

ABSTRAK

FUZI MAHENDRA. 2026. **PENGARUH *PROBLEM BASED LEARNING* BERBASIS *DOUBLE DIAMOND MODEL* TERHADAP HASIL BELAJAR DAN *PROBLEM SOLVING* PESERTA DIDIK PADA KONSEP SISTEM EKSKRESI.** Program Studi Pendidikan Biologi. Fakultas Keguruan dan Ilmu Pendidikan. Universitas Siliwangi.

Penelitian ini bertujuan untuk mengetahui pengaruh *problem based learning* (*PBL*) berbasis *double diamond* terhadap hasil belajar dan kemampuan *problem solving* peserta didik pada konsep sistem ekskresi manusia. Metode penelitian yang digunakan adalah *quasi-eksperimen* dengan desain *non-equivalent control group design*. Populasi penelitian adalah peserta didik kelas XI SMA Negeri 1 Panawangan tahun ajaran 2025/2026. Teknik pengambilan sampel menggunakan *purposive sampling* sehingga diperoleh kelas XI IPA 1 sebagai kelas eksperimen dan XI IPA 4 sebagai kelas kontrol. Instrumen penelitian berupa tes hasil belajar pilihan ganda sebanyak 10 butir soal yang telah diuji validitas dan reliabilitasnya, serta tes kemampuan *problem solving* berbentuk uraian sebanyak 4 butir soal. Pengumpulan data dilakukan melalui *pretest* dan *posttest* yang diberikan pada kedua kelas. Teknik analisis data menggunakan uji normalitas, homogenitas, dan uji hipotesis dengan ANCOVA menggunakan *covariat pretest*. Hasil penelitian didapatkan nilai rata-rata *posttest* hasil belajar dan *problem solving* peserta didik kelas eksperimen lebih tinggi dibanding kelas kontrol. Uji ANCOVA memperoleh nilai signifikansi $< 0,05$ yang menunjukkan bahwa terdapat pengaruh signifikan penerapan *problem based learning* berbasis *double diamond model* terhadap hasil belajar dan *problem solving* peserta didik pada konsep sistem ekskresi manusia. Hasil penelitian menyimpulkan bahwa terdapat pengaruh yang signifikan antara *problem based learning* berbasis *double diamond model* terhadap hasil belajar dan *problem solving* peserta didik pada konsep sistem ekskresi manusia

Kata kunci: *Double diamond Model, Problem Based Learning, Hasil Belajar, Problem Solving.*

ABSTRACT

FUZI MAHENDRA. 2026. THE EFFECT OF DOUBLE DIAMOND MODEL BASED PROBLEM BASED LEARNING (PBL) ON STUDENTS LEARNING OUTCOMES AND PROBLEM SOLVING IN THE CONCEPT OF THE EXCRETORY SYSTEM.
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This study aims to examine the effect of Double Diamond based Problem Based Learning (PBL) on students' learning outcomes and problem solving skills in the concept of the human excretory system. The research employed a quasi-experimental method with a non-equivalent control group design. The population consisted of eleventh grade students of SMA Negeri 1 Panawangan in the 2025/2026 academic year. Purposive sampling was used to select the samples, resulting in class XI IPA 1 as the experimental group and class XI IPA 4 as the control group. The research instruments included a learning outcomes test in the form of 10 multiple choice questions that had been tested for validity and reliability, as well as a problem solving skills test consisting of 4 essay questions. Data were collected through pretests and posttests administered to both groups. Data analysis techniques included tests of normality, homogeneity, and hypothesis testing using ANCOVA with pretest scores as covariates. The results showed that the average posttest scores of learning outcomes and problem solving skills in the experimental group were higher than those in the control group. The ANCOVA test yielded a significance value of < 0.05 , indicating a significant effect of the implementation of the Double Diamond based Problem Based Learning model on students' learning outcomes and problem solving skills in the concept of the human excretory system. The study concludes that Double Diamond based Problem Based Learning has a significant effect on students' learning outcomes and problem solving skills in learning the human excretory system.

Keyword: *Double Diamond, Problem Based Learning, Learning Outcomes, Problem Solving.*