

ABSTRAK

Arti Fatihatul Fadillah. 2025. **PENGEMBANGAN E-LKPD BERBASIS MODEL PEMBELAJARAN *PREDICT, OBSERVE, DISCUSS, EXPLAIN* (PODE) BERBANTUAN *LIVEWORKSHEET* PADA MATERI MOMENTUM DAN IMPULS**

Penelitian ini dilatarbelakangi karena keterbatasan kegiatan praktikum di laboratorium yaitu keterbatasan ruangan laboratorium, alat dan bahan praktikum. Selain itu, peserta didik mengalami kesulitan dalam memahami dan memvisualisasi konsep momentum dan impuls. Oleh karena itu, peneliti berupaya untuk memberikan solusi alternatif dengan mengembangkan E-LKPD berbasis model pembelajaran PODE menggunakan *Liveworksheet* pada momentum dan impuls. Tujuan dari penelitian ini adalah untuk menghasilkan sebuah produk berupa E-LKPD yang valid dan praktis. Metode penelitian yang digunakan yaitu *Research and Development* (R&D) dengan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Subjek penelitian ini adalah peserta didik *moving class* XI SMA Negeri 1 Karangnunggal. Kelayakan E-LKPD diukur dengan melakukan validasi meliputi ahli materi dan ahli media. Teknik analisis data yang digunakan dalam mengolah hasil validasi adalah indeks Aiken's V. Kepraktisan E-LKPD diukur dengan melakukan penyebaran angket kepraktisan kepada peserta didik. Teknik analisis data yang digunakan dalam mengolah hasil uji praktikalitas dengan menghitung nilai rata-rata praktikalitas. Hasil penelitian menunjukkan bahwa indeks aiken's V ahli materi dan ahli media berturut-turut sebesar 0,97 dan 0,98 dengan kategori sangat valid serta rata-rata persentase kepraktisan sebesar 98% dengan kriteria sangat praktis. E-LKPD berbasis model pembelajaran PODE berbantuan *liveworksheet* pada materi momentum dan impuls yang dikembangkan memenuhi kriteria valid dan praktis untuk digunakan dalam kegiatan pembelajaran.

Kata kunci: E-LKPD, *Liveworksheet*, Momentum dan Impuls, PODE.

ABSTRACT

Arti Fatihatul Fadillah. 2025. **DEVELOPMENT OF E-LKPD BASED ON PREDICT, OBSERVE, DISCUSS, EXPLAIN (PODE) LEARNING MODEL ASSISTED WITH LIVWORKSHEET ON MOMENTUM AND IMPULSE MATERIAL**

*This research was motivated by the limitations of practical activities in the laboratory, namely limited laboratory space, equipment and practical materials. In addition, students have difficulty understanding and visualizing the concepts of momentum and impulse. Therefore, researchers are trying to provide an alternative solution by developing E-LKPD based on the PODE learning model using Liveworksheets on momentum and impulse. The aim of this research is to produce a product in the form of an E-LKPD that is valid and practical. The research method used is Research and Development (R&D) with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) development model. The subjects of this research were moving class XI students at SMA Negeri 1 Karangnunggal. The feasibility of E-LKPD is measured by carrying out validation including material experts and media experts. The data analysis technique used in processing validation results is the Aiken's *V* index. The practicality of E-LKPD is measured by distributing practicality questionnaires to students. The data analysis technique used in processing practicality test results is by calculating the average practicality value. The research results show that the Aiken's *V* index for material experts and media experts is 0.97 and 0.98 respectively with the very valid category and the average percentage of practicality is 98% with very practical criteria. The E-LKPD based on the PODE learning model assisted by live worksheets on momentum and impulse material that was developed meets the criteria of being valid and practical for use in learning activities.*

Keywords: E-LKPD, Liveworksheet, Momentum Impulse, PODE.