

**PENERAPAN MODEL *PROBLEM BASED LEARNING* MELALUI
PENDEKATAN *FLIPPED CLASSROOM* TERMODIFIKASI UNTUK
MENINGKATKAN KEMAMPUAN MEMAHAMI KONSEP DAN
ARGUMENTASI ILMIAH SISWA SMP PADA MATERI TEKANAN ZAT**

Mentari Darma Putri

ABSTRAK

Penelitian ini bertujuan untuk mengetahui perbedaan peningkatan kemampuan memahami konsep dan argumentasi ilmiah siswa setelah memperoleh pembelajaran dengan model *Problem Based Learning* melalui pendekatan *Flipped Classroom* termodifikasi dan model *Problem Based Learning* tanpa pendekatan *Flipped Classroom* termodifikasi pada materi Tekanan Zat. Penelitian menggunakan metode kuasi eksperimen dengan desain *Non-equivalent Pre-test Post-test Group Design*. Subjek dalam penelitian adalah siswa kelas VIII di salah satu SMP di kota Argamakmur, Bengkulu Utara sebanyak 64 siswa yang dibagi kedalam dua kelas. Data dalam penelitian dikumpulkan melalui tes kemampuan memahami konsep, tes kemampuan argumentasi ilmiah, angket tanggapan siswa dan lembar observasi keterlaksanaan pembelajaran. Berdasarkan hasil analisis data dapat disimpulkan bahwa: (1) terdapat perbedaan yang signifikan antara peningkatan kemampuan memahami konsep siswa kelas eksperimen 1 dan eksperimen 2 dengan skor rata-rata peningkatan kemampuan memahami konsep siswa kelas eksperimen 1 lebih tinggi dibandingkan dengan siswa kelas eksperimen 2; (2) tidak terdapat perbedaan yang signifikan antara peningkatan kemampuan argumentasi ilmiah siswa kelas eksperimen 1 dan eksperimen 2 secara keseluruhan maupun untuk tiap komponen argumentasi; (3) terdapat korelasi atau hubungan yang positif dan signifikan antara peningkatan kemampuan memahami konsep dan argumentasi ilmiah siswa dengan kategori korelasi sedang (cukup kuat); dan (4) tanggapan siswa terhadap penerapan model *Problem Based Learning* (PBL) melalui pendekatan *Flipped Classroom* termodifikasi menunjukkan respons yang positif.

Kata kunci: *Problem Based Learning*, *Flipped Classroom* termodifikasi, Memahami Konsep, Argumentasi Ilmiah

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IMPLEMENTATION OF *PROBLEM BASED LEARNING* MODEL THROUGH *MODIFIED FLIPPED CLASSROOM* APPROACH TO IMPROVE THE ABILITY OF UNDERSTANDING CONCEPTS AND SCIENTIFIC ARGUMENTATION OF JUNIOR HIGH SCHOOL STUDENTS IN MATERIAL OF SUBSTANCE PRESSURE

Mentari Darma Putri

ABSTRACT

This study aims at determining the differences of increasing the ability to understand concepts and scientific argumentation on the students after obtaining the learning with Problem Based Learning model through modified Flipped Classroom approach and Problem Based Learning model without modified Flipped Classroom approach in material of substance pressure. This study uses quasi experimental method with Non-equivalent Pre-test Post-Test Group Design. Subjects in this study are grade 8 students in one junior high school in Argamakmur, North Bengkulu as many as 64 students who divided into two classes. The data were collected through the ability to understand concept test, scientific argumentation ability test, student response questionnaire and observation sheet of learning implementation. Based on the results of data analysis could be concluded that: (1) there was a significant difference in the increase of the ability to understand concepts between students of experiment class 1 and experiment class 2 where the average score of N-Gain ability to understand concepts of students in experiment class 1 was higher than in experiment class 2; (2) there was no significant difference in the ability of scientific argumentation between students of experiment class 1 and experiment class 2 as a whole or for each component of argumentation; (3) there was a positive or significant correlation between the improvement of the ability to understand concepts and scientific argumentation of students with medium correlation category (strong enough); and (4) students' responses to the implementation of the Problem Based Learning (PBL) model through the modified Flipped Classroom approach showed a positive response.

Keywords: Problem Based Learning, Modified Flipped Classroom, Understanding the Concepts, Scientific Argumentation

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