ABSTRAK

Nira Nurhanifah. 2024. **PENGARUH MODEL *BRAIN BASED LEARNING* BERBANTUAN GEOGEBRA TERHADAP KETERAMPILAN BERPIKIR KRITIS PESERTA DIDIK PADA MATERI GELOMBANG STASIONER**

Penelitian ini dilatarbelakangi oleh rendahnya keterampilan berpikir kritis peserta didik yang disebabkan oleh peserta didik yang cenderung menghafal rumus tanpa memahami konsep fisikanya dan kurangnya alat eksperimen fisika yang memadai. Upaya yang dilakukan untuk mengatasi masalah tersebut adalah menerapkan model *Brain Based Learning*. Kurangnya alat eksperimen dapat diatasi dengan penggunaan *software* GeoGebra. Penelitian ini bertujuan untuk mengetahui pengaruh model *Brain Based Learning* berbantuan GeoGebra terhadap keterampilan berpikir kritis peserta didik pada materi gelombang stasioner di kelas XI MIPA SMAN 5 Tasikmalaya tahun ajaran 2023/2024. Penelitian ini menggunakan metode *quasi experiment* dengan desain penelitian *nonequivalent control group design*. Populasi dalam penelitian ini adalah seluruh peserta didik kelas XI MIPA SMAN 5 Tasikmalaya tahun ajaran 2023/2024 sebanyak 7 kelas. Sampel penelitian diambil menggunakan teknik *purposive sampling*. Keterampilan berpikir kritis peserta didik diukur menggunakan tes berupa soal esai dengan tiap soal terdiri dari salah satu indikator keterampilan berpikir kritis. Hasil uji hipotesis menggunakan uji t pada taraf signifikansi (α) 0,05 menunjukkan bahwa $t_{hitung} > t_{tabel}$ yaitu $2,93 > 1,67$ sehingga H_a diterima yang berarti model *Brain Based Learning* berbantuan GeoGebra berpengaruh secara signifikan terhadap keterampilan berpikir kritis peserta didik pada materi gelombang stasioner.

Kata kunci: *Brain Based Learning*, GeoGebra, Gelombang Stasioner, Keterampilan Berpikir Kritis

ABSTRACT

Nira Nurhanifah. 2024. *THE EFFECT OF BRAIN-BASED LEARNING MODEL ASSISTED BY GEOGEBRA ON STUDENTS' CRITICAL THINKING SKILLS IN STATIONARY WAVE MATERIAL*

This research is motivated by the low critical thinking skills of students, which are caused by students who tend to memorize formulas without understanding the physics concept and the lack of adequate experimental equipment for physics. The effort to overcome this problem is to apply the Brain-Based Learning model. The lack of experimental tools can be overcome by using GeoGebra software. This research aims to determine the effect of the Brain-Based Learning model assisted by GeoGebra on students' critical thinking skills in stationary wave material in class XI MIPA SMAN 5 Tasikmalaya in the 2023/2024 academic year. This research uses a quasi-experimental method with a nonequivalent control group design. The population in this study were all students of class XI MIPA SMAN 5 Tasikmalaya in the 2023/2024 academic year, totaling 7 classes. The research sample was taken using a purposive sampling technique. Students' critical thinking skills are measured using a test in the form of essay questions with each question consisting of one indicator of critical thinking skills. The results of hypothesis testing using the t test at a significance level (α) of 0.05 show that $t_{count} > t_{table}$ is $2,93 > 1,67$ so H_a is accepted, which means that the Brain-Based Learning model assisted by GeoGebra has a significant effect on students' critical thinking skills in stationary wave material.

Keywords: Brain-Based Learning, GeoGebra, Stationary Waves, Critical Thinking Skills