

ABSTRAK

Debora Efnita Simanjuntak, NIM 4172141021 (2024). Pengembangan Lembar Kerja Peserta Didik (LKPD) Untuk Meningkatkan Pengetahuan dan Keterampilan Proses Sains Siswa Pada Materi Sistem Pernapasan Manusia di Kelas XI MIPA SMA Negeri 18 Medan.

Penelitian ini bertujuan untuk merancang, menghasilkan dan mengetahui kelayakan dari Lembar Kerja Peserta Didik berbasis Keterampilan Proses Sains pada Materi Sistem Pernapasan Manusia. Jenis Penelitian ini adalah penelitian pengembangan (*Research and Development*) dengan desain penelitian menggunakan model pengembangan 4-D. Sampel dalam penelitian ini adalah Peserta Didik kelas XI MIPA 1 SMA Negeri 18 Medan yang berjumlah 32 orang. Pengumpulan data dilakukan dengan instrumen berupa lembar penilaian validasi ahli materi, ahli pembelajaran, ahli desain, penilaian guru dan respon peserta didik. Teknik analisis data menggunakan deksriptif kuantitatif dan kualitatif. Hasil penilaian menunjukkan bahwa LKPD berbasis Keterampilan Proses Sains yang dikembangkan berdasarkan penilaian ahli materi diperoleh persentase rata-rata 93% dengan kriteria sangat layak, penilaian ahli keterampilan proses sains diperoleh persentase rata-rata 93% dengan kriteria sangat layak, penilaian ahli desain diperoleh persentase rata-rata 93% dengan kriteria sangat layak, penilaian guru biologi diperoleh persentase rata-rata 96% dengan kriteria sangat layak dan respon peserta didik diperoleh persentase rata-rata 93% dengan kriteria baik dan dapat digunakan dalam pembelajaran. Hasil analisis efektivitas Lembar Kerja Peserta Didik termasuk dalam kategori tinggi dengan *N-gain Score* rata-rata 0,70.

Kata kunci: Pengembangan LKPD, Keterampilan Proses Sains, Model 4-D, Sistem Pernapasan Manusia



ABSTRACT

Debora Efnita Simanjuntak, NIM 4172141021 (2024). Development of Student Worksheets to Improve Students Knowledge and Science Process Skills on Human Respiratory System Material in class XI Science of SMA Negeri 18 Medan.

This study aims to design, produce and determine the feasibility Science Process Skills Worksheets on Human Respiratory System Material. This type of research is research and development with a research design using a 4-D model (*Define, Design, Develop, Disseminate*). The sample in this study were 32 students of class XI MIPA 1 SMA Negeri 18 Medan. Data collection was carried out with instruments in the form of material expert, learning expert, design expert validation assessment sheets, teacher assessments and student responses. The data analysis technique used quantitative and qualitative descriptive. The results showed that Science Process Skills Worksheets developed based on the assessment of material expert obtained an average percentage of 93% with feasible criteria, science process skills expert assessment obtained an average percentage of 93% with feasible criteria, design expert assessment obtained an average percentage of 93% with feasible criteria, the assessment of biology teacher obtained an average percentage of 96% with very decent criteria, and responses of student obtained a percentage of 93% with good criteria and can be used in learning. The results of the analysis of the effectiveness of the Student Worksheets are included in the high category with an average *N-gain Score* of 0,70.

Keywords: LKPD Development, Science Process Skills, 4-D Model, Human Respiratory System.

