

ABSTRACT

Ismi Rahayu, 2020. *The Development of E-modules Project Based Learning for Students of Computer and Basic Networks at Vocational School*

The purpose of this research is to describe the e-module learning media based on Project Based Learning that is valid, practical, and effective in basic computer and network subjects. This project-based learning e-module is designed to increase student interest in learning so that it can increase the achievement of learning outcomes. The purpose of this study is also to produce project-based learning e-modules that can help students learn independently as a project-based learning media in Computer and Basic Network subjects.

This study uses the Research and Development (R&D) method with 4-D development procedures (Define, Design, Develop, and Disseminate). The data analysis technique uses descriptive analysis techniques to describe the value of the validity, practicality, and effectiveness of project-based learning e-module.

The results of this development research are: (1) Producing e-module based on project-based learning, (2) the validity of e-module based on project-based learning is declared valid with a value category of $0.84 > 0.61$ (3) The practicality of e-modules based on two teacher responses with an average Score of 89 in the very practical category and 36 student responses with an average Score of 85 in the very practical category (4) The effectiveness of project-based learning e-module is stated to be effective in improving learning outcomes. Based on the research results, it can be concluded that e-module learning based on Project Based Learning is valid, practical, and effective to be used as a learning medium in basic computer and network subjects.

Keywords: *E-modul, Project Based Learning, Computer and basic network*

ABSTRAK

Ismi Rahayu, 2020. Pengembangan *E-modul Project Based Learning* untuk Siswa Komputer dan Jaringan Dasar di Sekolah Menengah Kejuruan. Tesis Pascasarjana Fakultas Teknik Universitas Negeri Padang.

Tujuan penelitian ini adalah mendeskripsikan media pembelajaran *e-modul* berbasis *Project Based Learning* yang valid, praktis, dan efektif pada mata pelajaran komputer dan jaringan dasar. *E-modul* pembelajaran berbasis proyek ini dirancang untuk meningkatkan minat belajar siswa sehingga dapat meningkatkan pencapaian hasil belajar. Tujuan penelitian ini juga adalah menghasilkan *e-modul* berbasis *Project Based Learning* yang dapat membantu siswa belajar secara mandiri sebagai media pembelajaran berbasis *Project Based Learning* pada mata pelajaran Komputer dan Jaringan Dasar.

Penelitian ini menggunakan metode *Research and Development* (R&D) dengan prosedur pengembangan 4-D (*Define, Design, Develop, Disseminate*). Teknik analisis data menggunakan teknik analisis deskriptif untuk mendeskripsikan nilai validitas, kepraktisan, dan keefektifan *e-modul* pembelajaran berbasis *Project Based Learning*.

Hasil dari penelitian pengembangan ini adalah: (1) Menghasilkan *e-modul* berbasis *Project Based Learning*, (2) validitas *e-modul* berbasis *Project Based Learning* dinyatakan valid dengan kategori nilai $0,84 > 0,61$ (3) Praktikalitas *e-modul* berdasarkan dua respon guru dengan nilai rata-rata 89 dengan kategori sangat praktis dan 36 respon siswa dengan nilai rata-rata 85 dengan kategori sangat praktis (4) Efektivitas *e-modul* pembelajaran berbasis *Project Based Learning* dinyatakan efektif dalam meningkatkan hasil pembelajaran. Berdasarkan hasil penelitian dapat disimpulkan bahwa *e-modul* pembelajaran berbasis *Project Based Learning* valid, praktis, dan efektif untuk digunakan sebagai media pembelajaran pada mata pelajaran komputer dasar dan jaringan.

Kata kunci: *E-modul, Project Based Learning, Komputer dan Jaringan Dasar*