

ABSTRAK

TIARA NATASYA, 2025. **PENGARUH MEDIA 3D *ANATOMY AND PHYSIOLOGY* TERHADAP LITERASI VISUAL DAN HASIL BELAJAR KOGNITIF PESERTA DIDIK PADA PEMBELAJARAN BIOLOGI (Studi Eksperimen pada Materi Sistem Respirasi di Kelas XI SMA Negeri 4 Tasikmalaya Tahun Ajaran 2024/2025)** Jurusan Pendidikan Biologi. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi.

Tantangan abad ke-21 menuntut sistem pendidikan inovatif yang memberdayakan kemampuan literasi, termasuk literasi visual. Namun, banyak peserta didik mengalami kesulitan dalam memahami materi yang bersifat abstrak, yang berdampak negatif terhadap hasil belajarnya, sehingga diperlukan inovasi dalam media pembelajaran. Penelitian ini bertujuan untuk mengetahui pengaruh media 3D *anatomy and physiology* terhadap literasi visual dan hasil belajar kognitif peserta didik pada pembelajaran biologi. Penelitian ini dilaksanakan pada bulan September 2024 sampai Februari 2025. Metode penelitian yang digunakan adalah *quasi experiment* dengan desain *non-equivalent control group design*. Populasi dalam penelitian ini adalah seluruh kelas XI SMAN 4 Tasikmalaya sebanyak 5 kelas dengan jumlah 180 peserta didik. Sampel dipilih menggunakan teknik *purposive sampling*, sehingga diperoleh 2 kelas yaitu kelas XI-4 sebagai kelas eksperimen dan kelas XI-3 sebagai kelas kontrol. Instrumen yang digunakan yaitu tes uraian kemampuan literasi visual sebanyak 10 butir soal serta tes pilihan majemuk hasil belajar kognitif sebanyak 32 butir soal yang teruji valid dan reliabel. Data berdistribusi normal dan homogen, sehingga teknik analisis data dilanjutkan menggunakan uji *ANCOVA* dengan taraf signifikansi $\alpha=0,05$. Berdasarkan analisis dan pengujian hipotesis diperoleh nilai signifikansi $0,000 < 0,05$ untuk kemampuan literasi visual dan hasil belajar kognitif, artinya bahwa ada pengaruh media 3D *anatomy and physiology* terhadap kemampuan literasi visual dan hasil belajar kognitif peserta didik. Dapat disimpulkan bahwa penerapan media 3D *anatomy and physiology* dalam pembelajaran, berpengaruh baik terhadap kemampuan literasi visual dan hasil belajar kognitif peserta didik pada materi sistem respirasi.

Kata Kunci: Media 3D *Anatomy and Physiology*, Kemampuan Literasi Visual, Hasil Belajar Kognitif, Sistem Respirasi.

ABSTRACT

TIARA NATASYA, 2025. ***THE EFFECT OF 3D ANATOMY AND PHYSIOLOGY MEDIA ON VISUAL LITERACY AND COGNITIVE LEARNING OUTCOMES OF STUDENTS IN BIOLOGY LEARNING (Experimental Study on Respiratory System Materials in Class XI SMA Negeri 4 Tasikmalaya Academic Year 2024/2025)*** Department of Biology Education. Faculty of Teacher Training and Education, Siliwangi University.

The challenges of the 21st century demand an innovative education system that empowers literacy skills, including visual literacy. However, many students have difficulty understanding abstract material, which has a negative impact on their learning outcomes, so innovation in learning media is needed. This study aims to determine the effect of 3D anatomy and physiology media on visual literacy and cognitive learning outcomes of students in biology learning. This study was conducted from September 2024 to February 2025. The research method used was a quasi-experiment with a non-equivalent control group design. The population in this study was all 11th grade students of SMAN 4 Tasikmalaya, totaling 5 classes with a total of 180 students. The sample was selected using a purposive sampling technique, so that 2 classes were obtained, namely class XI-4 as the experimental class and class XI-3 as the control class. The instruments used were a descriptive test of visual literacy skills consisting of 10 questions and a multiple-choice test of cognitive learning outcomes consisting of 32 questions that were tested valid and reliable. The data is normally distributed and homogeneous, so the data analysis technique is continued using the ANCOVA test with a significance level of $\alpha = 0.05$. Based on the analysis and hypothesis testing, a significance value of $0.000 < 0.05$ is obtained for visual literacy skills and cognitive learning outcomes, meaning that there is an influence of 3D anatomy and physiology media on students' visual literacy skills and cognitive learning outcomes. It can be concluded that the application of 3D anatomy and physiology media in learning has a good effect on students' visual literacy skills and cognitive learning outcomes in the respiratory system material.

Keywords: ***3D Media Anatomy and Physiology, Visual Literacy Ability, Cognitive Learning Outcomes, Respiratory System.***