

ABSTRAK

YUSRI NIDAUS SALAM. 2023. **Penerapan Model *Problem Based Learning* (PBL) Berbantuan *Artificial Intelligence Learning System* (AILS) Terhadap Hasil Belajar dan Sikap Ilmiah Siswa Pada Materi Sistem Syaraf (Studi Eksperimen di Kelas XI MIPA SMA Negeri 4 Tasikmalaya Tahun Ajaran 2022/2023)**. Jurusan Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi, Tasikmalaya.

Tujuan penelitian ini untuk mengetahui pengaruh model *problem based learning* berbantuan *artificial intelligence learning system* terhadap hasil belajar sikap ilmiah siswa kelas XI MIPA SMA Negeri 4 Tasikmalaya pada materi Sistem Saraf. Penelitian ini dilaksanakan pada bulan Juni 2023. Metode penelitian yang digunakan yaitu Quasi Eksperimen dengan desain *The Matching Posttest Only Control Group Design*. Populasi dalam penelitian adalah kelas XI MIPA SMA Negeri 4 Tasikmalaya tahun ajaran 2022/2023 terdiri dari 5 kelas XI MIPA. Sampel diambil menggunakan teknik purposive sampling, diperoleh kelas XI MIPA 3 sebagai kelas eksperimen dan kelas XI MIPA 5 sebagai kelas kontrol. Proses pembelajaran di kelas kontrol menggunakan model *discovery learning*. Teknik pengumpulan data berupa tes hasil belajar dengan jumlah 29 soal pilihan majemuk yang mengacu ke dalam indikator C1, C2, C3, C4, dan C5 dan non-tes menggunakan angket skala likert dengan 20 item pernyataan untuk instrumen sikap ilmiah. Teknik analisis data yang digunakan yaitu Uji One Way Anova yang menunjukkan bahwa adanya pengaruh yang signifikan dengan penerapan model *Problem Based Learning* berbantuan *Artificial Intelligence Learning System* (AILS) terhadap hasil belajar dan sikap ilmiah dengan nilai signifikansi sig.(2-tailed) sebesar $0,021 < 0,05$ sehingga dapat disimpulkan bahwa ada pengaruh model *problem based learning* terhadap hasil belajar dan sikap ilmiah siswa pada materi sistem saraf di kelas XI MIPA SMA Negeri 4 Tasikmalaya Tahun Ajaran 2022/2023. Berdasarkan hasil temuan analisis data, pada hasil belajar indikator C4 (menganalisis) merupakan indikator tertinggi dengan skor rata-rata 0,79, dan sikap ilmiah pada indikator ketekunan dengan skor rata-rata 2,84.

Kata Kunci: *AILS; perplexity; problem based learning.*

ABSTRACT

YUSRI NIDAUS SALAM. 2023. *Application of the Problem Based Learning (PBL) Model Assisted by the Artificial Intelligence Learning System (AILS) on Learning Outcomes and Student Scientific Attitudes on Nervous System Material (Experimental Study in Class XI MIPA SMA Negeri 4 Tasikmalaya Academic Year 2022/2023)*. Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya.

The aim of this research is to determine the effect of the problem based learning model assisted by an artificial intelligence learning system on the scientific attitude learning outcomes of class XI MIPA students at SMA Negeri 4 Tasikmalaya on the Nervous System material. This research was carried out in June 2023. The research method used was Quasi Experiment with the Matching Posttest Only Control Group Design. The population in the study was class XI MIPA SMA Negeri 4 Tasikmalaya for the 2022/2023 academic year consisting of 5 classes XI MIPA. Samples were taken using a purposive sampling technique, class XI MIPA 3 was obtained as the experimental class and class XI MIPA 5 was the control class. The learning process in the control class uses the discovery learning model. The data collection technique is a learning outcomes test with 29 multiple choice questions referring to indicators C1, C2, C3, C4 and C5 and non-tests using a Likert scale questionnaire with 20 statement items for the scientific attitude instrument. The data analysis technique used is the One Way Anova Test which shows that there is a significant influence with the application of the Problem Based Learning model assisted by the Artificial Intelligence Learning System (AILS) on learning outcomes and scientific attitudes with a sig.(2-tailed) significance value of $0.021 < 0.05$ so it can be concluded that there is an influence of the problem based learning model on learning outcomes and students' scientific attitudes on nervous system material in class XI MIPA SMA Negeri 4 Tasikmalaya for the 2022/2023 academic year. Based on the results of data analysis, the learning outcomes indicator C4 (analyzing) is the highest indicator with an average score of 0,79, and scientific attitude is the perseverance indicator with an average score of 2.84.

Keywords: *Artificial Intelligence Learning System; perplexivity; problem based learning.*