

PENGARUH MODEL PEMBELAJARAN BERBASIS PRAKTIKUM TERHADAP KETERAMPILAN PROSES SAINS, SIKAP ILMIAH DAN PENGUASAAN KONSEP SISTEM REGULASI

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ABSTRAK

Penelitian ini bertujuan menganalisis pengaruh model pembelajaran berbasis praktikum pada konsep sistem regulasi terhadap keterampilan proses sains, sikap ilmiah dan penguasaan konsep siswa. Metode penelitian yang digunakan adalah metode *quasy experiment* dengan desain *the matching pretest-posttest design*. Populasi penelitian terdiri dari seluruh siswa kelas XI IPA salah satu SMA di Kabupaten Lima Puluh Kota Sumatera Barat dengan total populasi 150 siswa. Teknik pengambilan sampel dengan menggunakan *Cluster Random Sampling*. Sampel terdiri atas 26 orang siswa kelas eksperimen dengan pembelajaran berbasis praktikum dan 26 orang siswa kelas kontrol dengan pembelajaran praktikum verifikasi. Instrumen yang digunakan adalah tes keterampilan proses sains, skala sikap ilmiah, tes penguasaan konsep, angket tanggapan siswa dan lembar observasi. Analisis data menggunakan uji *Mann-Whitney*, *Normalized gain*, korelasi *Spearman* dan uji regresi linear sederhana. Hasil penelitian menunjukkan terdapat perbedaan signifikan pada keterampilan proses sains dan penguasaan konsep antara kelas eksperimen dan kelas kontrol dan tidak terdapat perbedaan yang signifikan pada sikap ilmiah antara kelas eksperimen dan kelas kontrol. Kesimpulannya, model pembelajaran berbasis praktikum pada konsep sistem regulasi meningkatkan keterampilan proses sains, sikap ilmiah dan penguasaan konsep siswa. Keterampilan proses sains dan sikap ilmiah pada kelas eksperimen memiliki hubungan yang signifikan terhadap penguasaan konsep.

Kata kunci: Model pembelajaran berbasis praktikum, keterampilan proses sains, penguasaan konsep, sikap ilmiah, sistem regulasi.

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THE EFFECT OF THE PRACTICAL-BASED LEARNING MODEL TOWARD SCIENCE PROCESS SKILLS, SCIENTIFIC ATTITUDES AND CONCEPT COMPREHENSION OF REGULATION SYSTEM

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ABSTRACT

The aim of this research was to analyze the influence of practical-based learning model on the concept of regulation system of the science process skills, scientific attitudes and concept comprehension of student. Research method was a quasi-experimental with the matching pretest-posttest design. The research population consisted of all students in class XI in one of senior high school in West Sumatra with a total population of 150 students. Sampling technique was a cluster random sampling. Sample consisted of 26 students of class experiment through practical-based learning and 26 students of class control through verification practical learning. The instrument consist of a science process skills test, scientific attitude scale, concept comprehension test, student feedback questionnaires and observation sheets. The data was analyzed using the *Mann-Whitney* test, Normalized gain, *Spearman* correlation and simple linear regression. The results showed that there was a significant difference in science process skills and concept comprehension between the experimental and the control class and there was no significant difference in scientific attitude between the experimental and the control class. Herewith, it has been concluded that the practical-based learning model on the concept system of regulation improvement the science process skills, scientific attitudes and concept comprehension. Science process skills and scientific attitudes in the experimental class had a significant relationship to the concept comprehension.

Key words: Practical-based learning model, concept comprehension, regulation system, science process skills, scientific attitude.

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