

PENGARUH PEMBELAJARAN BERBASIS PEOE (*Predict-Explain-Observe-Explain*) TERHADAP PENGUASAAN KONSEP DAN SIKAP ILMIAH SISWA SMA MATERI SISTEM SARAF

ABSTRAK

Penelitian penerapan PEOE (*Predict-Explain-Observe-Explain*) ini bertujuan untuk mengungkap penguasaan konsep sistem saraf dan sikap ilmiah siswa SMA. Pembelajaran PEOE terdiri dari empat kegiatan diantaranya memprediksi (*predict*), menjelaskan (*explain*), mengamati/mengobservasi (*observe*) dan menjelaskan kembali (*explain*). Penelitian menggunakan metode *quasi eksperiment* dengan menggunakan *nonequivalent control grup design*. Sampel dipilih secara *cluster random sampling* yang kemudian diperoleh kelas XI MIPA 4 dan XI MIPA 5 pada salah satu SMA di Kota Bandung. Data diperoleh menggunakan instrumen tes berupa soal pilihan ganda yang diberikan di awal dan di akhir pembelajaran, lembar kerja siswa, angket sikap ilmiah serta respon siswa. Pada temuan penelitian hasil penguasaan konsep *posttest* di kedua kelas terdapat perbedaan yang signifikan antara kelas pembelajaran berbasis PEOE dan kelas pembelajaran praktikum konvensional. Pada temuan penelitian mengenai sikap ilmiah menunjukkan terdapat perbedaan sikap ilmiah yang signifikan antara kelas pembelajaran berbasis PEOE dan pembelajaran praktikum konvensional. Selain itu hasil uji korelasi menunjukkan bahwa penguasaan konsep dan sikap ilmiah termasuk kategori sedang. Hasil angket siswa menunjukkan bahwa pembelajaran berbasis PEOE pada materi sistem saraf dapat membantu siswa dalam mengatasi penguasaan konsep dan sikap ilmiah. Dengan demikian, pembelajaran berbasis PEOE dapat diterapkan dalam pembelajaran biologi di sekolah.

Kata Kunci: *pembelajaran berbasis PEOE, penguasaan konsep, sikap ilmiah, sistem saraf.*

THE EFFECT OF PEOE (Predict-Explain-Observe-Explain) BASED - LEARNING ON CONCEPT MASTERY AND SCIENTIFIC ATTITUDE SENIOR HIGH SCHOOL STUDENTS' IN NERVE SYSTEM

ABSTRACT

Study applying PEOE (Predict-Explain-Observe-Explain) set as purpose to express concept mastery of nerve system and scientific attitude student in senior high school. Learning PEOE consist of four activities including predicting, explaining, observing and explaining again. The method which in this study is quasi-experiment used Non equivalent control group design. The sample is chosen by cluster random sampling which is obtained XI MIPA 4 and XI MIPA 5 from a senior high school in Bandung. The data as gathered use instrument such as multiple choice which given in the beginning and in the end of learning process, students' worksheets, questionnaire scientific attitude along with students' respondents. On the result finding that concept mastery from two classes there are significant differences between classes with PEOE based-learning and class with conventional experiment. On research finding about the scientific attitude shows there are significantly different on scientific attitude between PEOE based-learning and conventional experiment. In addition, the result of correlation test shows that concept mastery and scientific attitude include moderate category. The result of students' questionnaire show in learning PEOE based-learning in nerve system can help students' to resolve concept mastery and scientific attitude. Therefore, PEOE based-learning can be apply in learning biology in school.

Key Word: *PEOE based – learning, concept mastery, scientific attitude, nerve system*