

**INVESTIGATING STUDENTS' SCIENTIFIC LITERACY AND
MOTIVATION USING INQUIRY BASED LEARNING SUPPORTED BY
INSTAGRAM IN LEARNING LIGHT AND OPTIC TOPIC**

RESEARCH PAPER

Submitted as Requirement to Obtain Degree of *Sarjana Pendidikan* in International
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UNIVERSITAS PENDIDIKAN INDONESIA

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Skripsi ini diajukan untuk memenuhi salah satu syarat
memperoleh gelar Sarjana Pendidikan
pada Program Studi International Program on Science Education (IPSE)
Fakultas Pendidikan Ilmu Pengetahuan alam

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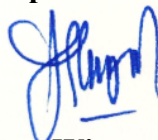
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DECLARATION

I hereby declare that every detail of this research paper entitled “Investigating Students’ Scientific Literacy and Motivation Using Inquiry-Based Learning Supported by Instagram in Learning Light and Optic Topic” which written based on my own idea, efforts, and works without plagiarizing or copying from other papers. The theories, opinions, and other information in this paper have been quoted or referenced in accordance with the scientific code of UPI and the scientific ethics of academic society. This declaration is created truthfully and mindful way and if this research violates the scientific ethics or there is a statement by the other to the authenticity of this research paper, I will accept the authorization of scholars or copyright. As a result, I am willing to be accountable and accept academic punishment that corresponds with the rules.

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Abstract

Teaching and learning during pandemic unable the teacher and school to provide face to face class for the student. Therefore, we need to deliver the material to the students, as well as giving the students effective teaching and learning processes. The purpose of the study was to investigate the students' scientific literacy and students' Motivation toward Science Learning (SMTSL) using Inquiry-based Learning supported by Instagram. The method of this study is using a pre-experimental pretest and posttest design to measure the students' scientific literacy. The objective test will be used to measure the students' scientific literacy and questionnaire will be used in measuring Students Motivation towards Science Learning. The samples of this study consist of 17 students of 8th-grade students from one of the Junior High Schools in Bandung, Kuala Lumpur, and Yogyakarta. The n-gain result of the study shows that the students' scientific literacy is 0.127 which is described as low improvement. The n-gain result of the students' motivation towards science learning n-gain result is 75.71% which is described as good motivation with the highest n-gain in the science learning value domain with 82.82% which is described as very good motivation. The lowest n-gain result is in the self-efficacy and performance goal domain with 70.29% which is described as good motivation. Therefore, implementing inquiry-based learning supported by Instagram in the teaching and learning process able to improve the students' scientific literacy during distance learning as well as gain the students' motivation in learning science, especially in learning light and optic topic.

Keyword: Inquiry-based learning, Instagram, scientific literacy, students motivation, light and optic, science learning.

**MENYELIDIKI LITERASI SAINS SISWA DAN MOTIVASI
MENGUNAKAN PEMBELAJARAN INKUIRI BERBANTUAN
INSTAGRAM DALAM PEMBELAJARAN TOPIK CAHAYA DAN OPTIK**

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Abstrak

Proses belajar mengajar di masa pandemi tidak memungkinkan guru dan sekolah menyediakan kelas tatap muka bagi siswa. Oleh karena itu, kita perlu menyampaikan materi kepada siswa, serta memberikan proses belajar mengajar yang efektif kepada siswa. Tujuan dari penelitian ini adalah untuk mengetahui literasi sains siswa dan Motivasi Belajar Sains Siswa (SMTSL) menggunakan Pembelajaran Berbasis Inkuiri yang didukung oleh Instagram. Metode penelitian ini menggunakan pre-experimental pretest and posttest design untuk mengukur literasi sains siswa. Tes objektif akan digunakan untuk mengukur literasi sains siswa dan angket akan digunakan untuk mengukur Motivasi Siswa terhadap Pembelajaran Sains. Sampel penelitian ini terdiri dari 17 siswa kelas 8 salah satu SMP di Bandung, Kuala Lumpur, dan Yogyakarta. Hasil n-gain penelitian menunjukkan bahwa literasi sains siswa sebesar 0,127 yang dikategorikan sebagai peningkatan rendah. Hasil n-gain motivasi siswa terhadap pembelajaran IPA diperoleh hasil n-gain sebesar 75,71% yang tergolong motivasi baik dengan nilai n-gain tertinggi pada domain nilai belajar IPA sebesar 82,82% yang dinyatakan motivasi sangat baik. Hasil n-gain terendah terdapat pada domain self-efficacy dan performance goal sebesar 70,29% yang dikategorikan sebagai motivasi yang baik. Oleh karena itu, dengan menerapkan pembelajaran berbasis inkuiri yang didukung oleh Instagram dalam proses belajar mengajar mampu meningkatkan literasi sains siswa selama pembelajaran jarak jauh serta meningkatkan motivasi siswa dalam belajar IPA khususnya dalam pembelajaran topik cahaya dan optik.

Kata kunci: pembelajaran inkuiri, Instagram, literasi sains, motivasi siswa, cahaya dan optik, pembelajaran sains

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