ABSTRAK

PENGEMBANGAN WEB PEMBELAJARAN PERSAMAAN GAYA PEGAS BAGI PESERTA DIDIK KELAS XI SMA NEGERI 1 NGAGLIK

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2023

Keterbatasan alat, bahan dan waktu eksperimen serta pandemi Covid-19 menyebabkan eksperimen luring tidak dapat dilaksanakan. Oleh karena itu perlu dikembangkan laboratorium virtual beserta dengan materinya yang berbasis web, salah satunya pada topik persamaan gaya pegas. Tujuan penelitian ini adalah menghasilkan produk berupa web pembelajaran persamaan gaya pegas. Penelitian ini merupakan Research and Development dengan model pengembangan Borg and Gall (1983). Produk dan instrument penelitian berupa validasi materi, validasi produk, pembuatan laporan dan mengisi kritik & saran dan angket semua di validasi oleh ahli media, ahli materi dan guru fisika. Uji coba lapangan dilakukan pada salah satu kelas XI SMA Negeri 1 Ngaglik yang berjumlah 25 peserta didik. Analisis data dilakukan menggunakan program spss model one sampe test dan deskriptif. Hasil penelitian menunjukkan bahwa: (1) produk cocok dikembangkan dengan model Borg and Gall (1983) karena tahapannya yang sistematis dan detail (2) produk telah memenuhi kriteria sangat valid dengan rata-rata skor 88,83%, materi yang terkandung dalam produk 88,93% dan nilai laporan anak-anak rata-rata 8. Produk layak digunakan untuk menunjang eskperimen virtual persamaan gaya pegas di SMA

Kata Kunci : Web Pembelajaran, Laboratorium Virtual, Persamaan Gaya Pegas

ABSTRACT

DEVELOPMENT OF WEB LEARNING OF SPRING FORCE EQUATION FOR STUDENTS OF CLASS XI SMA NEGERI 1 NGAGLIK

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The limitations of material tools and experiment time and covid-19 cause luring experiments not to be carried out, and physics subjects are difficult to understand when using the memorization method alone. Therefore it is necessary to develop a virtual laboratory along with the material but web-based, one of the topics is the peg force equation. The purpose of this study is to produce a product in the form of a learning web for the spring force equation. This research is research and development with the Borg and Gall development model (1983). product and instrument in the form of material validation and product validation report making and filling in criticism & suggestions and questionnaires all validated by media experts, material experts and physics teachers. Field trials were conducted in one of the XI classes of SMA NGERI 1 NGAGLIK totaling 25 students. The results showed that (1) the product meets the valid criteria with the final percentage of the validation sheet of 84.29% which explains the product is valid (2) the material meets the valid criteria with a final percentage of 91, 66% which explains the material in the product is very valid (3) the product has an effect on the learning outcomes of students based on the learning outcomes of students based on the results of the t test one sample test using SPSS with a comparison of the calculated t value and t table is (8.0742.064), and the probability value (sig 2 tailed) is smaller than 0.05. Thus the spring force equation learning product can be used to support virtual experiments on the spring force equation in high school.

***Keywords**: Web Learning, Virtual Laboratory, Spring Force Equation*