ABSTRAK

Sudirman Hasanuddin Siregar NIM. 5162111021 : *Pengembangan Mobile Learning Berbasis Android Menggunakan Mit App Inventor Pada Mata Kuliah Mekanika Dasar Prodi Pendidikan Teknik Bangunan Ft-Unimed*. Skripsi. Fakultas Teknik – Universitas Negeri Medan 2023.

Penelitian ini bertujuan untuk: (1) Mendeskripsikan proses pengembangan media pembelajaran *mobile learning* berbasis *android* pada mata kuliah Mekanika Dasar pada mahasiswa jurusan pendidikan teknik bangunan di Ft- Unimed, (2) Mengetahui kelayakan media pembelajaran *mobile learning* berbasis android pada mata kuliah mekanika dasar materi konstruksi rangka batang statis tertentu jurusan pendidikan teknik bangunan di Ft-Unimed, (3) Mengetahui respon mahasiswa terhadap media pembelajaran *mobile learning* berbasis android pada mata kuliah mekanika dasar materi konstruksi rangka batang statis tertentu jurusan Pendidikan Teknik bangunan Ft-Unimed. Penelitian ini menggunakan metode penelitian pengembangan 4D (*four*-D) yang diadaptasikan menjadi 4P yakni *Define* (pendefinisian), *Design* (perancangan), *Develop* (pengembangan) dan *Disseminate* (penyebarluasan). Media pembelajaran mobile learning berbasis android ini mengacu pada Rencana Pembelajaran Semester (RPS) yang memuai Capaian pembelajaran mata kuliah (CPMK) yang memuat materi "Konstruksi Rangka Batang Statis Tertentu Menggunakan Metode Analisis Ritter". Instrumen yang digunakan berupa angket. Angket yang digunakan untuk mengetahui kelayakan media melalui validasi ahli media dan ahli materi, dan untuk mengetahui respon mahasiswa terhadap media yang telah dikembangkan. Uji coba media dilakukan kepada mahasiswa PTB berjumlah 28 orang. Hasil validasi oleh ahli media mendapat skor 3,88 atau 77,77% dengan kriteria "Layak"dan validasi oleh ahli materi mendapat skor 4,2 atau 87% dengan kriteria "Sangat Layak". Hasil uji coba produk mendapat respon mahasiswa dengan skor persentase 79,16% dengan kriteria "Layak". Hasil penelitian menunjukkan bahwa media pembelajaran mobile learning berbasis android layak digunakan mahasiswa PTB di Ft-Unimed.

Kata Kunci: Pengembangan Media, *Mobile Learning, Android*. Konstruksi Rangka Batang Statis Tertentu Metode Analisis Ritter.

ABSTRACT

Sudirman Hasanuddin Siregar NIM. 5162111021. *Development of Android-Based Mobile Learning Using Mit App Inventor in Basic Mechanics Course in Building Engineering Education Study Program, Ft-Unimed. Thesis. Faculty of Engineering – State University of Medan*. 2023

This study aims to: (1) Describe the process of developing android-based mobile learning media in Basic Mechanics courses for students majoring in building engineering education at Ft-Unimed, (2) Determine the feasibility of Android-based mobile learning media in basic mechanics courses. certain static truss construction majoring in building engineering education at Ft-Unimed, (3) Knowing student responses to android-based mobile learning media in basic mechanics courses on certain static truss construction materials majoring in Building Engineering Education Ft-Unimed. This study used the 4D (four-D) development research method which was adapted to 4P namely Define, Design, Develop and Disseminate. This Android-based mobile learning media refers to the Semester Learning Plan (RPS) which expands the course learning outcomes (CPMK) which contains the material "Construction of Certain Static Bars Using the Ritter Analysis Method". The instrument used is a questionnaire. The questionnaire was used to determine the feasibility of the media through the validation of media experts and material experts, and to find out student responses to the media that had been developed. Media trials were conducted on 28 PTB students. The validation results by media experts got a score of 3.88 or 77.77% with the "Decent" criteria and the validation by the material experts got a score of 4.2 or 87% with the "Very Eligible" criteria. The results of the product trials received student responses with a percentage score of 79.16% with the "Decent" criteria. The results of the study show that Android-based mobile learning media is suitable for use by PTB students at Ft-Unimed

Keyword: *Media Development, Mobile Learning, Android. Certain Static Truss Construction Ritter Analysis Method*