

ABSTRAK

PENGEMBANGAN ALAT PRAKTIKUM SPEKTROFOTOMETER SEDERHANA UNTUK MENSTIMULUS KETERAMPILAN PROSES SAINS

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Penelitian ini bertujuan untuk mengembangkan alat praktikum spektrofotometer sederhana yang dapat digunakan dalam pembelajaran materi gelombang cahaya di sekolah, serta untuk menstimulus keterampilan proses sains. Penelitian ini menggunakan jenis penelitian *research and development* yang terbagi menjadi lima tahap, yaitu analisis, desain, pengembangan, implementasi dan evaluasi (ADDIE). Sebelum digunakan di lapangan, alat praktikum ini pertama kali diuji kelayakannya. Uji kelayakan alat praktikum spektrofotometer sederhana dilakukan dengan melakukan uji validitas, dan uji kepraktisan. Setelah digunakan di lapangan dilakukan uji keefektifan. Hasil uji validitas alat praktikum diperoleh persentase 88% dengan kategori sangat valid dan indikator kebermanfaatan alat praktikum pada keterampilan proses sains sebesar 85%. Hasil dari uji kepraktisan diperoleh nilai persentase 89% dengan kategori sangat praktis. Hasil uji keefektifan berupa lembar soal *posttest* diperoleh nilai persentase 76% dengan kategori sangat efektif. Berdasarkan ketiga uji kelayakan tersebut, dapat disimpulkan bahwa alat praktikum cocok digunakan dalam pembelajaran materi gelombang cahaya di sekolah, serta dapat menstimulus kemampuan keterampilan proses sains peserta didik.

Kata Kunci: ADDIE, Gelombang Cahaya, Spektrofotometer Sederhana, Keterampilan Proses Sains.

ABSTRACT

DEVELOPMENT OF SIMPLE SPECTROPHOTOMETER PRACTICAL TOOLS TO STIMULATE SCIENCE PROCESS SKILLS

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This study aims to develop a simple spectrophotometer practical tool that can be used in learning light wave material in schools, as well as to stimulate science process skills. This study uses a research and development type of research which is divided into five stages, namely analysis, design, development, implementation and evaluation (ADDIE). Before being used in the field, this practical tool was first tested for its feasibility. The feasibility test of the simple spectrophotometer practical tool was carried out by conducting a validity test and a practicality test. After being used in the field, an effectiveness test was carried out. The results of the validity test of the practical tool obtained a percentage of 88% with a very valid category and an indicator of the usefulness of the practical tool on science process skills of 85%. The results of the practicality test obtained a percentage value of 89% with a very practical category. The results of the effectiveness test in the form of a posttest question sheet obtained a percentage value of 76% with a very effective category. Based on the three feasibility tests, it can be concluded that the practical tool is suitable for use in learning light wave material in schools, and can stimulate students' science process skills.

Keyword: ADDIE, Light Waves, Simple Spectrophotometer, Science Process Skills.