

ABSTRACT

Siska Guswari. 2019. Development of Text Book Edupark Natural Sciences Janjang Siribu and Mountain Merah Putih Based Problem Based Learning . Thesis. The Master of Physics Education Study Program Faculty of Mathematics and Natural Sciences, Padang State University.

The lack of integration of learning materials with the natural environment is one of the causes students have difficulty understanding the concepts of natural science. While around students there are many natural phenomena related to the concept of natural science, this can be seen from the results of students' knowledge analysis due to the concepts of natural science. The purpose of this study is to produce text books on natural science edupark Janjang Siribu and Mountain Merah Putih Sulit Air based problem based learning with valid, practical, and effective criteria.

This type of research is Educational Design Research, using the Plomp development model. The development procedure starts from the preliminary research stage by analyzing learners, analyzing learning resources, analyzing the area's potential and analyzing the material prototyping phase including the design of the text book to be developed, validity testing by three experts and two practitioners, one by one test of text books, small group tests to determine the practicality of text books on students' responses, and field tests to determine the practicality of response books from educators and students. Assessment phase by evaluating the learning outcomes of students to determine the effectiveness of the book. The subjects of the study were 29 students of grade VIII of MTs Muhammadiyah Sulit Air. Data collection instruments in the form of student questionnaire analysis, validity, practicality, competency tests, skill assessment sheets, and social attitude assessment sheets as instruments of effectiveness.

The results of the research in the preliminary stage were obtained that student analysis, learning resource analysis, regional potential analysis and material analysis were needed to be a reference for the development of science edupark text books. The results of the text book design stage were obtained by the edupark natural science text books which were designed using a problem based learning model . The results of the development phase obtained text books meet the valid, practical, and effective criteria . Based on the results of the study it can be concluded edupark text books of natural sciences Janjang Siribu and Mountain Merah Putih Sulit Air based problem based learning is valid, practical and effective to improve student learning outcomes.

Keywords: Text Books, Edupark, Janjang Siribu and Mountain Merah Putih, Problem Based Learning .

ABSTRAK

Siska Guswari. 2019. Pengembangan Buku Ajar *Edupark* Ilmu Pengetahuan Alam (IPA) Janjang Siribu dan Gunung Merah Putih Sulit Air Berbasis *Problem Based Learning*. Tesis. Program Studi Magister Pendidikan Fisika Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Padang.

Kurangnya pengintegrasian materi pembelajaran dengan lingkungan alam sekitar merupakan salah satu penyebab peserta didik kesulitan memahami konsep-konsep ilmu pengetahuan alam. Sementara disekitar peserta didik banyak ditemukan gejala-gejala alam yang berhubungan dengan konsep ilmu pengetahuan alam, hal ini dapat dilihat dari hasil analisis pengetahuan peserta didik terkat konsep-konsep IPA. Tujuan penelitian ini adalah untuk menghasilkan buku ajar *edupark* ilmu pengetahuan alam (IPA) Janjang Siribu dan Gunung Merah Putih Sulit Air berbasis *problem based learning* dengan kriteria valid, praktis, dan efektif.

Jenis penelitian ini adalah desain dan evaluasi (*Educational Design Research*), dengan model pengembangan yang digunakan adalah model Plomp dengan menggunakan model pengembangan Plomp. Prosedur pengembangan dimulai dari tahap *preliminary research* dengan melakukan analisis peserta didik, analisis sumber belajar, analisis potensi daerah, dan analisis materi. *Prototyping phase* meliputi perancangan terhadap buku ajar yang akan dikembangkan, uji validitas oleh tiga orang ahli, uji satu per satu terhadap buku ajar, uji kelompok kecil untuk menentukan kepraktisan buku ajar pada respon peserta didik, serta uji lapangan untuk menentukan kepraktisan buku respon dari pendidik dan peserta didik. *Assesment phase* menentukan efektivitas buku dengan melakukan penilaian terhadap hasil belajar peserta didik. Subjek penelitian adalah peserta didik kelas VIII MTs Muhammadiyah Sulit Air sebanyak 29 orang. Instrumen pengumpulan data berupa angket analisis peserta didik, validitas, praktikalitas, tes kompetensi dan lembar penilaian sikap sosial sebagai instrumen efektivitas.

Hasil penelitian pada tahap pendahuluan yang diperoleh dari analisis peserta didik, analisis sumber belajar, analisis potensi daerah dan analisis materi digunakan sebagai acuan pengembangan buku ajar *edupark* IPA. Hasil tahap perancangan buku ajar diperoleh buku ajar *edupark* ilmu pengetahuan alam (IPA) yang dirancang menggunakan model *problem based learning*. Hasil tahap pengembangan diperoleh buku ajar memenuhi kriteria sangat valid, sangat praktis, dan efektif. Berdasarkan hasil penelitian dapat disimpulkan buku ajar *edupark* ilmu pengetahuan alam (IPA) Janjang Siribu dan Gunung Merah Putih Sulit Air berbasis *problem based learning* valid, praktis dan efektif untuk meningkatkan hasil belajar peserta didik.

Kata Kunci: Buku Ajar, *Edupark*, Janjang Siribu dan Gunung Merah Putih, *Problem Based Learning*.