ABSTRAK

Nabila Faradika, NIM 4201111010 (2025). Pengembangan E-LKPD Berbasis POE (Predict, Observe, Explain) Berbantuan Geogebra untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa SMP Swasta Cerdas Murni.

Penelitian ini bertujuan untuk menghasilkan E-LKPD berbasis POE (Predict, Observe, Explain) yang valid, praktis, dan efektif dalam meningkatkan kemampuan pemecahan masalah matematis siswa. Jenis penelitian ini adalah penelitian dan pengembangan dengan menggunakan model pengembangan ADDIE (*Analysis*, *Design, Development*, *Implementation*, dan *Evaluation*). Subjek dalam penelitian ini adalah 30 siswa kelas IX-1 SMP Swasta Cerdas Murni. Hasil penelitian menunjukkan bahwa E-LKPD berbasis POE (Predict, Observe, Explain) yang dikembangkan valid dengan rata-rata skor validasi ahli materi 3,5 dan validasi ahli media 3,56 yang berada pada kategori valid. Kepraktisan E-LKPD berbasis POE (Predict, Observe, Explain) oleh guru diperoleh rata-rata skor 3,7, kepraktisan oleh siswa pada uji coba terbatas diperoleh 3,77 dan uji coba lapangan 3,8 dengan kategori praktis. E-LKPD berbasis POE (Predict, Observe, Explain) yang dikembangkan juga memenuhi kriteria efektif dengan ketuntasan belajar siswa secara klasikal mencapai 86,67% siswa tuntas atau mampu memperoleh nilai ≥ 70 dan hasil uji N-Gain menunjukkan adanya peningkatan kemampuan pemecahan masalah matematis siswa sebesar 0,58 dengan kategori sedang. Berdasarkan hasil penelitian dapat disimpulkan bahwa E-LKPD berbasis POE (Predict, Observe, Explain) berbeantuan Geogebra yang dikembangkan memenuhi kriteria valid, praktis, dan efektif untuk meningkatkan kemampuan pemecahan masalah matematis siswa.

Kata Kunci: E-LKPD, Model POE, *Liveworksheets, Geogebra,* Kemampuan Pemecahan Masalah, Model pengembangan ADDIE.

ABSTRACT

Nabila Faradika, NIM 4201111010 (2025). Development of POE (Predict, Observe, Explain)-Based E-LKPD Assisted by Geogebra to Improve the Mathematical Problem-Solving Skills of Students at Private Smart Murni Junior High School.

This research aims to produce a valid, practical, and effective POE (Predict, Observe, Explain)-based E-LKPD to enhance students' mathematical problem-solving abilities. This research type is research and development using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). The subjects of this study are 30 students from class IX-1 of Private Smart Murni Junior High School. The results of the study indicate that the developed POE (Predict, Observe, Explain)-based E-LKPD is valid with an average expert validation score of 3.5 and media expert validation score of 3.56, both falling into the valid category. The practicality of the POE (Predict, Observe, Explain)-based E-LKPD as assessed by teachers received an average score of 3.7, and the practicality assessed by students in a limited trial 3,77 and field trial 3,8 with a practical category. The POE (Predict, Observe, Explain) based E-LKPD developed also meets the effective criteria with classical student learning completeness reaching 86,67% of students completing or able to score ≥ 70 and the N-Gain test results show an improvement in students' mathematical problem-solving abilities of 0.58 with a moderate category. Based on the research results, it can be concluded that the POE (Predict, Observe, Explain) based E-LKPD assisted by Geogebra developed meets the criteria of validity, practicality, and effectiveness to improve students' mathematical problem-solving abilities.

Keywords: E-LKPD, POE Model, Liveworksheets, Geogebra, Problem-Solving Ability, ADDIE development model.