

## **Pengembangan Bahan Ajar *Web* Fisika SMP Berorientasi Literasi Sains Pada Materi Kalor**

### **ABSTRAK**

Skripsi ini memaparkan penelitian tentang pengembangan bahan ajar *web* fisika SMP berorientasi literasi sains yang mengacu pada kurikulum 2013 dan domain literasi sains dalam *framework* PISA 2015. Penelitian ini bertujuan menghasilkan bahan ajar *web* fisika SMP berorientasi literasi sains yang teruji kualitasnya serta dapat membantu guru dan siswa dalam mempelajari materi kalor. Metode *Research and Development* (R&D) model 4-D yang direduksi menjadi 3-D (*Define, Design, dan Develop*) digunakan untuk mengembangkan bahan ajar dalam penelitian ini. Instrumen yang digunakan meliputi angket kelayakan konten, angket kelayakan desain visual, dan angket kelayakan navigasi. Untuk mengetahui kualitas bahan ajar *web* fisika yang dikembangkan kemudian dilakukan uji coba terbatas melalui dua tahapan yakni uji ahli dan uji pengguna. Uji ahli dilakukan oleh enam orang ahli yang terdiri dari tiga ahli materi dan tiga ahli media. Uji pengguna dilakukan oleh lima orang guru mata pelajaran IPA dan 30 orang siswa kelas VIII SMP. Hasil uji coba terbatas menunjukkan bahwa bahan ajar *web* fisika yang dikembangkan memiliki karakteristik konten yang terqualifikasi “baik” dengan nilai tingkat ketercapaian kelayakan konten 86,7%, karakteristik desain visual yang terqualifikasi “baik” dengan nilai tingkat ketercapaian kelayakan desain visual 82,7%, dan karakteristik navigasi yang terqualifikasi “baik” dengan nilai tingkat ketercapaian kelayakan navigasi 83,7%.

**Kata kunci** : bahan ajar *web* fisika, literasi sains, kalor.

***Developing Web-Based Teaching Physics on Heat Materials  
Which is Oriented to Scientific Literacy  
for Junior High School***

**ABSTRACT**

*This research explains developing web-based teaching physics on heat materials which is oriented to scientific literacy for junior high school that refers to the Curriculum 2013 and the domain of scientific literacy for PISA framework 2015. The aim of the research is to produce a qualified web-based teaching physics on heat materials which is oriented to scientific literacy for junior high school and help teachers and students in learning heat materials. This research used a 4-D model Research and Development (R & D) method that reduced into 3-D (Define, Design, and Develop) to develop teaching materials. The Instruments for the research consist of ; Content Properness Questionnaires, Visual Design Properness Questionnaires, and Navigation Properness Questionnaires. To know the quality of the developed web-based teaching physics materials, this research held a limited test through two steps, they were the expert test and the user test. The expert test was done by three materials experts and three media experts. The user test was done by five science teachers and 30 grade eight students of junior high school. The result of the limited test showed that the developed web-based teaching physics materials had a “good” content characteristics qualification with the percentage of content properness was 86,7%, a “good” visual design characteristics qualification with the percentage of visual design properness was 82,7%, and a “good” navigation characteristics qualification with the percentage of navigation properness was 83,7%.*

**Keywords :** *web-based teaching physics materials, scientific literacy, heat.*