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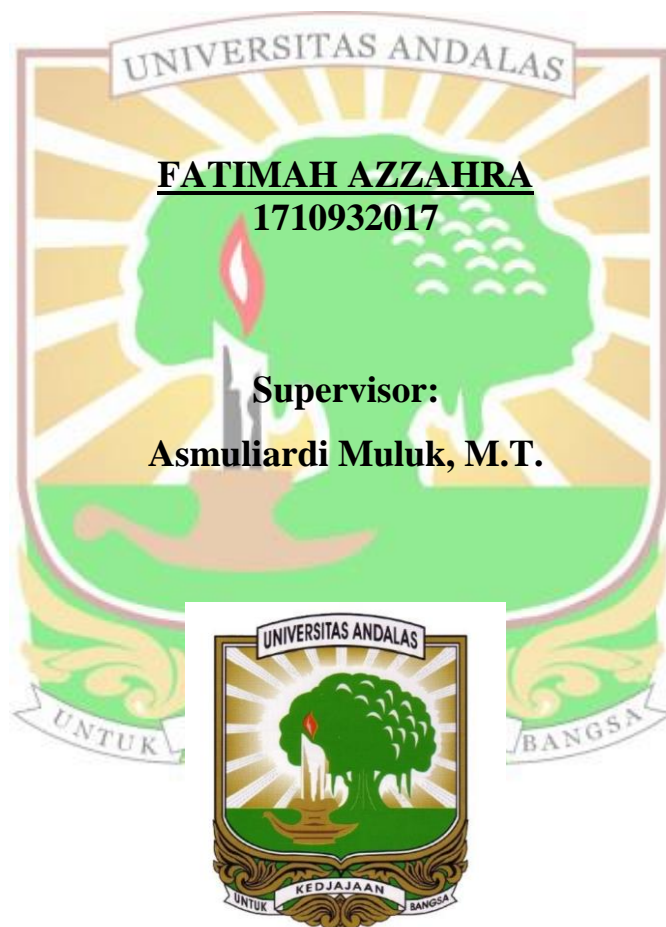
(Case Study: Engineering Faculty Students of Andalas University)

FINAL PROJECT PROPOSAL

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Supervisor:

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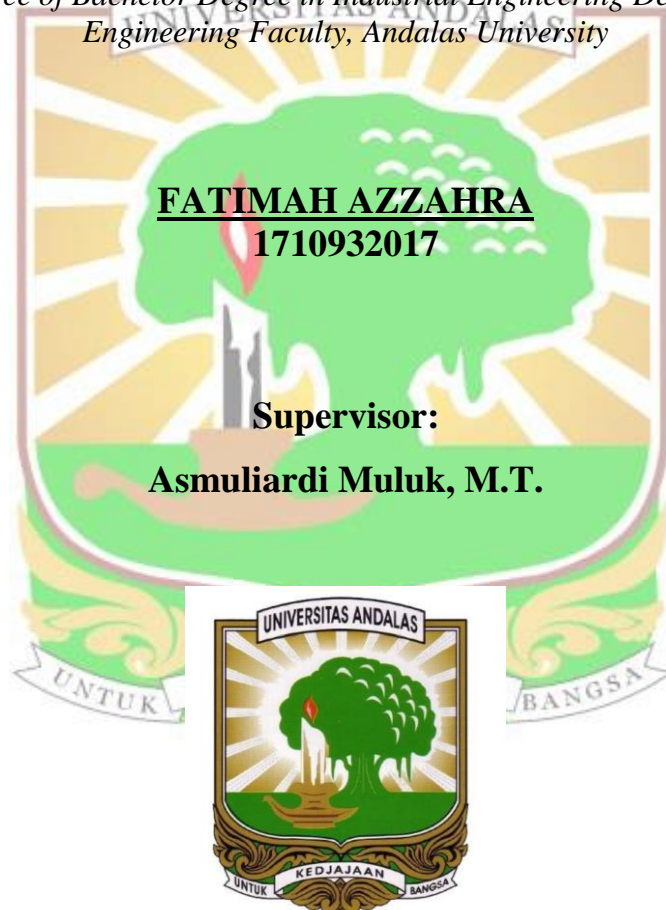
FINAL PROJECT PROPOSAL

A Final project report submitted in fulfillment of the requirement for the award of the degree of Bachelor Degree in Industrial Engineering Department, Engineering Faculty, Andalas University

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ABSTRACT

In November 2019, the Chinese authorities found the Covid-19 epidemic in Wuhan Province, China. Severe Acute Respiratory Syndrome Coronavirus 2 causes COVID-19 (SARS-CoV2). This sickness is spreading at a breakneck speed. As a result, health experts advise social isolation, physical isolation, and working from home. COVID-19 is having an effect on students as well. Traditional lecture activities that could not be carried out due to societal constraints were replaced by online lectures.

