ABSTRAK

Faradillah Syam, 2026. Penerapan Model *Problem Based Learning* Terhadap Hasil Belajar Siswa Siswa Pada Pembelajaran Sistem Saraf Kelas XI SMA Muhammadiyah Makassar. Skripsi. Jurusan Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Muhammadiyah Makassar. Pembimbing I Irmawanty, dan Pembimbing II Hilmi Hambali.

Pembelajaran sistem saraf di kelas XI SMA Muhammadiyah Makassar masih konvensional, menyebabkan siswa kesulitan memahami konsep abstrak seperti impuls saraf dan neuron, sehingga hasil belajar rendah (rata-rata pretest 66,35). Penelitian ini bertujuan mengetahui pengaruh penerapan model Problem Based Learning (PBL) terhadap hasil belajar siswa pada materi tersebut. Penelitian menggunakan desain quasi-eksperimen one-group pretest-posttest pada 22 siswa kelas XI IPA, dengan instrumen tes kognitif (25 soal pilihan ganda), observasi aktivitas, dan angket respons. PBL diterapkan dalam 3 pertemuan melalui 5 tahap: orientasi masalah, organisasi kelompok, penyelidikan mandiri, presentasi hasil, dan evaluasi. Data dianalisis deskriptif, uji normalitas Kolmogorov-Smirnov (Sig. >0,05), homogenitas Levene (Sig. >0,05), dan paired t-test. Hasil menunjukkan peningkatan signifikan: posttest rata-rata 80,26 (kategori baik-sangat baik, 100% siswa), normalized gain 0,50 (sedang), t-hitung -9,999 (Sig. 0,001 <0,05). Observasi aktivitas PBL rata-rata 57,78% (cukup), angket respons 76,2% (cukup baik). Penerapan PBL berpengaruh signifikan terhadap hasil belajar siswa. Saran: guru terapkan PBL secara konsisten dengan pelatihan; siswa tingkatkan partisipasi; penelitian lanjut bandingkan dengan model lain atau kelas kontrol.

Kata Kunci: *Problem based learning, hasil belajar, sistem saraf*

ABSTRACT

Faradillah Syam, 2026. *Application of Problem Based Learning Model to Student Learning Outcomes in Nervous System Learning for Grade XI of Muhammadiyah Senior High School Makassar. Thesis. Department of Biology Education, Faculty of Teacher Training and Education, Muhammadiyah University of Makassar. Supervisor I Irmawanty, and Supervisor II Hilmi Hambali.*

Learning the nervous system in grade XI of SMA Muhammadiyah Makassar is still conventional, causing students to have difficulty understanding abstract concepts such as nerve impulses and neurons, resulting in low learning outcomes (average pretest 66.35). This study aims to determine the effect of the application of the Problem Based Learning (PBL) model on student learning outcomes in the material. The study used a quasi-experimental one-group pretest-posttest design on 22 grade XI science students, with cognitive test instruments (25 multiple-choice questions), activity observation, and response questionnaires. PBL was implemented in 3 meetings through 5 stages: problem orientation, group organization, independent investigation, presentation of results, and evaluation. Data were analyzed descriptively, Kolmogorov-Smirnov normality test (Sig. >0.05), Levene's homogeneity (Sig. >0.05), and paired t-test. The results showed significant improvements: an average posttest score of 80.26 (good-very good category, 100% of students), a normalized gain of 0.50 (moderate), and a t-test of -9.999 (Sig. 0.001 <0.05). The average PBL activity observation was 57.78% (sufficient), and the questionnaire response rate was 76.2% (sufficiently good). The implementation of PBL significantly impacted student learning outcomes. Recommendations: Teachers should implement PBL consistently with training; students should increase their participation; and further research should compare it with other models or a control class.

Keywords: *Problem-based learning, learning outcomes, nervous system*