OOP courses. By paying attention to the characteristics of students and user needs, this study aims to develop, test the feasibility, and find out the user's response to the media to be developed namely The Development of Educational 3D Game Factory Developer Using Forward Chaining Method and Metatrophical Thinking for Object Oriented Programming. This research is a development study that uses the Kemp and Dayton development model which consists of nine stages, namely (1) General purpose, (2) Specific purpose, (3) Characteristics of students, (4) Content outline, (5) Treatment, (6)) Storyboards, (7) scripts, (8) Developing, editing, and mixing, and (9) Testing and revising. The product produced in this research is an android-based educational game for OOP subjects. The assessment obtained from the material expert test shows the eligibility of 99% has very decent qualifications, the media expert test of 93% has very decent qualifications, individual trials of 87% have very decent qualifications, small group trials of 85% have very decent qualifications , and large group trials of 85% have very decent qualifications. So it can be concluded that the Factory Developer educational game uses the Forward Chaining method and the Metaphor approach is appropriate to be used as a learning medium in the Object Oriented Programming Program of Informatics Education Study Program.

Keywords : *Game, Forward Chaining, Metaphor, OOP.*