ABSTRAK

Talenta Kristina. 2018. *Peningkatan Pemahaman Siswa Tentang Hukum Archimedes dengan Metode Prediction Observation Explanation (POE) pada Siswa Sekolah Menengah Atas (SMA)* **FH Yogyakarta. Skripsi. Yogyakarta: Program Studi Pendidikan Fisika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma, Yogayakarta.**

Penelitian ini bertujuan untuk: (1) Mengetahui tingkat pemahaman awal siswa tentang hukum Archimedes (2) Meningkatkan pemahaman siswa tentang hukum Archimedes, melalui penerapan metode *Prediction Observation Explanation* (POE).

Penelitian ini bersifat kualitatif. Penelitian ini dilaksanakan pada bulan Mei 2018 di Asrama SMA FH Yogyakarta. Subjek penelitian berjumlah 13 siswa SMA FH Yogyakarta. Metode pengambilan data berupa *pretest* dan *posttest* berisi 15 butir tes esai. Tes esai ini digunakan untuk mengukur pemahaman awal dan pemahaman akhir siswa. Data yang diperoleh berupa lembar pengerjaan siswa dan LKS (Lembar Kerja Siswa).

Hasil penelitian menunjukkan bahwa: (1) Pemahaman awal, siswa belum memahami bahwa benda tenggelam mengalami gaya apung, siswa juga belum memahami bahwa volume fluida tempat benda dicelupkan, jenis bahan pembuat benda, jenis benda, posisi benda, ukuran benda, tidak mempengaruhi keadaan benda di dalam air jika dua buah benda itu atau lebih memiliki massa dan volume yang sama; dan siswa belum memahami bahwa massa jenis fluida, percepatan gravitasi, dan volume benda yang tercelup mempengaruhi gaya apung benda; serta siswa juga belum memahami bahwa benda di dalam air mengalami pengurangan berat akibat adanya gaya apung; (2) Penerapan metode POE (*Prediction Observation Explanation*) dapat meningkatkan pemahaman siswa tentang hukum Archimedes. Ini terlihat pada nilai rata-rata siswa pada *pretest* adalah 37,8 meningkat menjadi 73,4 pada *posttest*.

Kata kunci: metode POE, peningkatan pemahaman, hukum Archimedes.

ABSTRACT

Kristina, Talenta. 2018. *Improvement of Student's Understanding on Archimedes Law with Prediction Observation Explanation (POE) Method on High School Students of FH Yogyakarta.* **Thesis. Yogyakarta: Physics Education Study Program, Department of Mathematics and Natural Sciences Education, Faculty of Teacher Training and Education, Sanata Dharma University, Yogayakarta.**

This study aims to: (1) Measure the level of students prior understanding of the Archimedes law (2) Improve students understanding of the Archimedes law through the application of Prediction Observation Explanation POE).

This research is qualitative type. This research was conducted in May 2018 at FH Yogyakarta's dorm. Subjects were 13 students of SMA FH Yogyakarta. Methods of data collection in the form of pretest and posttest contains 15 items of essay test. This essay test is used to measure early understanding and final understanding of students. Data obtained in the form of student workmanship and LKS (Student Worksheet).

The results show that: (1) In the prior understanding, the student has not understood that the drowning object experiences buoyant style, the student has not understood that the fluid volume where the object is immersed, the type of material making, the type of object, the position of the object, the size of the object, in water if two or more objects have the same mass and volume; the students has not yet understood that the fluid type mass, the acceleration of gravity, and the volume of dyed objects affect the buoyant force of the object and the students has not understood that objects in the water experience weight reduction due to buoyancy; (2) The application of the POE (Prediction Observation Explanation) method can improve students understanding. This is seen in the average grade of students on pretest was 37.8 increased to 73.4 on posttest.

Keywords: POE method, increased understanding, Archimedes law.