One of the prevention standards implemented by the government is social distancing. Online learning activities are very flexible because they can be accessed without being hindered by time and place. In addition, online learning provides flexibility for lecturers to access their students to get references to other learning materials. This method is useful for improving the quality of learning (Pardede, 2011). But if there are good things, there are also bad things that can happen in implementing online learning. Often found many obstacles or discrepancies in learning. One of the challenges experienced in distance education is the lack of equipment, personnel, resources, limited educational technology, and the lack of skills and quality of lecturers. Based on the background above, it can be seen that motivation is very important for students in completing their studies.

The NASA-TLX approach can be utilized to quantify mental workload in this study. The NASA-TLX approach includes six indicators: mental and physical needs, time constraints, work performance, frustration levels, and physical and mental effort. There are 24 percent of indicators of frustration level among Engineering Faculty students at Andalas University, 18 percent for effort indicators, 17 percent for mental and performance needs, 16 percent for time needs, and 6 percent for indicators of physical needs. While the hypothesis analysis test tool used is the SmartPLS application with the SEM (Structural Equation Modeling) analysis method, the results of the analysis using this study show that online learning as a result of the Covid-19 pandemic has a positive and significant impact on the motivation of Andalas University Engineering Faculty students.

Keywords: Covid-19 pandemic, descriptive method, motivation, NASA-TLX, SEM (Structural Equation Modeling).

ABSTRAK

Pada November 2019, otoritas Tiongkok menemukan wabah Covid-19 di Provinsi Wuhan, Tiongkok. Sindrom Pernafasan Akut Parah Coronavirus 2 menyebabkan COVID-19 (SARS-CoV2). Penyakit ini menyebar dengan kecepatan yang sangat tinggi. Akibatnya, para ahli kesehatan menyarankan isolasi sosial, isolasi fisik, dan bekerja dari rumah. COVID-19 juga berdampak pada siswa. Kegiatan kuliah tradisional yang tidak bisa dilakukan karena kendala masyarakat digantikan oleh kuliah online.

Salah satu standar pencegahan yang diterapkan oleh pemerintah adalah social distancing. Kegiatan pembelajaran online sangat fleksibel karena dapat diakses tanpa terhalang oleh waktu dan tempat. Selain itu, pembelajaran online memberikan keleluasaan bagi dosen untuk mengakses mahasiswanya guna mendapatkan referensi materi pembelajaran lainnya. Metode ini berguna untuk meningkatkan kualitas pembelajaran (Pardede, 2011). Namun jika ada hal baik, ada juga hal buruk yang bisa terjadi dalam pelaksanaan pembelajaran online. Seringkali ditemukan banyak kendala atau ketidaksesuaian dalam pembelajaran. Salah satu tantangan yang dialami dalam pendidikan jarak jauh adalah kurangnya peralatan, tenaga, sumber daya, teknologi pendidikan yang terbatas, dan kurangnya keterampilan dan kualitas dosen. Berdasarkan latar belakang di atas, dapat diketahui bahwa motivasi sangat penting bagi mahasiswa dalam menyelesaikan studinya.

Pendekatan NASA-TLX dapat digunakan untuk mengukur beban kerja mental dalam penelitian ini. Pendekatan NASA-TLX mencakup enam indikator: kebutuhan mental dan fisik, kendala waktu, kinerja, tingkat frustrasi, dan upaya fisik dan mental. Terdapat 24 persen indikator tingkat frustasi mahasiswa Fakultas Teknik Universitas Andalas, 18 persen untuk indikator usaha, 17 persen untuk kebutuhan mental dan kinerja, 16 persen untuk kebutuhan waktu, dan 6 persen untuk indikator kebutuhan fisik. Sedangkan alat uji analisis hipotesis yang digunakan adalah aplikasi SmartPLS dengan metode analisis SEM (Structural Equation Modeling), hasil analisis menggunakan penelitian ini menunjukkan bahwa pembelajaran online akibat pandemi Covid-19 memberikan dampak positif dan signifikan terhadap motivasi mahasiswa Fakultas Teknik Universitas Andalas.

Kata kunci: pandemi covid-19, metode deskriptif, motivasi, NASA-TLX, SEM (Structural Equation Modeling).