ABSTRAK

NUR AZMI MAR : "Pengaruh Model *Project Based Learning* (PjBL) terhadap Keterampilan Berpikir Sistem (KBS) dalam Materi Sistem Reproduksi"

Keterampilan berpikir sistem (KBS) mendukung HOTS untuk memahami mekanisme sistem yang saling berpengaruh. Penelitian bertujuan menganalisis pengaruh model *project based learning* (PjBL) terhadap KBS siswa dalam materi sistem reproduksi. Penelitian *mix method* menggunakan desain *embedded*. Teknik *purposive sampling* memperoleh sampel 35 siswa kelas XI MIPA 3 sebagai kelas eksperimen dan 36 siswa kelas XI MIPA 4 sebagai kelas reguler. Instrumen penelitian yang digunakan diantaranya lembar observasi, soal uraian terbatas yang memuat lima indikator KBS (mengidentifikasi komponen, fungsi komponen, hubungan setiap komponen, keseimbangan dalam sistem, dan hubungan antar sistem), lembar asesmen kinerja produk, dan kuesioner kendala. Penelitian memperoleh hasil bahwa keterlaksanaan aktivitas guru dan siswa memperoleh kriteria sangat baik. Hasil uji hipotesis diperoleh $0,011 < 0,05$ yang menunjukkan adanya pengaruh model PjBL terhadap KBS siswa. Hasil dari uji *cohen's effect size* diperoleh nilai sebesar 0,353 yang menunjukkan bahwa model PjBL memberikan efek cukup. Hasil asesmen produk siswa pada kelas eksperimen menunjukkan kategori baik (57,1%) dan sangat baik (42,9%). Siswa mengalami kendala kurang memahami materi di awal pembelajaran sebesar 65,7%. Model PjBL berpengaruh dengan efek cukup terhadap peningkatan KBS siswa. Model PjBL dapat digunakan sebagai alternatif model pembelajaran untuk meningkatkan KBS siswa.

Kata Kunci : Berpikir Sistem, KBS, PjBL, Sistem Reproduksi

ABSTRACT

NUR AZMI MAR : *"The Effect of Project Based Learning (PjBL) Model on Systems Thinking Skills (STS) in Reproductive System Material"*

Systems thinking skills (STS) support HOTS to understand the mechanism of systems that affect each other. The research aims to analyze the effect of project-based learning (PjBL) model on students' STS in reproductive system material. Mixed method research used embedded design. The purposive sampling technique obtained a sample of 35 students of class XI MIPA 3 as the experimental class and 36 students of class XI MIPA 4 as the regular class. The research instruments used included observation sheets, limited description questions containing five indicators of STS (identifying components, component functions, the relationship between each component, balance in the system, and relationships between systems), product performance assessment sheets, and constraint questionnaires. The research obtained the results that the implementation of teacher and student activities obtained very good criteria. The results of the hypothesis test obtained $0.011 < 0.05$ which indicates the influence of the PjBL model on students' KBS. The results of the cohen's effect size test obtained a value of 0.353 which indicates that the PjBL model has a modest effect. The results of student product assessment in the experimental class showed good (57.1%) and very good (42.9%) categories. Students experienced problems in understanding the material at the beginning of learning by 65.7%. The PjBL model has a modest effect on increasing students' STS. The PjBL model can be used as an alternative learning model to improve students' STS.

Keywords : *PjBL, Reproductive System, STS, System Thinking*