

**PENGARUH MODEL PEMBELAJARAN *PROJECT
BASED LEARNING* BERBANTUAN PRAKTIKUM
VIRTUAL DENGAN APLIKASI *PHET*
TERHADAP SIKAP DAN LITERASI SAINS
PADA MATERI PERUBAHAN ENERGI KELAS 4
SD NEGERI 4 SUBAGAN**

Oleh

I Gede Yoga Danu Tirta, NIM 2111031244

Program Studi Pendidikan Guru Sekolah Dasar

Jurusan Pendidikan Dasar

ABSTRAK

Rendahnya literasi sains siswa berpengaruh terhadap sikap sains siswa. Penelitian ini bertujuan untuk menyelidiki pengaruh secara simultan model pembelajaran *Project Based Learning* berbantuan praktikum virtual menggunakan aplikasi PhET terhadap sikap dan literasi sains siswa kelas IV di SD Negeri 4 Subagan. Penelitian ini merupakan penelitian eksperimen semu (*quasi-eksperimental*) dengan rancangan *Nonequivalent Pre-Test Post Test Control Group Design*. Populasi dalam penelitian ini adalah seluruh siswa kelas IV SD Negeri 4 Subagan. Pengambilan sampel dilakukan melalui pengundian sebanyak satu kali dengan menggunakan potongan kertas. Sampel penelitian ini kelompok eksperimen yaitu kelas IVA yang berjumlah 32 orang dan kelas yang dijadikan kelompok kontrol yaitu kelas IVB yang berjumlah 30 orang. Data penelitian dikumpulkan menggunakan metode non tes dan tes dengan instrumen kuesioner dan soal pilihan ganda. Data yang diperoleh dianalisis dengan menggunakan statistik deskriptif dan statistik inferensial (Uji Manova). Berdasarkan hasil Uji Manova dapat dilihat bahwa nilai signifikan untuk sikap sains sebesar $0,000 < 0,05$ dan literasi sains sebesar $0,000 < 0,05$. Kemudian dari hasil uji Manova secara simultan diperoleh nilai signifikansi sebesar $0,000 < 0,05$ sehingga dapat disimpulkan bahwa secara simultan terdapat pengaruh signifikan model pembelajaran *Project Based Learning* berbantuan praktikum virtual menggunakan aplikasi PhET terhadap sikap dan literasi sains siswa kelas IV di SD Negeri 4 Subagan.

Kata Kunci: PjBL, PhET, Sikap Sains, Literasi Sains.

**THE EFFECT OF PROJECT BASED LEARNING LEARNING MODEL
ASSISTED BY VIRTUAL PRACTICE WITH PHET APPLICATION ON
SCIENCE ATTITUDE AND LITERACY ON ENERGY CHANGE MATERIAL
OF GRADE 4 STUDENTS OF ELEMENTARY SCHOOL 4 SUBAGAN**

By

I Gede Yoga Danu Tirta, NIM 2111031244

Elementary School Teacher Education Study Program

Elementary Education Department

ABSTRACT

The low science literacy of students affects students' science attitudes. This study aims to simultaneously investigate the effect of Project Based Learning learning model assisted by virtual practice using PhET application on science attitudes and literacy of grade IV students at SD Negeri 4 Subagan. This study is a quasi-experimental study with Nonequivalent Pre-Test Post Test Control Group Design. The population in this study were all grade IV students of SD Negeri 4 Subagan. Sampling was done through a one-time draw using pieces of paper. The sample of this research was the experimental group, namely class IVA totaling 32 people and the class used as the control group was class IVB totaling 30 people. The research data were collected using non-test and test methods with questionnaire instruments and multiple-choice questions. The data obtained were analyzed using descriptive statistics and inferential statistics (Manova Test). Based on the results of the Manova Test, it can be seen that the significant value for science attitudes is $0.000 < 0.05$ and science literacy is $0.000 < 0.05$. Then from the results of the simultaneous Manova test, a significance value of $0.000 < 0.05$ was obtained so that it can be concluded that simultaneously there is a significant effect of the Project Based Learning learning model assisted by virtual practicum using the PhET application on the attitudes and science literacy of grade IV students at SD Negeri 4 Subagan.

Keywords: *PjBL, PhET, Science Attitude, Science Literacy.*