

ABSTRAK

Muhammad Taufiq Abdillah Masruri, NIM 4171121021 (2017). Pengembangan LKPD dengan Pendekatan STEM Berbasis E-Learning pada Materi Besaran dan Satuan

Penelitian ini bertujuan untuk mendesain bahan ajar berbentuk LKPD yang valid, efektif dan layak. Dengan mengimplementasikan pendekatan STEM berbasis E-Learning pada materi besaran dan satuan. Penelitian ini dilakukan dengan menggunakan metode R&D (Research and Development) dan model ADDIE (analysis, Design, Development Implementation, Evaluation). Untuk mengetahui kevalidan produk pada tahap pengembangan melibatkan 3 validator yaitu ahli materi, ahli media dan guru. Untuk mengetahui keefektifan produk dilakukan uji gain ternormalisasi (N-Gain). Dan untuk mengetahui kepraktisan produk berdasarkan respons siswa. Uji produk terdiri dari uji skala kecil dan uji skala besar. Uji skala kecil melibatkan 10 siswa, uji skala besar melibatkan 20 siswa. Instrumen yang digunakan berupa angket validitas ahli dan angket respons siswa. Pada tahap validasi hasil penilaian ahli materi mendapatkan persentase rata-rata 97% dengan kategori sangat valid. Hasil penilaian ahli media mendapatkan persentase rata-rata yaitu 96% yang dikategorikan sangat valid. Hasil penilaian guru mendapatkan persentase rata-rata 76% dengan kategori sangat valid. Hasil uji keefektifan produk mendapatkan nilai N-Gain sebesar 0,94 dengan kategori nilai keefektifan sangat tinggi. Hasil uji kepraktisan pada kelompok kecil mendapatkan nilai 90,00% sehingga LKPD dapat diklasifikasikan ke dalam sangat praktis. Sedangkan pada kelompok besar mendapatkan nilai 93,33% sehingga LKPD dapat diklasifikasikan ke dalam sangat praktis. Hal ini menunjukkan bahwa LKPD yang dikembangkan sangat valid, efektif dan sangat praktis sebagai bahan ajar dalam kegiatan pembelajaran.

Kata Kunci : LKPD, STEM, Besaran dan Satuan

ABSTRACT

Muhammad Taufiq Abdillah Masruri, NIM 4171121021 (2017). Development of a Student Worksheet using a STEM Approach based on E-Learning for Magnitude and Unit

Designing relevant, effective, and valid student worksheet teaching materials is the goal of this project. by utilizing a STEM strategy focused on e-learning for magnitude and units. The ADDIE model and the R&D (Research and Development) approach were used to conduct this study (analysis, design, development implementation, evaluation). Three validators are used to determine the product's validity during the creation stage: material experts, media experts, and teachers. A normalized gain test (N-Gain) was conducted to evaluate the product's efficacy. Moreover, depending on the feedback from the students, to assess the product's practically. There are small-scale tests and large-scale tests used in product development. Ten students took the small-scale test, while 20 students took the large-scale test. Expert validity questionnaires and student responses made up the instruments employed. Ten students took the small-scale test, while 20 students took the large-scale test. Student response surveys and expert validity questionnaires were the instruments employed. The results of the material expert's assessment receive an average percentage of 97% with a very valid category during the validation stage. The average percentage for the media expert's judgment is 96%, which is considered to be quite valid. The teacher's evaluation yields an average percentage of 76% with a category that is extremely valid. Results of product effectiveness tests have an N-Gain value of 0.94 and fall into the group of very high effectiveness values. The small group feasibility test results are 90.00%, indicating that the LKPD is considered to be very practicable. However, the huge group receives a score of 93.33%, making the LKPD very practical. This demonstrates that the produced student worksheet is very relevant, efficient, and suitable as teaching content in learning activities.

Keywords : Student Worksheet, STEM, magnitude and units