

**THE EFFECT OF GUIDED INQUIRY LABORATORY ACTIVITY WITH VIDEO  
EMBEDDEDON STUDENTS' UNDERSTANDING AND MOTIVATION IN  
LEARNING LIGHT AND OPTICS**

RESEARCH PAPER

Submitting as Requirement to Obtain Degree of *SarjanaPendidikan* in  
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**INTERNATIONAL PROGRAM ON SCIENCE EDUCATON  
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Tina Afriani, 2019

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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana  
Pendidikan pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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# **THE EFFECT OF GUIDED INQUIRY LABORATORY ACTIVITY WITH VIDEO EMBEDDED ON STUDENTS' UNDERSTANDING AND MOTIVATION IN LEARNING LIGHT AND OPTICS**

## **ABSTRACT**

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This research aims to investigate the effect of guided inquiry laboratory activity with video embedded on students' understanding and students' motivation in learning light and optics topic. The method used in this research was pre-experiment. Sampling technique used in this research was convenience sampling and the samples were taken from grade 8 in one of junior high school in Bandung. The sample was 20 students. The class implemented guided inquiry laboratory activity with video embedded in learning light and optics. The students' understanding was measured using test given at pretest and post-test while students' motivation was calculated using software minsteps (RASCH Model). The t-test paired sample also was performed on the average level of 95% to identify the significant difference of students' understanding before and after the implementation of guided inquiry laboratory activity with video embedded. The results of this research show that the use of guided inquiry laboratory with video embedded gives improvement of students understanding. Eventhough the value of n-gain is 0.264 (categorized as low level), the statistical test shows that there is significant difference between students understanding before and after the implementation of guided inquiry laboratory activity with video embedded. There are 15 students from 20 students who are motivated in learning light and optics by using guided inquiry laboratory activity with video embedded. Almost all statements related to students motivation toward science learning can be approved by students. It means that students are motivated by the implementation of guided inquiry laboratory activity with video embedded.

*Keyword: Guided inquiry laboratory activity, video embedded, students' understanding, students' motivation, light and optics*

# **PENGARUH INKUIRI TERBIMBING DALAM KEGIATAN LABORATORIUM DENGAN PENAYANGAN VIDEO TERHADAP PEMAHAMAN DAN MOTIVASI SISWA DALAM PEMBELAJARAN CAHAYA DAN ALAT OPTIK**

## **ABSTRAK**

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Penelitian ini bertujuan untuk mengetahui pengaruh inkuiri terbimbing dalam kegiatan laboratorium dengan penayangan video terhadap pemahaman dan motivasi siswa dalam pembelajaran cahaya dan alat optik. Metode yang digunakan dalam penelitian ini adalah *pre-experiment*. Teknik pengambilan sampel yang digunakan dalam penelitian ini adalah *convenience sampling* dan sampel diambil di kelas 8 dari salah satu sekolah menengah pertama di Bandung. Sampel adalah 20 siswa. Kelas diterapkan inkuiri terbimbing dalam kegiatan laboratorium dengan video yang tertanam dalam pembelajaran cahaya dan alat optik. Pemahaman siswa diukur dengan menggunakan tes yang diberikan pada saat pretest dan post-test sementara motivasi siswa dihitung dengan menggunakan perangkat lunak minsteps (RASCH Model). *Paired sample t-test* juga dilakukan pada tingkat rata-rata 95% untuk mengidentifikasi perbedaan signifikan dari pemahaman siswa sebelum dan sesudah pelaksanaan inkuiri terbimbing dalam kegiatan laboratorium dengan penayangan video. Hasil penelitian ini menunjukkan bahwa penggunaan inkuiri terbimbing dalam kegiatan laboratorium dengan penayangan video memberikan peningkatan pemahaman siswa. Meskipun nilai *n-gain* adalah 0.264 (dikategorikan sebagai level rendah), uji statistik menunjukkan bahwa ada perbedaan yang signifikan antara pemahaman siswa sebelum dan sesudah tritmen. 75% siswa termotivasi dalam pembelajaran cahaya dan alat optik dengan menggunakan inkuiri terbimbing dalam kegiatan laboratorium dengan penayangan video. Hampir semua pernyataan yang terkait dengan motivasi siswa terhadap pembelajaran sains dapat disetujui oleh siswa. Ini berarti bahwa siswa termotivasi oleh pelaksanaan inkuiri terbimbing dalam kegiatan laboratorium dengan penayangan video.

*Keyword: Inkuiri Terbimbing dalam kegiatan laboratorium, Penayangan Video, pemahaman siswa, motivasi siswa, cahaya dan alat optik*

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