

## **ABSTRACT**

During the COVID-19 pandemic, conducting experiments in the lab has become constrained due to physical distancing protocols. Experiments activities are important to help students understand the concepts of physics, one of which is the optical learning of image formation on a positive lens. Video based laboratory is one of the solutions that can be used as an alternative to do experiments activities in the laboratory due to the COVID-19 pandemic. This study aims to produce learning media based on Optical Video Based Laboratory and improve analytical thinking skills of high school students on the topic of Shadow Formation. The research was conducted from November 2020 to July 2021 at one of the high schools in Tangerang and Bogor. The sample used in the model trial is 30 students. This study uses the R&D method with reference to the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). The results showed that the Optical Video Based Laboratory (OVBL) was feasible to be used as a media for learning physics on optical materials. The results of the n-gain test score increased from pre-test to post-test of 4,80 which means it can improve students' analytical thinking skills in the medium category

***Keywords:** Optical Video Based Laboratory, image formation, positive lens, analytical thinking skills*