ABSTRAK

Romi Pratama, NIM 4171121030 (2017). Pengembangan *E-Modul* Fisika Pokok Bahasan Suhu dan Kalor Berbasis Masalah Kelas XI di SMA Negeri 2 Percut Sei Tuan.

Mata pelajaran fisika SMA Negeri 2 Percut Sei Tuan, menunjukkan bahwa pembelajannya masih konvensional dan bahan ajar yang digunakan masih terbatas. Penelitian ini bertujuan untuk mengembangkan *e-modul* fisika berbasis *PBL* yang valid pada materi suhu dan kalor menurut ahli materi dan ahli media dan mengembangkan e-modul fisika yang praktis bagi guru dan peserta didik, serta mengukur keefektifan *e-modul* fisika berbasis *PBL* yang dikembangkan terhadap tingkat pemecahan masalah peserta didik. Jenis penelitian ini menggunakan model penelitian dan pengembangan *(Research and Development*) yang digunakan untuk menghasilkan suatu produk tertentu dan untuk mengetahui tingkat validitas produk yang dikembangkan. Model pengembangan yang digunakan yaitu model *ADDIE*, terdiri dari tahap Analisis *(Analysis)*, Desain *(Design)*, Pengembangan (*Development)*, Implementasi *(Implementation)*, dan Evaluasi *(Evaluation)*. Media pembelajaran yang dikembangkan valid digunakan dalam pembelajaran berdasarkan hasil uji kevalidan oleh ahli materi dengan persentase 99,3% dan ahli media dengan presentase 88,5%. Uji coba kepraktisan dari hasil uji coba guru bidang studi memperoleh persentase 83%, uji coba pada kelompok kecil dengan 10 peserta didik memperoleh persentase 94,6% dan uji coba pada kelompok besar dengan 36 peserta didik memperoleh persentase 91,6%. Keefektifan e-modul berbasis *Problem Based Learning (PBL)* pada materi Suhu dan Kalor yang telah dikembangkan dalam meningkatkan pemahaman konseptual peserta didik termasuk dalam kriteria sedang dengan nilai gain sebesar 0,61.

Kata Kunci : *E-Modul* Fisika, *Problem Based Learning (PBL)* , Model ADDIE.

ABSTRACT

Romi Pratama, NIM 4171121030 (2017). Development of Physics E-Modul on Temperature and Heat Topic Based on Problem for Grade XI at SMA Negeri 2 Percut Sei Tuan

The subject of Physics at SMA Negeri 2 Percut Sei Tuan indicates that the learning approach is still conventional, and the teaching materials used are still limited. This research aims to develop a valid PBL based physics e-modul on temperature and heat material according to material experts and media experts and develop a practical physics e-modul for teachers and students, as well as measure the effectiveness of the PBL based physics e-modul developed on level of student problem solving. This type of research uses a research and development model which is used to produce a particular product and to determine the level of validity of the product being developed. The development model used is the ADDIE model, consisting of analysis, design, development, implementation and evaluation. The learning media developed is valid for use in learning based on the results of validity tests by experts. material with a percentage of 99.3% and media experts with a percentage of 88.5%. Practicality trials from the results of field teacher trials obtained a percentage of 83%, trials in small groups with 10 students obtained a percentage of 94.6% and trial in the large group with 36 students, the percentage was 91.6%. The effectiveness of the Problem Based Learning (PBL) based e-modul on Temperature and. Heat material that has been developed in increasing students' conceptual understanding is included in the medium criteria with a gain value of 0.61.

Keywords : E-Modul Physics, Learning Model Problem Based Learning (PBL) , ADDIE Modle