ABSTRAK

Sandi Septian Prayoga. 2025. **PENGARUH MODEL PEMBELAJARAN *SIMAS ERIC* BERBANTUAN *PHET SIMULATION* TERHADAP KETERAMPILAN PROSES SAINS PESERTA DIDIK PADA MATERI GELOMBANG BERJALAN DAN GELOMBANG STASIONER.**

Penelitian ini dilatarbelakangi oleh keterampilan proses sains peserta didik MAN 3 Tasikmalaya yang masih rendah dengan dibuktikan ketika melakukan studi pendahuluan melalui observasi, wawancara dengan guru fisika, tes keterampilan proses sains dengan persentase 38% memiliki kategori kurang. Berdasarkan permasalahan tersebut, peneliti menerapkan model pembelajaran *Simas Eric* berbantuan *PhET Simulations.* Penelitian ini bertujuan untuk mengetahui pengaruh model *Simas Eric* berbantuan *PhET Simulation* pada materi gelombang berjalan dan gelombang stasioner di kelas XI MAN 3 Tasikmalaya tahun ajaran 2024/2025. Metode penelitian yang digunakan adalah *quasi experiment* dengan desain *The Matching-Only Posttest-Only Control Group Design*. Populasi penelitian melibatkan seluruh peserta didik kelas XI yang mengambil mata pelajaran Fisika di MAN 3 Tasikmalaya, yang terdiri dari 7 kelas dengan total 246 peserta didik. Sampel penelitian diambil secara *purposive sampling* sebanyak 2 kelas, yaitu kelas XI 5 sebagai kelas eksperimen dan kelas XI 4 sebagai kelas kontrol dengan masing-masing kelasnya terdiri dari 34 peserta didik. Berdasarkan uji hipotesis data *posttest* kelas eksperimen dan kelas kontrol pada taraf signifikan 5% didapatkan $t_{hitung} = 2{,}78$ dan $t_{tabel} = 1{,}66$. Karena nilai $t_{hitung} > t_{tabel}$, maka dapat simpulkan bahwa H_a diterima dan H_0ditolak. Sehingga dapat disimpulkan bahwa model pembelajaran *Simas Eric* berbantuan *PhET Simulations* berpengaruh terhadap keterampilan proses sains peserta didik pada materi gelombang berjalan dan gelombang stasioner.

Kata kunci: gelombang berjalan dan gelombang stasioner, keterampilan proses sains, model *Simas Eric, PhET Simulation.*

ABSTRACT

Sandi Septian Prayoga. 2025. ***THE EFFECT OF SIMAS ERIC LEARNING MODEL ASSISTED BY PHET SIMULATION ON STUDENTS' SCIENCE PROCESS SKILLS ON TRAVELING WAVE AND STATIONARY WAVE MATERIALS.***

This research is motivated by the science process skills of students at MAN 3 Tasikmalaya which are still low as evidenced by a preliminary study through observation, interviews with physics teachers, science process skills tests with a percentage of 38% in the poor category. Based on these problems, the researcher applied the Simas Eric learning model assisted by PhET Simulation. This study aims to determine the effect of the Simas Eric model assisted by PhET Simulation on the material of traveling waves and stationary waves in class XI MAN 3 Tasikmalaya in the 2024/2025 academic year. The research method used is a quasi experiment with a The Matching-Only Posttest-Only Control Group Design. The research population involved all class XI students taking Physics at MAN 3 Tasikmalaya, consisting of 7 classes with a total of 246 students. The research sample was taken by purposive sampling of 2 classes, namely class XI 5 as the experimental class and class XI 4 as the control class with each class consisting of 34 students. Based on the hypothesis test of the posttest data of the experimental class and the control class at a significant level of 5%, t_{hitung} *= 2.78 and* t_{tabel} *= 1.66 were obtained. Because the* $t_{hitung} > t_{tabel}$*, it can be concluded that* H_a *is accepted and* H_0*is rejected. So it can be concluded that the Simas Eric learning model assisted by PhET Simulation has an effect on students' science process skills in the material of traveling waves and stationary waves.*

Keywords: science process skills, Simas Eric model, traveling waves and stasionary PhET Simulation.