ABSTRAK

Eci Elviani Samosir, NIM 4173141016 (2021). Pengembangan Lembar Kegiatan Peserta Didik (LKPD) Pembelajaran Biologi Berbasis STEM Pada Materi Sistem Pernapasan Manusia Di Kelas XI MIA SMA Swasta Deli Murni Bandar Baru Tahun Pembelajaran 2020/2021.

Penelitian ini bertujuan untuk merancang dan menghasilkan Lembar Kegiatan Peserta Didik (LKPD) berbasis Pendekatan Sains Technology Engineering and Mathematics (STEM) pada materi Sistem Pernapasan Manusia. Desain penelitian yang digunakan adalah jenis penelitian dan pengembangan. Subjek dalam penelitian ini adalah Ahli Materi, Ahli Pembelajaran, Ahli Desain, Guru bidang studi Biologi dan siswa kelas XI-MIA-A SMA Swasta Deli Murni Bandar Baru. Pengumpulan data dilakukan dengan instrumen berupa lembar tanggapan/respon. Analisis data menggunakan analisis deskriptif kuantitatif dan kualitatif. Perancangan LKPD berbasis Pendekatan STEM dilakukan dengan menggunakan model pengembangan instruksional 4-D yaitu melalui tahap Define, Design, Development, dan Dessiminate. Hasil penelitian menunjukkan bahwa perancangan LKPD berbasis Pendekatan STEM berdasarkan penilaian ahli materi diperoleh persentase rata-rata 87,5% dengan kriteria sangat layak, penilaian ahli pembelajaran diperoleh persentase rata-rata 92,5% dengan kriteria sangat layak, penilaian ahli desain diperoleh persentase rata-rata 78,7%. Hasil dari penggunaan LKPD Berbasis Pendekatan STEM yang dirancang 82,96 dengan jumlah peserta didik yang tuntas sebanyak 27 orang dan ketuntasan belajar klasikal diperoleh presentase 91%. LKPD Berbasis STEM pada materi Sistem Pernapasan Manusia yang telah dirancang memperoleh kriteria penilaian "sangat tinggi" dan telah memenuhi persyaratan efektif digunakan dalam serta layak digunakan dalam proses pembelajaran Biologi pada materi Sistem Pernapasan Manusia.

Kata Kunci : *LKPD, STEM, 4-D, Ketuntasan Belajar Klasikal.*

ABSTRACT

Eci Elviani Samosir, NIM 4173141016 (2021). Development of Student Activity Sheets (LKPD) STEM−Based Biology Learning on the Material of tha Human Respiratory System in Class XI MIA Private High School Deli Murni Bandar Baru 2020/ 2021 Learning Year.

This study aims to design and produce Student Worksheets (LKPD) based on the Science Engineering Technology and Mathematics Approach (STEM) on the subject of Human Respiratory System. The research design used is a type of research and development. Subjects in this study were Material Experts, Learning Experts, Design Experts, Biology Study Teachers and XI-MIA-A Class Deli Murni Private High School Bandar Baru. Data collection was carried out with instruments in the form of respons sheets. Data analysis used quantitative and qualitative descriptive analysis. The design of the LKPD based onthe STEM Approach was carried out using the 4-D instructional development model, namely through the stages of Define, Design, Development, and Dessiminate. The results showed that the design of the LKPD based on the STEM approach based on the assessment of material experts obtained an average percentage of 87,5% with very appropriate criteria, the assessment of learning experts obtained an average percentage of 92,5% with very appropriate criteria, the design expert's assessment obtained an average percentage of 78,7% of the eligible criteria for the evaluation of Biology Study Teachers obtained an average percentage of 87,96% with a very feasible rating category and classical learning completeness obtained an percentage of 91%, while the results of responses / responses from students obtained an average percentage of 93,0% with good assessment criteria. The results of the use of the LKPD Based on the STEM Approach designed obtained an average score of 82.96 with a total of 27 students completed.

STEM-based LKPD on the material for Human Respiratory System that has been designed obtains "Very High" assessment criteria and has met the effective requirements used and is suitable for use in the Biology learning process on human respiratory system.

Keywords : *LKPD, STEM, 4-D, classical learning completeness.*