

## ABSTRACT

*As a result of the outbreak of the Covid-19 pandemic, the issuance of a policy of limiting physical gatherings in various fields, including in the field of education. Based on the joint decree of the Minister of Education and Culture, Minister of Religion, Minister of Health and Minister of Home Affairs Number 03/KB/2021, Number 384 of 2021, Number HK.01.08/MENKES/4242/2021, Number 440-717 of 2021 concerning Guidelines for Implementing Learning during the Covid-19 Pandemic, a maximum of 50%. For the adjustment stage of the Education unit that implements PTMT starting from 25% of the number of education units and students in one sub-district. One of the problems is how to design an effective online learning system.*

*In this Final Project, the creation of an Augmented Reality (AR)-based Learning Management System (LMS) application using Android as the main medium was carried out. Android design is made using android studio software and blender software as 3D object design software, objects made into 3D are fusion splicer, optical power meter (OPM), optical light source (OLS) and optical time domain reflectometer (OTDR). In designing this application, it uses firebase as its main database.*

*The results of making the application are tested with the black box testing method, resulting in 100% of the application's features running as they should. Furthermore, testing was carried out using the usability scale system to get a value of 70 (good category) and the reference test results of the usability scale system gave the number 68.*

**Keywords:** *SMK Telkom Bandung, Learning Management System, Augmented Reality, Fiber to the Home.*