

ABSTRACT

Rizki Fadilah. 2019. Development of LKPD Based on Demand Based Learning Assisted by Tracker Applications on Momentum and Impulse Material of High School Physics Learning. Thesis. Master Program in Physics Education, Faculty of Mathematics and Natural Sciences, Padang State University.

LKPD plays an important role in learning. One source of learning, LKPD can guide students to understand physics material. However, the available LKPDs have several disadvantages, which are not in accordance with the structure of a good LKPD, not yet using the inquiry-based learning model. In addition, the use of LKPD is only on material that is easy to implement because of the limitations of tools and media. The purpose of this study was to produce inquiry-based LKPD based on assisted learning tracker application on momentum material and impulse high school physics learning with valid, practical and effective criteria.

This type of research is R & D using the Plomp model which consists of the preliminary research phase, development or prototyping and assessment stages. The research data consists of data on validity, practicality and effectiveness. The instrument of this study consisted of a validation sheet, a practice sheet of students and teachers, attitude observation sheets, multiple choice tests and skills assessment sheets. The data analysis technique uses descriptive percentages.

The results of the initial analysis consist of analysis of performance in a good category, aspects of knowledge and skills must be improved, then discipline and responsibility must be strengthened, and methods, models and learning resources must be maximized. The results of the analysis of students about general abilities, creativity, motivation, motivation and processing need to be improved. The results of material analysis obtained to adjust the selection of material that will support to improve the competency of students. The results of the study on the design obtained by LKPD were designed based on assisted assisted learning based learning models. The results of the pairs of LKPD developments meet the valid criteria of 0.86. The results of the implementation of the LKPD agreed to the very practical criteria of the response teacher 88.9% and the response of the students was 88.71%. The evaluation phase of the LKPD fulfills the effective criteria with an 85.81% attitude value, 84.68% knowledge and 84.45% skills. Based on the results of the study it can be concluded that inquiry-based LKPD is based on assisted learning tracking applications that meet valid, practical and effective criteria.

Keywords: Student Worksheets, Inquiry Based Learning, Tracker Application

ABSTRAK

Rizki Fadilah. 2019. Pengembangan LKPD Berbasis *Inquiry Based Learning* Berbantuan Aplikasi *Tracker* Pada Materi Momentum dan Impuls Pembelajaran Fisika SMA. Tesis. Program Studi Magister Pendidikan Fisika Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Padang.

LKPD memegang peranan penting dalam pembelajaran. Salah satunya sebagai sumber belajar, LKPD dapat menuntun peserta didik untuk memahami materi fisika. Namun, LKPD yang tersedia memiliki beberapa kekurangan yaitu belum sesuai dengan struktur LKPD yang baik, belum memuat penggunaan model *inquiry based learning*. Selain itu, penggunaan LKPD hanya pada materi yang mudah untuk dianalisis karena keterbatasan alat dan media. Tujuan penelitian ini adalah untuk menghasilkan LKPD berbasis *inquiry based learning* berbantuan aplikasi *tracker* pada materi momentum dan impuls pembelajaran fisika SMA dengan kriteria valid, praktis dan efektif.

Jenis penelitian ini adalah R&D dengan menggunakan model Plomp yang terdiri dari tahap *preliminary research, development or prototyping phase* dan *assessment phase*. Data penelitian terdiri dari data validitas, praktikalitas dan efektifitas. Instrument penelitian ini terdiri dari lembar validasi, lembar praktikalitas peserta didik dan guru, lembar observasi sikap, tes pilihan ganda dan lembar penilaian keterampilan. Teknik analisis data menggunakan deskriptif persentase.

Hasil analisis awal akhir berupa analisis performa dengan kategori baik, aspek pengetahuan dan keterampilan harus ditingkatkan, kemudian sikap disiplin dan tanggung jawab harus diperkuat, serta metode, model dan sumber belajar harus maksimal. Hasil analisis peserta didik berupa kemampuan umum, kreativitas, motivasi, menyelidiki dan mengolah perlu di tingkatkan. Hasil analisis materi diperoleh untuk menyesuaikan pemilihan materi yang akan diajarkan untuk meningkatkan kompetensi peserta didik. Hasil penelitian pada tahap desain diperoleh LKPD dirancang berbasis model *inquiry based learning* berbantuan aplikasi *tracker*. Hasil tahap pengembangan LKPD memenuhi kriteria valid 0,86. Hasil tahap implementasi LKPD memenuhi kriteria sangat praktis dari respon guru 88,9% dan respon peserta didik 88,71%. Tahap evaluasi LKPD memenuhi kriteria efektif dengan nilai sikap 85,81%, pengetahuan 84,68% dan keterampilan 84,45%. Berdasarkan hasil penelitian dapat disimpulkan LKPD berbasis *inquiry based learning* berbantuan aplikasi *tracker* yang memenuhi kriteria valid, praktis dan efektif.

Kata Kunci : Lembar Kerja Peserta Didik, *Inquiry Based Learning*, Aplikasi *Tracker*