

ABSTRAK

Rahmah Evita Putri (2016) : **Meningkatkan Penguasaan Konsep dan Kemampuan Argumentasi Ilmiah Siswa SMP Kelas VII melalui Bahan Ajar IPA Terpadu dengan Tema Halo pada Topik Kalor**

Penelitian yang dilaksanakan adalah penyusunan dan penggunaan bahan ajar IPA terpadu dengan tema Halo untuk meningkatkan penguasaan konsep dan kemampuan argumentasi ilmiah siswa SMP Kelas VII. Keterpaduan pada bahan ajar, sesuai dengan model *webbed*. Bahan ajar yang telah dibuat, diuji kelayakannya sesuai dengan kriteria oleh BNSP. Terdapat empat konsep yang diukur, yakni perubahan wujud, kalor, lapisan bumi dan optik. Pada kemampuan argumentasi ilmiah siswa, terdapat empat komponen, yakni klaim, data, pembenaran, dan dukungan. Adapun Populasi penelitian ini adalah seluruh siswa kelas VII, di salah satu SMP di kota Padang. Teknik pengambilan sampel menggunakan “purposive sampling”, data yang di ambil sebanyak dua kelas, berjumlah 64 orang siswa, yakni kelas kontrol dan kelas eksperimen. Data penelitian adalah kelayakan bahan ajar, peningkatan kemampuan penguasaan konsep, peningkatan kemampuan argumentasi ilmiah siswa, dan angket tanggapan guru dan siswa mengenai bahan ajar IPA terpadu yang digunakan. Teknik analisis data menggunakan uji kesamaan dua rata-rata yakni uji t N-Gain. Hasil penelitian menunjukkan bahwa bahan ajar IPA terpadu dengan tema Halo mendapatkan kelayakan isi dan penyajian materi dibawah rata-rata keseluruhan yakni 86,41%, sedangkan pada kebahasaan dan kegrafikan, berada diatas rata-rata. Terdapat peningkatan kemampuan penguasaan konsep siswa kelas eksperimen dengan N-Gain sedang pada kedua kelas. Kelas eksperimen mendapatkan nilai N-Gain lebih tinggi dan terdapat perbedaan yang signifikan pada peningkatan kedua kelas dengan $\text{sig } 0,001 < \alpha (0,05)$. Terdapat peningkatan kemampuan argumentasi ilmiah siswa kelas eksperimen dengan N-Gain pada kategori tinggi dan N-Gain sedang pada kelas kontrol. Terdapat perbedaan yang signifikan antara kedua kelas dengan $\text{sig. } 0,000 < \alpha (0,05)$.

Kata Kunci : Bahan Ajar IPA Terpadu, Peningkatan Penguasaan Konsep, Peningkatan Kemampuan Argumentasi Ilmiah

ABSTRACT

Rahmah Evita Putri (2016) : **Improving 7th Grade Junior Secondary School Students' Concept Mastery and Scientific Argumentation Ability through Integrated Science Teaching Materials with Halo as a Theme on Heat Topic**

This research is about the implementation of integrated science teaching material with Halo as a theme to improve students' concept mastery. The teaching material was integrated according to webbed model. The feasibility of teaching material that have been made were tested according to BNSP. There were four measured concept consists of changing state of material, heat, the earth layer, and optics. The argumentation ability had four components, those are claims, evidence, earrant and backing. The population of this research were all of 7th grade students in a junior high school in Padang. Purposive sampling was used as the sampel collection technique, there were 64 students in two classes enrolled as sample, namely control class and experiment class. Research data that were collected consists of the feasibility of teaching materials, concept mastery improvement, science agumentation ability improvement, and teachers' and students' responses survey about the integreated science teaching material. Independent t test were used as the data analysis technique. The research result showed that integrated science teaching material with Halo as a theme got the content and material presentation value below the average namely 86,41 %, due to the content and presentation of teaching material did not have religious values and social values, meanwhile language and graphics presentation were got percentages above the average because of a teaching materials, pictures and illustration was easy for students to understand the concept. There was improvement on students' concept mastery in experiment group with gain average/moderate for both class, and there was a significant difference between experiment class and control class with sig. $0,001 < \alpha (0,05)$. There was an improvement on students' argumentation ability where experiment class got higher gain and control class got average/moderate gain with significant difference $0,000 < \alpha (0,05)$.

Key Words : Integrated Science Teaching Material, Improving Students Concept Mastery, Improving Scientific Argumentation Ability