

ABSTRACT

Meri Renta Uli Pasaribu. NIM. 8214021007. Development Of Project-Based MERIE (Motivation, Engagement, Reinforcement, Implementation, Evaluation) Learning Model With Cisco Packet Tracer Application In Administrative Subjects Class XI E Network Infrastructure SMK Negeri 1 Siatas Barita Regency North Tapanuli

This study aims to determine 1) Development of a project-based MERIE learning model using the Cisco Packet Tracer Application for Network Infrastructure Administration learning in class XI E of SMK Negeri 1 Siatas Barita 2) The feasibility level of the project-based MERIE learning model (Motivation, Engagement, Reinforcement, Implementation, Evaluation) of students, material experts, media experts and learning practitioners Network Infrastructure Administration SMK 3) The level of effectiveness of learning outcomes in the Network Infrastructure Administration subject using the Cisco Packet Tracer application. The research method used in this study adapted the ADDIE development model, namely a development model consisting of five stages which include Analysis, Design, Development, Implementation and Evaluation. The results showed that the "MERIE" learning model and the Cisco Packet Tracer Application in the Network Infrastructure Administration subject proved feasible to use because they had gone through validation tests from material experts, instructional designs, media, learning practitioners, individual trials, small group trials and tests. field, and the result is declared "Very Good". The learning outcomes of students in using the Cisco Packet Tracer application in the learning process of Network Infrastructure Administration using the "MERIE" Learning Model show that there is a significant difference compared to the learning outcomes of the Discovery Learning learning model where from the different test results obtained t count (5.51) > t table (2.048). From the results of the effectiveness test, the "MERIE" learning model and Cisco Packet Tracer applications have a higher level of effectiveness than the Discovery Learning learning model.

Keywords:

Kata Kunci : Project-based MERIE Learning Model, Cisco Packet Tracer Application, Level of feasibility of the MERIE learning model (Motivation, Engagement, Reinforcement, Implementation, Evaluation)

ABSTRAK

Meri Renta Uli Pasaribu. NIM. 8214021007. Pengembangan Model Pembelajaran *Project Based Learning* (PjBL) Dengan Aplikasi *Cisco Packet Tracer* Pada Mata Pelajaran Administrasi Infrastruktur Jaringan Kelas XI E SMK Negeri 1 Siatas Barita Kabupaten Tapanuli Utara.

Penelitian ini bertujuan untuk mengetahui 1) Pengembangan model pembelajaran MERIE berbasis proyek dengan menggunakan Aplikasi *Cisco Packet Tracer* untuk pembelajaran Administrasi Infrastruktur Jaringan di kelas XI E SMK Negeri 1 Siatas Barita 2) Tingkat kelayakan model pembelajaran MERIE berbasis proyek (*Motivation, Engagement, Reinforcement, Implementation, Evaluation*) terhadap peserta didik, ahli materi, ahli media dan praktisi pembelajaran Administrasi Infrastruktur Jaringan SMK 3) Tingkat keefektifan hasil belajar pada mata pelajaran Administrasi Infrastruktur Jaringan dengan menggunakan aplikasi *Cisco Packet Tracer*. Metode penelitian yang digunakan dalam penelitian ini mengadaptasi model pengembangan ADDIE yaitu model pengembangan yang terdiri dari lima tahapan yang meliputi Analisis (*Analysis*), Desain (*Design*), Pengembangan (*Development*), Implementasi (*Implementation*) dan Evaluasi (*Evaluation*). Hasil penelitian menunjukkan bahwa model pembelajaran “MERIE” dan Aplikasi *Cisco Packet Tracer* Pada mata pelajaran Administrasi Infrastruktur Jaringan terbukti layak digunakan karena telah melalui uji validasi dari ahli materi, desain pembelajaran, media, praktisi pembelajaran, uji coba perorangan, uji coba kelompok kecil dan uji lapangan, dan hasilnya dinyatakan “Sangat Baik”. Hasil belajar peserta didik di dalam penggunaan aplikasi *Cisco Packet Tracer* pada proses pembelajaran Administrasi Infrastruktur Jaringan menggunakan Model Pembelajaran “MERIE” menunjukkan adanya perbedaan signifikan dibandingkan hasil belajar model pembelajaran *Discovery Learning* dimana dari hasil uji beda diperoleh t hitung (5,51) > t tabel (2,048). Dari hasil uji keefektifan, model pembelajaran “MERIE” dan aplikasi aplikasi *Cisco Packet Tracer* memiliki tingkat keefektifan yang lebih tinggi dari model pembelajaran *Discovery Learning*.

Kata Kunci : Model Pembelajaran MERIE Berbasis Proyek, Aplikasi Cisco Packet Tracer, Tingkat Kelayakan Model Pembelajaran MERIE (Motivasi, Keterlibatan, Penguatan, Implementasi, Evaluasi)