

ABSTRAK

SHOFA NASYIATUS SADIAH. 2025. **EFEKTIVITAS PENGGUNAAN LUMIO BY SMART SEBAGAI MEDIA PEMBELAJARAN DIGITAL TERHADAP KEMAMPUAN LITERASI DIGITAL DAN HASIL BELAJAR PESERTA DIDIK PADA MATA PELAJARAN BIOLOGI DI KELAS X SMA MUHAMMADIYAH SINGAPARNA.** Jurusan Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi, Tasikmalaya.

Perkembangan teknologi digital di abad ke-21 menuntut peserta didik untuk memiliki kemampuan literasi digital. Namun, rendahnya kemampuan ini di lapangan menunjukkan perlunya inovasi media pembelajaran digital yang interaktif untuk mendukung peningkatan literasi digital dan hasil belajar. Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan *Lumio by Smart* sebagai media pembelajaran digital terhadap kemampuan literasi digital dan hasil belajar di kelas X SMA Muhammadiyah Singaparna. Penelitian ini dilaksanakan pada bulan September 2024 hingga Juli 2025. Metode penelitian yang digunakan adalah *Pre-Experimental* dengan bentuk *One-Group Pretest-Posttest Design* dengan populasi seluruh kelas X SMA Muhammadiyah Singaparna sebanyak 102 orang. Teknik pengambilan sampel dilakukan dengan menggunakan teknik *purposive sampling* sehingga dipilih kelas X-2 atas pertimbangan tertentu. Instrumen penelitian yang digunakan dalam penelitian ini terdiri dari 2 instrumen yang sudah tervalidasi yaitu angket kemampuan literasi digital dan soal *multiple choice*. Teknik analisis data yang digunakan adalah uji *Shapiro-Wilk*, uji *Levene*, dan uji *Paired Sample t-test*. Hasil penelitian menunjukkan terdapat perbedaan yang signifikan pada kemampuan literasi digital dan hasil belajar peserta didik sebelum dan sesudah menggunakan *Lumio by Smart*. Keefektifan *Lumio by Smart* dibuktikan dengan hasil N-gain kemampuan literasi digital (N-gain = 0,39) dan hasil belajar (N-gain = 0,60) serta ketuntasan belajar mencapai 71,43%. Dengan demikian, *Lumio by Smart* dinyatakan efektif terhadap kemampuan literasi digital dan hasil belajar peserta didik dengan kategori sedang.

Kata Kunci: Efektivitas; *Lumio by Smart*; Literasi Digital; Hasil Belajar

ABSTRACT

SHOFA NASYIATUS SADIAH. 2025. *EFFECTIVENESS OF USING LUMIO BY SMART AS A DIGITAL LEARNING MEDIA ON DIGITAL LITERACY ABILITIES AND STUDENTS' LEARNING OUTCOMES IN BIOLOGY SUBJECTS IN GRADE X OF SMA MUHAMMADIYAH SINGAPARNA*. Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University of Tasikmalaya.

The development of digital technology in the 21st century requires students to have digital literacy skills. However, the low level of this ability in the field indicates the need for innovation in interactive digital learning media to support the improvement of digital literacy and learning outcomes. This study aims to determine the effectiveness of using Lumio by Smart as a digital learning media on digital literacy skills and learning outcomes in class X of SMA Muhammadiyah Singaparna. This study was conducted from September 2024 to July 2025. The research method used was Pre-Experimental with a One-Group Pretest-Posttest Design with a population of all class X of SMA Muhammadiyah Singaparna of 102 people. The sampling technique was carried out using a purposive sampling technique so that class X-2 was selected for certain considerations. The research instruments used in this study consisted of 2 validated instruments, namely a digital literacy skills questionnaire and multiple choice questions. The data analysis techniques used were the Shapiro-Wilk test, Levene's test, and the Paired Sample t-test. The results of the study showed a significant difference in digital literacy skills and learning outcomes of students before and after using Lumio by Smart. The effectiveness of Lumio by Smart was proven by the results of the N-gain of digital literacy skills ($N\text{-gain} = 0,39$) and learning outcomes ($N\text{-gain} = 0,60$) as well as learning completeness reaching 71,43%. Thus, Lumio by Smart was declared effective for digital literacy skills and learning outcomes of students in the moderate category.

Keywords: *Effectiveness; Lumio by Smart; Digital Literacy; Learning Outcomes*