

ABSTRAK

Maria Gracyiela P. S, NIM 4183121038 (2022), Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis Pendekatan Saintifik Berbantuan Laboratorium Virtual *Amrita Olabs* Pada Materi Elastisitas Di SMAN 1 Bilah Hulu.

Penelitian pengembangan ini bertujuan untuk menghasilkan LKPD berbasis pendekatan saintifik berbantuan laboratorium virtual *Amrita Olabs* pada materi elastisitas yang layak digunakan dalam pembelajaran fisika. Jenis penelitian ini merupakan *Research and Development* (R&D) menggunakan model 4D Thiagarajan yang diabatasi sampai dengan tahap pengembangan (*Develop*). Subjek pada penelitian ini adalah ahli materi, ahli media, guru bidang studi fisika dan peserta didik kelas XI MIA 2 SMA Negeri 1 Bilah Hulu yang berjumlah 30 peserta didik. Instrumen yang digunakan dalam penelitian ini terdiri dari angket uji kelayakan ahli materi, dan ahli media, lembar observasi, instrumen soal *pretest* dan *posttest* serta angket respon guru bidang studi dan peserta didik terhadap LKPD berbasis pendekatan saintifik berbantuan laboratorium virtual *Amrita Olabs*. Hasil penelitian menunjukkan bahwa LKPD berbasis pendekatan saintifik berbantuan laboratorium virtual *Amrita Olabs* yang dikembangkan termasuk dalam kategori sangat layak digunakan dalam proses pembelajaran fisika berdasarkan hasil uji validasi ahli materi (92,85%) dan ahli media (93,18%). Respon guru terhadap LKPD Yang dikembangkan (98,21%) dan respon peserta didik (97,22%). Berdasarkan perhitungan N-Gain, LKPD berbasis pendekatan saintifik berbantuan laboratorium virtual *Amrita Olabs* berada dalam kategori sedang dengan nilai 0,69. Dengan rata-rata hasil belajar 79,50. Dengan demikian dapat disimpulkan bahwa LKPD berbasis pendekatan saintifik berbantuan laboratorium virtual *Amrita Olabs* layak dan efektif digunakan dalam pembelajaran fisika.

Kata kunci : Pengembangan, LKPD, pendekatan saintifik, laboratorium virtual, *Amrita Olabs*, elastisitas

ABSTRACT

Maria Gracyiela P. S, NIM 4183121038 (2022), Development of Student Worksheets (LKPD) Based on a Scientific Approach Assisted by the Amrita Olabs Virtual Laboratory on Elasticity At SMAN 1 Bilah Hulu.

This development research aims to produce LKPD based on a scientific approach assisted by the Amrita Olabs virtual laboratory on elasticity material that is suitable for use in physics learning. This type of research is Research and Development (R&D) using the Thiagarajan 4D model which is limited to the development stage (Develop). The subjects in this study were material experts, media experts, physics teachers and students in class XI MIA 2 SMA Negeri 1 Bilah Hulu, totaling 30 students. The instruments used in this study consisted of questionnaires for the due diligence of material experts and media experts, observation sheets, instruments of pretest and posttest questions as well as questionnaires for field of study teachers and students' responses to LKPD based on a scientific approach assisted by the Amrita Olabs virtual laboratory. The results showed that the LKPD based on the scientific approach assisted by the Amrita Olabs virtual laboratory that was developed was included in the very suitable category for use in the physics learning process based on the results of the validation test of material experts (92.85%) and media experts (93.18%). The teacher's response to the developed LKPD (98.21%) and the student's response (97.22%). Based on N-Gain calculations, LKPD based on a scientific approach assisted by the Amrita Olabs virtual laboratory is in the medium category with a value of 0.69. With an average learning result of 79.50. Thus it can be concluded that LKPD based on a scientific approach assisted by the Amrita Olabs virtual laboratory is feasible and effective for use in learning physics.

Keywords: Development, LKPD, scientific approach, virtual laboratory, Amrita Olabs, elasticity

