

ABSTRAK

TIA SYAHDA MUTHMAINNAH. 2026. **PENERAPAN *PROJECT BASED LEARNING BERBANTUAN ARTIFICIAL INTELLIGENCE LEARNING SYSTEM (AILS)* TERHADAP HASIL BELAJAR DAN LITERASI DIGITAL PESERTA DIDIK PADA MATERI VIRUS (Studi Eksperimen di Kelas X MA Negeri 2 Kabupaten Tasikmalaya Tahun Ajaran 2023/2024)**. Jurusan Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi, Tasikmalaya.

Penelitian ini bertujuan untuk mengetahui ada tidaknya pengaruh penerapan *project based learning* berbantuan *Artificial Intelligence Learning System (AILS)* berupa perplexity terhadap hasil belajar dan literasi digital peserta didik pada materi virus di kelas X MAN 2 Kab. Tasikmalaya Tahun Ajaran 2023/2024. Metode penelitian yang digunakan yaitu quasi eksperimen dengan populasi seluruh peserta didik kelas X MAN 2 Kab. Tasikmalaya sebanyak 15 kelas dengan jumlah 443 peserta didik. Pengambilan sampel dilakukan dengan teknik *purposive sampling* dengan sampel yang dipilih yaitu kelas X6 berjumlah 29 peserta didik sebagai kelas eksperimen dan kelas X4 yang berjumlah 30 peserta didik sebagai kelas kontrol. Instrumen penelitian yang digunakan dalam penelitian ini terdiri dari dua instrumen, yaitu instrumen tes untuk mengukur hasil belajar peserta didik dan instrument non tes berupa angket untuk mengukur literasi digital peserta didik. Teknik analisis data yang digunakan yaitu uji ANOVA satu jalur. Berdasarkan hasil penelitian yang telah dilakukan menyimpulkan bahwa terdapat pengaruh dari penerapan *project based learning* berbantuan *artificial intelligence learning system* berupa perplexity terhadap hasil belajar dan literasi digital peserta didik pada materi virus di kelas X MA Negeri 2 Tasikmalaya.

Kata Kunci: *Artificial Intelligence Learning System (AILS)*, Hasil Belajar, Literasi Digital, Perplexity, *Project Based Learning*.

ABSTRACT

TIA SYAHDA MUTHMAINAH. 2026. IMPLEMENTATION OF PROJECT-BASED LEARNING ASSISTED BY ARTIFICIAL INTELLIGENCE LEARNING SYSTEM (AILS) ON STUDENT LEARNING OUTCOMES AND DIGITAL LITERACY IN VIRUS MATERIAL (Experimental Study in Grade X of MA Negeri 2 Tasikmalaya Regency, Academic Year 2023/2024). Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya.

This research aimed to determine whether there is an effect of implementing project-based learning assisted by the Artificial Intelligence Learning System (AILS) in the form of perplexity on students' learning outcomes and digital literacy in the virus material for Grade X students at MAN 2 Tasikmalaya Regency in the 2023/2024 academic year. The research employed a quasi-experimental method, with the population consisting of all Grade X students at MAN 2 Tasikmalaya Regency, totaling 15 classes and 443 students. The sample was selected using a purposive sampling technique, with Class X6 consisting of 29 students as the experimental class and Class X4 consisting of 30 students as the control class. The research instruments consisted of two types: a test instrument to measure students' learning outcomes and a non-test instrument in the form of a questionnaire to measure students' digital literacy. Data were analyzed using a one-way ANOVA test. The results of the study indicate that the implementation of Project-Based Learning assisted by an Artificial Intelligence Learning System (AILS) using Perplexity has a significant effect on students' learning outcomes and digital literacy in the topic of viruses among Grade X students at MAN 2 Tasikmalaya Regency.

Keywords: Artificial Intelligence Learning System (AILS), Learning Outcomes, Digital Literacy, Perplexity, Project-Based Learning.