

**PENGEMBANGAN MEDIA PUZZLE DALAM MENINGKATKAN
KEMAMPUAN PEMAHAMAN OPERASI HITUNG
BILANGAN BULAT SISWA KELAS III
SDN 104215 SUDIREJO
T.P 2025/2026**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui tingkat kevalidan dan kepraktisan pengembangan media puzzle pada materi operasi hitung bilangan bulat siswa kelas III SDN 104215 Sudirejo Tahun Pelajaran 2025/2026. Penelitian ini merupakan penelitian dan pengembangan (Research and Development) dengan menggunakan model PPE (Planning, Production, dan Evaluation). Subjek penelitian adalah siswa kelas III SDN 104215 Sudirejo, sedangkan validator terdiri atas ahli materi dan ahli media. Instrumen penelitian yang digunakan berupa lembar validasi serta angket respon guru dan angket respon siswa. Hasil validasi menunjukkan bahwa penilaian ahli materi memperoleh persentase sebesar 75% dengan kategori valid, sedangkan penilaian ahli media memperoleh persentase sebesar 94,23% dengan kategori sangat valid. Hasil uji kepraktisan menunjukkan bahwa respon guru memperoleh persentase sebesar 92,5% dengan kategori sangat praktis, dan respon siswa memperoleh persentase sebesar 92,91% dengan kategori sangat praktis. Berdasarkan hasil tersebut, dapat disimpulkan bahwa media puzzle pada materi operasi hitung bilangan bulat (penjumlahan, pengurangan, perkalian, dan pembagian) layak digunakan dalam proses pembelajaran matematika kelas III SDN 104215 Sudirejo.

Kata kunci: penelitian pengembangan, media puzzle, operasi hitung bilangan bulat, matematika, *Planning, Production and Evaluasi* (PPE).

**THE DEVELOPMENT OF PUZZLE E-BASED LEARNING
MEDIA TO IMPROVE STUDENTS' UNDERSTANDING
OF INTEGER OPERATIONS AT
SDN 104215 SUDIREJO
ACADEMIC YEAR
2025/2026**

ABSTRAK

This study aims to determine the level of validity and practicality of the development of puzzle media on the topic of integer arithmetic operations for third-grade students at SDN 104215 Sudirejo in the 2025/2026 Academic Year. This research is a Research and Development (R&D) study using the PPE (Planning, Production, and Evaluation) development model. The research subjects were third-grade students of SDN 104215 Sudirejo, while the validators consisted of a material expert and a media expert. The research instruments used were validation sheets and response questionnaires for teachers and students. The validation results showed that the material expert's assessment obtained a percentage of 75% in the valid category, while the media expert's assessment obtained a percentage of 94.23% in the very valid category. The practicality test results indicated that the teacher response questionnaire obtained a percentage of 92.5% in the very practical category, and the student response questionnaire obtained a percentage of 92.91% in the very practical category. Based on these results, it can be concluded that the puzzle media on integer arithmetic operations (addition, subtraction, multiplication, and division) is feasible to be used in the mathematics learning process for third-grade students at SDN 104215 Sudirejo.

Keywords: research and development, puzzle media, integer arithmetic operations, mathematics, Planning, Production and Evaluasi (PPE).