

ABSTRAK

Pembelajaran STEM adalah pembelajaran yang dipandang sebagai suatu pendekatan yang dapat membuat perubahan signifikan pada abad ke-21 begitupun apabila diterapkan pada sebuah pengembangan LKPD. Penelitian ini bertujuan untuk mengembangkan LKPD berbasis STEM berpikir kreatif pada materi *fiber optic* di SMK Negeri 1 Rengel dengan jumlah peserta didik 30. Model pengembangan yang digunakan adalah ADDIE (*Analyze, Design, Development, Implementation, and Evaluation*). Penelitian pengembangan ini menghasilkan produk berupa LKPD Berbasis STEM Berpikir Kreatif *Fiber Optic*. Hasil uji validasi ahli materi sebesar 88% dan ahli media sebesar 87,8% dikategorikan sangat valid dan sangat baik digunakan. Hasil rata-rata gabungan validasi ahli sebesar 87,8% dengan kategori sangat valid dan dapat digunakan tanpa revisi. Hasil uji coba keterbacaan oleh kelompok kecil sebesar 98,3% dan kemenarikan oleh kelompok besar sebesar 83,5% dinyatakan valid dan dapat digunakan tanpa revisi. Hasil uji validitas soal LKPD diperoleh 7 soal valid dan 2 soal tidak valid. 7 soal valid diuji reliabilitasnya dan diperoleh hasil soal tersebut reliabel dengan $r_{xy} = 0,684 > r_{tabel} = 0,432$. Hasil analisis taraf kesukaran soal diperoleh 3 soal dengan taraf kesukaran sedang dan 6 soal dengan taraf kesukaran mudah. Untuk hasil analisis daya pembeda diperoleh hasil 1 soal dengan daya pembeda baik, 2 soal dengan daya pembeda cukup baik, dan 6 soal dengan daya pembeda kurang baik.

Kata Kunci: LKPD, Pendekatan STEM, Berpikir Kreatif, *Fiber Optic*

ABSTRACT

STEM learning is learning that is seen as an approach that can make significant changes in the 21st century as well as when applied to a student worksheet development. This study aims to develop STEM-based worksheets for creative thinking on fiber optic material at SMK Negeri 1 Rengel with a total of 30 students. The development model used is ADDIE (Analyze, Design, Development, Implementation, and Evaluation). This development research produces a product in the form of a STEM-Based Worksheet for Fiber Optic Creative Thinking. The results of the validation test of material experts by 88% and media experts by 87.8% are categorized as very valid and very well used. The combined average result of expert validation is 87.8% with a very valid category and can be used without revision. The results of the readability test by a small group of 98.3% and attractiveness by a large group of 83.5% were declared valid and could be used without revision. The results of the validity test of the LKPD questions obtained 7 valid questions and 2 invalid questions. 7 valid questions were tested for reliability and the results obtained were reliable with $r_{xy} = 0.684 > r_{table} = 0.432$. The results of the analysis of the level of difficulty of the questions obtained 3 questions with a moderate level of difficulty and 6 questions with an easy level of difficulty. For the results of the analysis of discriminatory power, the results obtained 1 question with good discriminating power, 2 questions with good discriminating power, and 6 questions with poor discriminating power.

Keywords: *LKPD, STEM Approach, Creative Thinking, Fiber Optic*