

ABSTRAK

PENERAPAN PRAKTIKUM KIMIA SKALA KECIL DENGAN MODEL DISCOVERY LEARNING UNTUK MENINGKATKAN KETERAMPILAN PROSES SAINS DAN PEMAHAMAN MURID FASE F1 SMA PANGUDI LUHUR SEDAYU

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Penelitian ini bertujuan untuk mengetahui cara meningkatkan keterampilan proses sains (KPS) dan mengetahui peningkatan pemahaman murid pada materi faktor-faktor yang memengaruhi laju reaksi melalui penerapan praktikum kimia skala kecil dengan model *discovery learning*. Penelitian ini menggunakan metode campuran (kuantitatif-kualitatif) dengan jenis penelitian deskriptif serta *design research* yang terdiri atas tiga tahap, yaitu persiapan, penelitian di kelas, dan evaluasi. Data dikumpulkan melalui wawancara, lembar observasi KPS, tes pemahaman *pretest-posttest*, kemudian dianalisis secara kuantitatif dan kualitatif. Hasil penelitian menunjukkan bahwa penerapan *discovery learning* melalui praktikum kimia skala kecil mampu mengetahui cara meningkatkan KPS murid pada seluruh indikator yang terdiri dari mengamati, berhipotesis, merencanakan percobaan, menggunakan alat dan bahan, menafsirkan data, dan menyimpulkan yaitu dengan cara menerapkan sintaks secara tepat, pemberian umpan balik melalui evaluasi pada setiap pertemuan, serta latihan KPS secara berulang. Selain itu pemahaman murid pada level kognitif C2, C3, C4 dan C6 juga mengalami peningkatan nilai rata-rata dari *pretest* sebesar 30,36% menjadi *posttest* sebesar 90,18% dengan nilai rata-rata N-Gain sebesar 0,87 berkategori tinggi.

Kata Kunci: *discovery learning*, keterampilan proses sains, pemahaman, praktikum kimia skala kecil

ABSTRACT

**IMPLEMENTATION OF SMALL-SCALE CHEMISTRY LAB
EXPERIMENTS USING DISCOVERY LEARNING TO IMPROVE SCIENCE
PROCESS SKILLS AND UNDERSTANDING AMONG PHASE F1
STUDENTS AT PANGUDI LUHUR SEDAYU HIGH SCHOOL**

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This research aims to determine determine how to improve students' science process skills (SPS) and to assess improvements in students understanding of the factors affecting reaction rates through the implementation of small-scale chemistry laboratory experiments using the discovery learning model. This research employed a mixed-methods (quantitative-qualitative) approach with a descriptive research design consisting of three stages: preparation, classroom research, and evaluation. Data were collected thru interviews, SPS observation sheets, pretest-posttest understanding tests, and then analyzed quantitatively and qualitatively. The research results show that the application of discovery learning thru small-scale chemistry practicals can identify ways to improve students scientific process skills (SPS) across all indicators, which include observing, hypothesizing, planning experiments, using tools and materials, interpreting data, and concluding. This is achieved by applying the syntax correctly, providing feedback thru evaluations at each meeting, and repeatedly practicing science process skills. In addition, students understanding at the cognitive levels C2, C3, C4, and C6 also showed an increase in the average score from the pretest of 30.36% to the posttest of 90.18%, with an average N-Gain score of 0.87, categorized as high.

Keywords: *discovery learning, science process skills, understanding, small scale chemistry practicum*