

Media Interaktif Berbasis Virtual Manipulatives Pada Materi Fakta Dasar Pembagian

Oleh

Putu Sintya Wulandari, NIM 2111031236

Program Studi S1 Pendidikan Guru Sekolah Dasar

Jurusan Pendidikan Dasar

ABSTRAK

Penelitian ini bertujuan untuk menganalisis, mengevaluasi, dan mengembangkan media pembelajaran berbasis *Virtual Manipulatives* untuk meningkatkan kemampuan bernalar kritis siswa terhadap konsep dasar pembagian. Penelitian ini menggunakan jenis penelitian pengembangan dengan desain penelitian model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Subjek dalam penelitian pengembangan ini terdiri dari 2 ahli materi, 2 ahli media, dan 9 siswa di kelas inklusi. Data dikumpulkan menggunakan metode tes, observasi, dan angket, dengan instrumen berupa lembar observasi, lembar validasi ahli, dan tes evaluasi. Analisis data dilakukan secara kuantitatif dan kualitatif untuk mengukur validitas, kepraktisan, dan efektivitas produk. Hasil penelitian menunjukkan bahwa media berbasis virtual manipulatives valid, praktis, dan efektif dalam meningkatkan kemampuan bernalar kritis siswa pada materi fakta dasar pembagian. Media ini mampu memberikan pengalaman belajar yang interaktif, menarik, dan sesuai dengan karakteristik siswa inklusi. Kesimpulan dari penelitian ini adalah bahwa media *Virtual Manipulatives* dapat menjadi solusi inovatif untuk mengatasi tantangan pembelajaran matematika di kelas inklusi. Implikasi dari penelitian ini adalah perlunya integrasi media pembelajaran berbasis teknologi dalam proses pembelajaran untuk meningkatkan kualitas pendidikan inklusi.

Kata Kunci : *virtual manipulatives*, pembelajaran matematika, kelas inklusi,

**Media Interaktif Berbasis Virtual Manipulatives Pada Materi Fakta Dasar
Pembagian**

Oleh

Putu Sintya Wulandari, NIM 2111031236

Program Studi S1 Pendidikan Guru Sekolah Dasar

Jurusan Pendidikan Dasar

ABSTRACT

Math learning in inclusive classrooms often faces challenges in conveying abstract concepts to students, especially those who use sign language as their primary language focused on basic facts of division. Innovative learning media is needed to help students understand concepts effectively and engagingly. This research aims to analyze, evaluate, and develop learning media based on Virtual Manipulatives to improve students' critical reasoning skills on mathematics concepts. This research uses a type of development research with the ADDIE model research design (Analysis, Design, Development, Implementation, Evaluation). The subjects in this development research consisted of 2 material experts, 2 media experts, and 9 students in the inclusion class. Data were collected using test, observation, and questionnaire methods, with instruments in the form of observation sheets, expert validation sheets, and evaluation tests. Data analysis was carried out quantitatively and qualitatively to measure the validity, practicality, and effectiveness of the product. The results showed that the virtual manipulatives-based media was valid, practical, and effective in improving students' critical reasoning skills on basic facts of division. This media is able to provide an interactive learning experience, interesting, and in accordance with the characteristics of inclusive students. The conclusion of this research is that Virtual Manipulatives media can be an innovative solution to overcome the challenges of learning mathematics in inclusive classrooms. The implication of this research is the need for the integration of technology-based learning media in the learning process to improve the quality of inclusive education.

Kata Kunci : virtual manipulatives, math learning, inclusive classroom, division basic facts.