

ABSTRAK

Hamid Syahropi. 2019. “Pengembangan Modul Mata Kuliah Fisika Dasar Berbasis KKNi dengan Model *Problem Based Learning*”. Tesis. Program Pascasarjana Universitas Negeri Padang.

Berdasarkan hasil observasi dan analisis di program studi Pendidikan Fisika Universitas Pasir Pengaraian, modul fisika dasar yang tersedia masih berfokus pada modul penuntun praktikum dan tidak berbasis KKNi serta mahasiswa tidak mampu menyelesaikan masalah dalam perkuliahan fisika dasar. Beberapa permasalahan tersebut menyebabkan perkuliahan fisika dasar belum maksimal mencapai tujuan pembelajaran. Berdasarkan analisis kebutuhan dan analisis mahasiswa pengembangan modul mata kuliah fisika dasar berbasis KKNi dengan model *problem based learning* dapat menjadi solusi dari permasalahan. Tujuan penelitian ini adalah untuk mengembangkan modul mata kuliah fisika dasar berbasis KKNi dengan model *problem based learning* yang valid, praktis dan efektif.

Jenis penelitian adalah penelitian pengembangan (*research and development*). Model pengembangan yang digunakan adalah model ADDIE terdiri dari lima tahap yaitu tahap *analyse, design, development, Implementation, dan Evaluation*. Tahap *analyse*, dilakukan analisis kebutuhan antara lain analisis performa, analisis SKL, analisis pekerjaan, analisis kesulitan belajar, analisis sarana dan prasarana, analisis sumber belajar. Analisis mahasiswa dan analisis materi. Tahap *design* dilakukan perancangan terhadap modul yang akan dikembangkan. Tahap *development* meliputi uji validitas modul oleh tiga orang ahli dan dua praktisi. Tahapan *Implementation* meliputi uji coba modul pada pembelajaran di kelas, melakukan uji praktikalitas berdasarkan respon mahasiswa dan dosen, serta uji efektivitas modul yang dikembangkan. Tahap *evaluation*, dilakukan analisis dan interpretasi terhadap hasil belajar mahasiswa untuk menentukan efektivitas modul. Data penelitian adalah angket validasi dari pakar dan hasil praktikalitas dosen dan mahasiswa dengan menggunakan instrumen penelitian lembar observasi, lembar validitas, lembar praktikalitas, dan item soal yang digunakan pada uji efektivitas. Teknik analisis data adalah teknik analisis deskriptif.

Hasil penelitian dari tahap analisis, perancangan, pengembangan, penerapan dan penilaian diperoleh produk berupa pengembangan modul mata kuliah fisika dasar berbasis KKNi dengan model *problem based learning* yang memenuhi kriteria valid dengan rata-rata nilai validitas 0,80. Nilai praktikalitas modul diperoleh dengan rata-rata nilai (dosen 93,05 dan mahasiswa 82,37) memenuhi kriteria sangat efektif. Serta nilai efektivitas dari aspek sikap spiritual 85. Aspek sikap model PBL 83,58. Aspek pengetahuan dengan indeks gain 0,73 serta aspek keterampilan mahasiswa 85 yang berarti modul sangat efektif dalam meningkatkan hasil belajar. Kesimpulannya modul pembelajaran yang dikembangkan memiliki kriteria valid, praktis dan efektif untuk digunakan pada proses perkuliahan.

Kata Kunci: Modul, Fisika Dasar, KKNi, *Problem Based Learning*.

ABSTRACT

Hamid Syahropi. 2019. "Development of a module basic physic course based on KKNi with model Problem Based Learning". Tesis. Program Pascasarjana Universitas Negeri Padang.

Based on the results of observations and analysis in the study of physical education at Pasir Pengaraian University, the basic physics modules are still focused on practical guidance modules and not based on KKNi, and students are unable to solve problems in basic physics lectures. Some of these problems caused basic physics lectures are unable maximally achieved the learning goals. Based on the requirement analysis and analysis of students, development of the basic physics course module based on KKNi with the *problem based learning* model can be a solution to the problem. The aim of this study is to develop a KKNi based basic physics course module with a *problem based learning* model that is valid, practical and effective.

The type of this research is *Research and Development*. The development model used is ADDIE which consists of five phase that is *Analyse, Design, Development, Implementation and Evaluation*. At the *Analyse* phase, requirement analysis was carried out including performance analysis, SKL analysis, job analysis, analysis of learning difficulties, analysis of facilities and infrastructure, analysis of learning resources, student analysis and material analysis. The *design* phase is designed for the module to be developed. The development phase includes module validity testing by three experts and two practitioners. *Implementation* phase include modules testing on classroom learning, practicing tests based on the responses of students and lecturers, and testing the effectiveness of modules developed. Evaluation phase, carried out analysis and interpretation of student learning outcomes to determine the effectiveness of the module. The research data is primary data using observation sheet instruments, validity sheets, practical sheets, and question items used in the effectiveness test.

The results of the analysis, design, development, application and assessment of the product is obtained in the form of developing a KKNi based basic physics course module with a *problem based learning* model that meet the valid criteria with an average validity value of 0.80. The practicality of the module is obtained by the average score (lecturer 93.05 and student 82.37) fulfilling the criteria very effectively. As well as the value of effectiveness from the aspect of spiritual attitude 85. The attitude aspect of the PBL model is 83.58. Knowledge aspects with index gain 0.73 and aspects of student skills is 85 which means the module is very effective in improving learning outcomes. So the overall learning module developed is suitable for used in the lecture process.

Keywords : Module, Basic Physics, KKNi, *Problem Based Learning*.