ABSTRAK

Penelitian ini didasari oleh kebutuhan untuk membelajarkan konsep fotosintesis yang abstrak, mengingat bahwa siswa SMP belum sepenuhnya mencapai kemampuan berpikir abstrak maka dicari solusi untuk mencari model pembelajaran yang sesuai dengan karakteristik materi fotosintesis, agar materi semakin mudah dipahami. Penelitian yang dilaksanakan di salah satu Sekolah Menengah Pertama (SMP) di Bandung ini bertujuan untuk menganalisis kemampuan penguasaan konsep siswa dan sikap ilmiah siswa sebelum dan sesudah penerapan model pembelajaran *Predict-Observe-Explain* (POE). Sampel penelitian menggunakan dua kelas sampel kelas VII sebagai kelas eksperimen dan kelas kontrol. Metode penelitian yang digunakan adalah quasi eksperimen. Desain penelitian yang digunakan adalah *Nonequivalent Control Group*. Instrumen yang digunakan untuk mengukur penguasaan konsep siswa adalah soal pilihan ganda sebanyak 25 butir, sedangkan instrumen untuk mengukur sikap ilmiah siswa menggunakan angket model skala Likert sebanyak 30 butir pernyataan. Hasil penelitian menunjukkan bahwa pembelajaran model POE memberikan pengaruh terhadap penguasaan konsep dan sikap ilmiah siswa. Tidak terdapat perbedaan penguasaan konsep antara kelas eksperimen dan kelas kontrol sebelum penerapan model pembelajaran POE, namun terdapat perbedaan penguasaan konsep antara kelas eksperimen dan kelas kontrol setelah penerapan model pembelajaran POE. Kemudian terdapat perbedaan sikap ilmiah siswa antara kelas eksperimen dan kelas kontrol sebelum dan sesudah penerapan model pembelajaran POE. Hasil penelitian juga menunjukkan terdapat peningkatan penguasaan konsep siswa dan sikap ilmiah siswa antara kelas eksperimen dan kelas kontrol. Penguasaan konsep di kelas eksperimen lebih tinggi (0,5) dibandingkan dengan kelas kontrol (0,12). Sikap Ilmiah siswa dikelas eksperimen lebih tinggi (0,12) dibandingkan dengan kelas kontrol (0,04). Kesimpulan penelitian ini adalah model pembelajaran POE pada materi fotosintesis memberikan pengaruh terhadap penguasaan konsep dan sikap ilmiah siswa SMP.

Kata kunci : model pembelajaran *Predict-Observe-Explain* (POE), penguasaan konsep, sikap ilmiah, fotosintesis.

ABSTRACT

This research was based on the need for learning photosynthesis which has abstracs concept, given that the Junior High School Students to find a model of learning in accordance with the characteristics of photosynthesis concept, so the material more easily understood. The research was conducted in one of the Junior High School in Bandung. The research aims to analyze the ability of student's mastery of concepts and scientific attitudes of students before and after application of learning model *Predict-Observe-Explain* (POE). The sample of this research used two classes of seven grade, one as experimental class and the other as control class. The method of this research is quasy experimental. The design of this research is *Nonequivalent Control Design*. The instrument used to measure students' mastery concepts is multiple choise questions as much as 25 points, while scientific instruments for measuring attitudes of students using a questionnaire Likert scale models as much as 30 point statement. The finding of this research showed that the learning model (POE) gave influence result on the mastery of concepts and scientific attitudes of students. There is not difference on the mastery of concepts between experimental class and the control class before learning with POE but there is difference on the mastery of concepts between experimental class and in the control class after learning POE. The result of this reseach also shows that there is difference on the scientific attitudes of students between experimental class and the control class before and after learning with POE model. There are improvement in student's mastery concepts and scientific attitudes of students between the experimental class and control class. The student's mastery of the concept in experimental class was higher (0,5) than the control class (0,12). The scientific attitude of students in experimental class is higher (0,12) than control class (0,04). Therefore it can be conclude that application of learning model POE for photosynthesis concept give influence for student's mastery concepts and scientific attitudes of students in Junior High School.

Keywords : Learning Model *Predict-Observe-Explain* (POE), student's mastery of concept, scientific attitude of students, photosynthesis.