

## ABSTRAK

### **EFEKTIVITAS BAHAN AJAR IPA TERPADU BERORIENTASI *PROBLEM SOLVING* PADA MATERI PENCEMARAN LINGKUNGAN UNTUK MENINGKATKAN KEMAMPUAN PEMECAHAN MASALAH**

Atik Aswanti  
1404541

Penelitian ini bertujuan untuk mengetahui efektivitas bahan ajar IPA terpadu berorientasi *problem solving* pada materi pencemaran lingkungan untuk meningkatkan kemampuan pemecahan masalah. Penelitian ini digolongkan dalam jenis penelitian dan pengembangan (*Research and Development*). Pengembangan bahan ajar pada penelitian ini menggunakan model 4STMD (*Four Steps Teaching Material Development*). Pada penelitian ini dilakukan uji coba terbatas terhadap bahan ajar menggunakan metode *pre experiment* dengan desain *one group pre-test post-test design*. Penelitian ini dilaksanakan pada salah satu SMP swasta di Serang-Banten kelas VII. Sampel ditetapkan secara *purposive sampling*. Instrumen yang digunakan untuk menguji kelayakan bahan ajar berupa lembar validasi tahap seleksi, strukturisasi, karakterisasi, dan kelayakan bahan ajar, untuk mengukur kemampuan pemecahan masalah berupa tes uraian, sedangkan untuk mengetahui respon guru dan siswa menggunakan pedoman wawancara. Analisis data menggunakan tes penulisan ide pokok dan keterpahaman teks untuk angket tahap karakterisasi, CVR dan CVI untuk kelayakan bahan ajar; sedangkan untuk mengukur kemampuan pemecahan masalah menggunakan *N-gain* dan *effect size*. Hasil penelitian menunjukkan bahwa kelayakan bahan ajar pada seluruh aspek yaitu 97% dan CVI yaitu 0,95 termasuk kategori sangat sesuai dan penggunaan bahan ajar IPA Terpadu berorientasi *problem solving* pada materi pencemaran lingkungan memiliki rerata nilai *N-gain* sebesar 0,77 termasuk kategori tinggi. Efektivitas penggunaan bahan ajar IPA Terpadu berorientasi *problem solving* pada materi pencemaran lingkungan ini berdasarkan perhitungan diperoleh nilai *effect size* sebesar 3,33. Hal ini berarti bahwa penggunaan bahan ajar IPA terpadu tema pencemaran lingkungan ini memberikan pengaruh yang besar (*large effect*) terhadap peningkatan kemampuan pemecahan masalah.

Kata kunci: Bahan Ajar IPA Terpadu, Pencemaran Lingkungan, *Problem Solving* Dan Kemampuan Pemecahan Masalah

## ABSTRACT

### **THE EFFECTIVENESS OF INTEGRATED SCIENCE TEACHING MATERIALS ORIENTED PROBLEM SOLVING ORIENTED IN ENVIRONMENT POLLUTION THEME TO ENHANCE THE PROBLEM SOLVING ABILITIES**

Atik Aswanti  
1404541

This study aims to effectiveness of integrated science teaching material *problem solving* oriented in environment pollution theme to enhance problem solving abilities. This study is categorized as a research and development study. The development of the teaching materials in this study was conducted by 4STMD (Four Steps Teaching Material Development) model. In this study, there was a test limitedly towards teaching materials using pre-experiment method with one group pre-test post-test design. The study was conducted in one of private junior high school in Serang-Banten grade VII. The sample was decided with purposive sampling. The instrument used is an essay to measure students' problem solving abilities. The instrument used to test of feasibility of teaching materials in the form of sheets validation stage of selection, structuring, characterization, and the feasibility of teaching materials, used in measuring students' problem solving abilities was an essay test, whereas to study the response of teachers and students using interview guide. Analysis of data using the writing test is the main idea and to understand text to the questionnaire stage of characterization, CVR and CVI to suitable teaching materials; whereas to measure problem-solving skills using N-gain and effect size. The results showed that the eligibility of teaching materials on all aspects of CVI is 97% and the 0.95 category is very appropriate and the use of teaching materials Integrated Science oriented problem solving in environmental pollution material had a mean value of N-gain of 0.77 were high. The effectiveness of the use of teaching materials Integrated Science oriented problem solving on material environmental pollution is based on the calculation, the value of the effect size of 3.33. This means that the use of teaching materials IPA unified theme of environmental pollution is a big impact (large effect) to increase problem-solving abilities.

Keywords: Integrated Science Teaching Materials, Environmental Pollution, problem-solving and problem-solving abilities.