

Abstrak

Penelitian ini bertujuan untuk mengembangkan E-LKPD (Elektronik Lembar Kerja Peserta didik) berbasis *discovery learning* dengan aplikasi *Liveworksheets* pada materi suhu dan kalor. Model pengembangan yang digunakan adalah *ADDIE* (*Analysis, Design, Development, Implementation, Evaluation*). E-LKPD berbasis *discovery learning* dengan aplikasi *Liveworksheets* dapat menjadi alternatif media pembelajaran yang efektif untuk meningkatkan hasil belajar siswa pada materi suhu dan kalor. Populasi penelitian ini terdiri dari 1 kelas yaitu Kelas XI-A SMA RK Deli Murni Bandar Baru tahun ajaran 2025/2026. Sampel penelitian ini terdiri dari 40 peserta didik kelas XI-A SMA RK Deli Murni Bandar Baru. Instrumen yang digunakan dalam penelitian ini untuk mengumpulkan data adalah lembar validasi, angket, dan tes hasil belajar. Hasil validasi berdasarkan lembar validasi menunjukkan E-LKPD berbasis *Discovery Learning* pada pembelajaran fisika memenuhi kriteria valid. Kriteria valid diperoleh dari ahli materi dan ahli media. Hasil kepraktisan berdasarkan angket kepraktisan menunjukkan E-LKPD berbasis *Discovery Learning* pada pembelajaran fisika memenuhi kriteria praktis. Kriteria praktis diperoleh dari peserta didik kelas XI-A SMA RK Deli Murni Bandar Baru dan guru bidang studi. Hasil efektivitas berdasarkan hasil belajar memenuhi kriteria efektif. Kriteria efektif diperoleh dari hasil belajar siswa, terlihat bahwa tes hasil belajar memperoleh ketuntasan 87,5% dan rata-rata nilai 76,78 dengan kategori sangat efektif.

Kata kunci: E-LKPD, Discovery Learning, Liveworksheet, Suhu dan Kalor



Abstract

This research aims to develop E-LKPD (Electronic Worksheet Students) based on discovery learning with the Liveworksheets application on temperature and heat material. The development model used is ADDIE (Analysis, Design, Development, Implementation, Evaluation). E-LKPD based on discovery learning with the Liveworksheets application can be an effective alternative learning media to improve student learning outcomes on temperature and heat material. The population of this study consisted of 1 class, namely Class XI-A SMA RK Deli Murni Bandar Baru in the 2025/2026 academic year. The sample of this study consisted of 40 students of class XI-A SMA RK Deli Murni Bandar Baru. The instruments used in this study to collect data were validation sheets, questionnaires, and learning outcome tests. The validation results based on the validation sheet showed that E-LKPD based on Discovery Learning in physics learning met the valid criteria. Valid criteria were obtained from material experts and media experts. The results of practicality based on the practicality questionnaire showed that the Discovery Learning-based E-LKPD in physics learning met the practical criteria. The practical criteria were obtained from class XI-A students of SMA RK Deli Murni Bandar Baru and subject teachers. The effectiveness results based on learning outcomes met the effective criteria. The effective criteria were obtained from student learning outcomes, it was seen that the learning outcome test obtained 87.5% completeness and an average score of 76.78 with a very effective category.

Keywords: E-LKPD, Discovery Learning, Liveworksheet, Temperature and Heat