

ABSTRAK

PENGARUH MODEL *PROBLEM-BASED LEARNING* (PBL) TERIMPLEMENTASI *DEEP LEARNING* BERBANTUAN *ARTICULATE STORYLINE* TERHADAP LITERASI LINGKUNGAN DAN *SUSTAINABILITY AWARENESS* PESERTA DIDIK SMA PADA MATERI PERUBAHAN IKLIM

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Penelitian ini bertujuan untuk mengetahui pengaruh model *Problem-Based Learning* (PBL) terimplementasi *deep learning* berbantuan *Articulate storyline* terhadap literasi lingkungan dan *sustainability awareness* peserta didik kelas X pada materi perubahan iklim di SMA Negeri 6 Bandar Lampung. Jenis penelitian ini adalah *quasi eksperimen* dengan desain *pretest-posttest nonequivalent control group*. Sampel penelitian diambil menggunakan teknik *purposive sampling*, yang terdiri dari 30 peserta didik masing-masing pada kelas eksperimen dan kelas kontrol. Instrumen pengumpulan data meliputi tes kognitif literasi lingkungan, angket *sustainability awareness*, serta lembar observasi aktivitas belajar. Hasil penelitian menunjukkan bahwa implementasi model PBL berbasis *deep learning* berpengaruh signifikan terhadap peningkatan literasi lingkungan peserta didik. Hal ini dibuktikan melalui uji t-test dengan nilai signifikansi ($0,00 < 0,05$). Rata-rata *N-Gain* kelas eksperimen sebesar 0,44 (kategori sedang) lebih tinggi dibandingkan kelas kontrol sebesar 0,26. Indikator tertinggi dicapai pada analisis isu lingkungan *N-Gain* 0,99, sedangkan indikator terendah pada perancangan penyelesaian masalah *N-Gain* 0,35. Selain itu, rata-rata skor *sustainability awareness* secara keseluruhan mencapai 78,09% (kategori sangat tinggi). Uji *Effect Size* sebesar 1,07 menunjukkan bahwa model ini memberikan pengaruh dalam kategori besar. Dengan demikian model PBL terimplementasi *deep learning* berbantuan *Articulate storyline* efektif dalam meningkatkan literasi lingkungan dan *sustainability awareness* peserta didik pada materi perubahan iklim.

Kata Kunci: *Articulate Storyline, Deep Learning, Literasi Lingkungan, Problem-Based Learning, Perubahan Iklim, Sustainability Awareness.*

ABSTRACT

THE EFFECT OF PROBLEM-BASED LEARNING (PBL) IMPLEMENTED WITH DEEP LEARNING ASSISTED BY *ARTICULATE STORYLINE* ON THE ENVIRONMENTAL LITERACY AND SUSTAINABILITY AWARENESS OF HIGH SCHOOL STUDENTS IN MATERIAL CLIMATE CHANGE

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This study aims to determine the effect of the Problem-Based Learning (PBL) model implemented with deep learning assisted by Articulate storyline on the environmental literacy and sustainability awareness of tenth-grade students regarding climate change materials at SMA Negeri 6 Bandar Lampung. This research is a quasi-experimental study using a pretest-posttest nonequivalent control group design. The research sample was selected using a purposive sampling technique, consisting of 30 students each in the experimental and control classes. Data collection instruments included environmental literacy cognitive tests, sustainability awareness questionnaires, and learning activity observation sheets. The results showed that the implementation of the Deep Learning-based PBL model had a significant effect on improving students' environmental literacy. This was evidenced by the t-test results with a significance value of $0.00 < 0.05$. The average N-Gain for the experimental class was 0.44 (medium category), which was higher than the control class at 0.26. The highest indicator was achieved in environmental issue analysis N-Gain 0.99, while the lowest indicator was found in problem-solving design N-Gain 0.35. Furthermore, the overall average sustainability awareness score reached 78.09% (very high category). An Effect Size test of 1.07 indicated that this model provided an influence in the large category. In conclusion, the PBL model implemented with deep learning assisted by Articulate storyline is effective in improving students' environmental literacy and sustainability awareness regarding climate change materials.

Keyword *Climate Change, Deep Learning, Environmental Literacy, Problem-Based Learning, Sustainability Awareness.*