ABSTRAK

Azira, NIM 4202141007 (2026). Pengaruh Model Pembelajaran Berbasis Proyek terhadap Keterampilan Kolaborasi dan Hasil Belajar Biologi Siswa pada Materi Virus SMA Negeri 1 Tanjungtiram.

Penelitian ini bertujuan mengetahui pengaruh model pembelajaran berbasis proyek (PjBL) terhadap keterampilan kolaborasi dan hasil belajar biologi materi virus siswa kelas X SMA Negeri 1 Tanjungtiram. Metode penelitian menggunakan kuasi eksperimen dengan desain *pretest and postest control group*. Populasi berjumlah 252 siswa, sampel diambil menggunakan teknik *random sampling* menghasilkan sampel dengan 72 siswa dari dua kelas. Kelas eksperimen menerapkan model pembelajaran berbasis proyek (PjBL) sedangkan kelas kontrol menggunakan pembelajaran konvensional. Instrumen penelitian berupa lembar observasi untuk mengukur keterampilan kolaborasi dan tes berupa soal pilihan ganda untuk mengukur hasil belajar. Hasil penelitian menunjukkan keterampilan kolaborasi kelas eksperimen meningkat dari 46,76% (pretes) menjadi 84,66% (postes), sedangkan kelas kontrol dari 44,72% menjadi 64,05%. Peningkatan kelas eksperimen (37,90%) lebih tinggi dibanding kelas kontrol (19,33%). Rata-rata hasil belajar kelas eksperimen meningkat dari 50,28 menjadi 85,69, sementara kelas kontrol dari 49,17 menjadi 73,19. Nilai *N-gain* kelas eksperimen sebesar 0,72 (kategori tinggi) dan kelas kontrol 0,46 (kategori sedang). Analisis data menggunakan uji *Mann-Whitney U* menunjukkan model pembelajaran berbasis proyek (PjBL) berpengaruh signifikan terhadap keterampilan kolaborasi dan hasil belajar biologi materi virus. Dapat disimpulkan bahwa model pembelajaran berbasis proyek (PjBL) berpengaruh terhadap keterampilan kolaborasi dan hasil belajar biologi materi virus pada siswa kelas X SMA Negeri 1 Tanjungtiram T.P. 2025/2026.

Kata Kunci: Pembelajaran berbasis proyek, keterampilan kolaborasi, hasil belajar

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ABSTRACT

Azira, Student ID Number 4202141007 (2026). The Effect of Project Based Learning Models on Students' Collaboration Skills and Learning Outcomes in Biology on the Subject of Viruses at SMA Negeri 1 Tanjungtiram.

This study aims to determine the effect of project-based learning (PjBL) on collaboration skills and learning outcomes in biology, specifically virus material, among 10th grade students at SMA Negeri 1 Tanjungtiram. The research method used a quasi-experimental design with a pre-test and post-test control group. The population consisted of 252 students, and the sample was taken using random sampling techniques, resulting in a sample of 72 students from two classes. The experimental class implemented the project-based learning (PjBL) model, while the control class used conventional learning. The research instruments were observation sheets to measure collaboration skills and multiple-choice tests to measure learning outcomes. The results of the study show that the collaboration skills of the experimental class increased from 46.76% (pre-test) to 84.66% (post-test), while the control class increased from 44.72% to 64.05%. The increase in the experimental class (37.90%) was higher than that of the control class (19.33%). The average learning outcome of the experimental class increased from 50.28 to 85.69, while that of the control class increased from 49.17 to 73.19. The N-gain value of the experimental class was 0.72 (high category) and that of the control class was 0.46 (medium category). Data analysis using the Mann-Whitney U test showed that the project-based learning (PjBL) model had a significant effect on collaboration skills and learning outcomes in biology on the subject of viruses. It can be concluded that the project-based learning (PjBL) model has an effect on collaboration skills and learning outcomes in biology on the subject of viruses in grade X students at SMA Negeri 1 Tanjungtiram academic year 2025/2026.

Keywords : Project based Learning, collaboration skills, learning outcomes

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