

ABSTRACT

Vera Yunita Nasution. 2019. Development of Student Worksheets using Inquiry Based Learning Models with Science Technology Society Approach for Second Grade High School in Physics Learning at Second Semester. Thesis. Master Program in Physics Education, Faculty of Mathematics and Natural Sciences, Padang State University.

Physics learning aims to develop knowledge and train students' thinking skills. But in reality, students have not been able to develop it because they are less trained to find concepts independently. Student worksheets include teaching materials that can help students find concepts and apply these concepts. The use of LKPD is expected to help students improve their knowledge and skills. The purpose of this study was to produce student worksheets using the inquiry based learning model with the community technology science approach for the second semester of SMA Physics learning in the second semester with criteria valid, practical, and effective.

This type of research is R&D using the Plomp model consisting of preliminary research, prototyping phase, and assessment phase. The data used is primary data. The research instrument consisted of sheets of self evaluation, validation, practicality sheets of students and teachers, attitude observation sheets, multiple choice tests and performance assessment sheets. The data analysis technique uses descriptive percentages.

The results of the needs analysis are obtained by identifying teacher performance that is quite good. While for the analysis of attitudes, knowledge and skills of students and the methods, models and learning resources used need to be improved. The results of the material analysis are obtained to adjust the material that can support the achievement of competencies in accordance with the analysis that has been done. The results of the study at the design stage were obtained by student worksheets which was designed using an inquiry based learning model with a , science technology society approach. The results of the development phase of the student worksheets meet the valid criteria of 0.79. The results of the implementation phase of the student worksheets meet the very practical criteria of the teacher response questionnaire with a value of 92.90% and 78.22% of students with practical criteria. The evaluation phase of the student worksheets meets the effective criteria with an attitude value of 84.64%, knowledge of 81.64%, and skills of 67.65%. Based on the results of the study, it can be concluded that the student worksheets uses the inquiry based learning model with a science technology society approach valid, practical, and effective to improve second grade of high school physics competencies.

Keynote: Students worksheets, Inquiry Based Learning, science technology society approach

ABSTRAK

Vera Yunita Nasution. 2019. Pengembangan LKPD Menggunakan Model *Inquiry Based Learning* (IBL) dengan Pendekatan Sains Teknologi Masyarakat (STM) untuk Pembelajaran Fisika SMA Kelas XI Semester 2. Tesis. Program Studi Magister Pendidikan Fisika Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Padang.

Pembelajaran fisika bertujuan untuk mengembangkan pengetahuan dan melatih kemampuan berfikir peserta didik. Namun pada kenyataannya, peserta didik belum bisa mengembangkannya dikarenakan kurang terlatih untuk menemukan konsep secara mandiri. LKPD termasuk bahan ajar yang dapat membantu peserta didik menemukan konsep serta menerapkan konsep tersebut. Penggunaan LKPD diharapkan dapat membantu peserta didik dalam meningkatkan kemampuan pengetahuan dan keterampilannya. Tujuan penelitian ini adalah untuk menghasilkan LKPD menggunakan model *inquiry based learning* dengan pendekatan sains teknologi masyarakat untuk pembelajaran Fisika SMA kelas XI semester 2 dengan kriteria valid, praktis, dan efektif.

Jenis penelitian ini merupakan R&D dengan menggunakan model Plomp yang terdiri dari *preliminary research*, *prototyping phase*, and *assessment phase*. Data yang digunakan adalah data primer. Instrumen penelitian terdiri dari lembar *self evaluation*, validasi, lembar praktikalitas peserta didik dan guru, lembar observasi sikap, tes pilihan ganda dan lembar penilaian unjuk kerja. Teknik analisis data menggunakan deskriptif persentase.

Hasil analisis kebutuhan diperoleh identifikasi performa guru yang cukup baik. Sedangkan untuk analisis sikap, pengetahuan dan keterampilan peserta didik serta metode, model dan sumber belajar yang digunakan perlu lebih ditingkatkan. Hasil analisis materi diperoleh untuk menyesuaikan materi yang dapat mendukung ketercapaian kompetensi sesuai dengan analisis yang telah dilakukan. Hasil penelitian pada tahap desain diperoleh LKPD yang dirancang menggunakan model *inquiry based learning* dengan pendekatan sains teknologi masyarakat. Hasil tahap pengembangan LKPD memenuhi kriteria valid 0,79. Hasil tahap implementasi LKPD memenuhi kriteria sangat praktis dari angket respon guru dengan nilai 92,90% dan peserta didik 78,22% dengan kriteria praktis. Tahap evaluasi LKPD memenuhi kriteria efektif dengan nilai sikap 84,64%, pengetahuan 81,64%, dan keterampilan 67,65%. Berdasarkan hasil penelitian dapat disimpulkan LKPD menggunakan model *inquiry based learning* dengan pendekatan sains teknologi masyarakat valid, praktis, dan efektif untuk meningkatkan kompetensi Fisika SMA kelas XI.

Kata Kunci: Lembar Kerja Peserta Didik, *Inquiry Based Learning*, Pendekatan Sains Teknologi Masyarakat