PENGARUH MODEL *PROJECT BASED LEARNING* TERHADAP KETERAMPILAN BERPIKIR KRITIS SISWA KELAS XI MIPA DI MADRASAH ALIYAH NEGERI (MAN) KARANGASEM

Oleh

Winda Ayu Ihlalul Amal, NIM 1613021018

Program Studi Pendidikan Fisika

ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan dan menganalisis perbedaan keterampilan berpikir kritis antara siswa yang belajar menggunakan model *Project Based Learning* (PjBL) dan *Direct Instruction* (DI). Penelitian dilaksanakan dengan desain *quasi experiment research* menggunakan *non-equivalent pretest-posttest control group design.* Populasi penelitian ini terdiri dari 3 kelas (68 siswa) dari kelas XI MIPA Madrasah Aliyah Negeri (MAN) Karangasem Tahun Ajaran 2022/2023. Sampel penelitian terdiri dari 2 kelas (46 siswa) yang ditentukan secara *cluster simple random sampling*, sehingga terpilih siswa kelas XI MIPA 3 sebagai kelas eksperimen dan siswa kelas XI MIPA 2 sebagai kelas kontrol. Data keterampilan berpikir kritis diperoleh dari tes keterampilan berpikir kritis yang terdiri dari 14 butir soal berbentuk *essay* (uraian) dengan nilai reliabilitas sebesar 0,776. Data dianalisis dengan analisis deskriptif dan analisis kovarian (ANAKOVA) satu jalur. Pengujian hipotesis dilakukan pada taraf signifikansi 5%. Hasil penelitian menunjukkan bahwa terdapat perbedaan yang signifikan terkait keterampilan berpikir kritis antara siswa yang belajar menggunakan model *Project Based Learning* dan *Direct Instruction* yang ditunjukkan dari nilai sig < 0,05 ($F^* = 9{,}283$; $sig^* = 0{,}004$) serta dari nilai $\Delta\mu$ yang bernilai lebih besar dari hasil dari uji LSD. Selain itu, berdasarkan analisis deskriptif didapatkan bahwa keterampilan berpikir kritis siswa yang belajar menggunakan model *Project Based Learning* (M = 86,258; SD =7,312 , kategori sangat baik) lebih unggul dibandingkan dengan siswa yang belajar menggunakan model *Direct Instruction* (M = 81,755; SD = 9,433, kategori baik). Berdasarkan hasil yang diperoleh, maka dapat disimpulkan bahwa model *Project Based Learning* dapat memberikan pengaruh terhadap keterampilan berpikir kritis siswa. Maka dalam rangka meningkatkan keterampilan berpikir kritis siswa terutama dalam pembelajaran fisika dapat diterapkan model *Project Based Learning* dalam proses pembelajaran.

Kata kunci: model *project based learning*, model pembelajaran *direct instruction*, keterampilan berpikir kritis, pembelajaran fisika.

THE EFFECT OF PROJECT BASED LEARNING MODEL ON CRITICAL THINKING SKILLS OF CLASS XI MIPA STUDENTS AT MADRASAH ALIYAH NEGERI (MAN) KARANGASEM

By

Winda Ayu Ihlaul Amal, NIM 1613021018

Physics Education Study Program

ABSTRACT

This study aims to describe and analyze differences in critical thinking skills between students who learn using Project Based Learning (PjBL) and Direct Instruction (DI) models. The research was carried out using a quasi-experimental research design using a non-equivalent pretest-posttest control group design. The population of this study consisted of 3 classes (68 students) from class XI MIPA of the Karangasem State Madrasah Aliyah (MAN) Academic Year 2022/2023. The research sample consisted of 2 classes (46 students) which were determined by cluster simple random sampling, so that class XI MIPA 3 students were selected as the experimental class and students from class XI MIPA 2 as the control class. Critical thinking skills data was obtained from a critical thinking skills test which consisted of 14 questions in the form of an essay (description) with a reliability value of 0.776. Data were analyzed by descriptive analysis and one way analysis of covariance (ANAKOVA). Hypothesis testing was carried out at a significance level of 5%. The results showed that there were significant differences related to critical thinking skills between students who studied using the Project Based Learning and Direct Instruction models as indicated by the sig < 0.05 ($F^* = 9.283$; $sig^* = 0.004$) and the $\Delta\mu$ value which was greater than the result of the LSD test. In addition, based on descriptive analysis it was found that students' critical thinking skills were studied using the Project Based Learning model ($M = 86.258$; $SD = 7.312$, very good category) is superior compared to students who learn using the Direct Instruction model ($M = 81.755$; $SD = 9.433$, good category). Based on the results obtained, it can be concluded that the Project Based Learning model can have an influence on students' critical thinking skills. So in order to improve students' critical thinking skills, especially in learning physics, the Project Based Learning model can be applied in the learning process.

Keywords: project based learning models, direct instruction learning models, critical thinking skills, physics learning