

ABSTRAK

Rika Rahmawati : Desain PjBL Terintegrasi STREM pada Materi Unsur, Senyawa, dan Campuran melalui Pembuatan Produk Kosmetik untuk Meningkatkan Keterampilan Berpikir Kritis dan Literasi Halal Peserta Didik SMP

Penelitian ini dilandasi oleh rendahnya keterampilan berpikir kritis dan minimnya pemahaman literasi halal dalam pembelajaran IPA di tingkat sekolah menengah. Penelitian ini bertujuan untuk merancang dan menerapkan desain pembelajaran *Project-Based Learning* (PjBL) yang terintegrasi STREM (*Science, Technology, Religion, Engineering, and Mathematics*) dalam konteks pembuatan produk kosmetik untuk meningkatkan keterampilan berpikir kritis dan literasi halal peserta didik SMP. Metode yang digunakan adalah pre-eksperimental dengan desain *One-Group Pretest-Posttest*. Subjek penelitian adalah peserta didik kelas VIII di SMP Plus Al-Amanah Kabupaten Bandung. Desain pembelajaran terdiri atas enam sintak PjBL yang terintegrasi STREM dalam tiga proyek, yaitu pembuatan label kemasan, produk kosmetik, dan poster edukasi halal. Instrumen penelitian divalidasi oleh ahli dan digunakan untuk mengukur kelayakan desain pembelajaran, keterlaksanaan, peningkatan keterampilan berpikir kritis dan literasi halal, serta perbedaannya sebelum dan sesudah pembelajaran. Hasil penelitian menunjukkan bahwa kelayakan instrumen pembelajaran PjBL-STREM memiliki tingkat kelayakan sangat baik (92,5%) dan keterlaksanaan efektif (78%). Peningkatan keterampilan berpikir kritis dan literasi halal berada pada kategori sedang dengan nilai *n-gain* masing-masing 0,38 dan 0,47. Uji statistik menunjukkan bahwa terdapat perbedaan signifikan antara kemampuan peserta didik sebelum dan sesudah pembelajaran.

Kata kunci : berpikir kritis, literasi halal, *project based learning*, STREM

ABSTRACT

Rika Rahmawati : *Design of STREM-Integrated Project-Based Learning on Elements, Compounds, and Mixtures through Cosmetic Product Development to Enhance Critical Thinking Skills and Halal Literacy of Junior High School Students*

This research is grounded in the low level of critical thinking skills and the limited understanding of halal literacy in science education at the secondary school level. The aim of this study is to design and implement a Project-Based Learning (PjBL) model integrated with STREM (Science, Technology, Religion, Engineering, and Mathematics) in the context of cosmetic product development to enhance students' critical thinking skills and halal literacy in junior high school. The research employed a pre-experimental method using a One-Group Pretest-Posttest design. The participants were Grade VIII students at SMP Plus Al-Amanah, Bandung Regency. The learning design consisted of six PjBL phases integrated with STREM across three projects: designing packaging labels, developing cosmetic products, and creating halal educational posters. The research instruments were validated by experts and used to measure the feasibility of the learning design, its implementation, the improvement of critical thinking skills and halal literacy, as well as the differences before and after the intervention. The results indicated that the feasibility of the PjBL-STREM learning instruments was rated very good (92.5%) and the implementation was effective (78%). The improvement in critical thinking skills and halal literacy was categorized as moderate, with n-gain scores of 0.38 and 0.47, respectively. Statistical analysis revealed a significant difference in students' abilities before and after the learning intervention.

Keywords: *critical thinking, halal literacy, project-based learning, STREM*