ABSTRAK

Diah Apriyantini, Ni Putu (2024*), Pengembangan Game Edukasi Berbasis Matematika Realistik untuk Meningkatkan Kemampuan Pemahaman Konsep Pada Mata Pelajaran Matematika Kelas V di SD No 1 Dalung*. Tesis, Teknologi Pendidikan, Program Pascasarjana, Universitas Pendidikan Ganesha.

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Kata kunci**:** game edukasi, kemampuan pemahaman konsep matematika, matematika realistik

Pembelajaran di era abad 21 menuntut guru untuk memiliki keterampilan dan literasi digital yang baik, sehingga perlu adanya integrasi teknologi digital dalam proses pembelajaran. Penelitian ini dilakukan karena rendahnya kemampuan pemahaman konsep matematika siswa dan kurangnya variasi media pembelajaran yang digunakan dalam mendukung proses pembelajaran matematika. Penelitian ini bertujuan untuk mengembangkan game edukasi berbasis matematika realistik untuk meningkatkan kemampuan pemahaman konsep pada mata pelajaran matematika kelas V. Adapun model pengembangan yang digunakan dalam penelitian ini adalah model pengembangan ADDIE. Penelitian ini melibatkan siswa kelas V di SD No. 1 Dalung. Jenis data yang diperoleh yaitu data kualitatif dan kuantitatif. Intrumen pengumpulan data yang digunakan yaitu kuesioner/angket dan tes essay. Data hasil penelitian dianalisis secara deskriptif kualitatif, deskriptif kuantitatif, dan statistik inferensial (uji-t). Hasil validasi game edukasi yaitu ahli isi pembelajaran berkualifikasi baik, ahli desain pembelajaran berkualifikasi baik, ahli media pembelajaran berkualifikasi sangat baik, sehingga game edukasi dinyatakan valid atau layak digunakan dalam proses pembelajaran. Hasil uji coba perorangan sebesar 83,11% dengan kualifikasi baik dan hasil uji coba kelompok kecil sebesar 80,45% dengan kualifikasi baik, sehingga game edukasi dinyatakan praktis untuk digunakan. Berdasarkan hasil uji-t terdapat perbedaan yang signifikan hasil belajar siswa kelas V dalam kemampuan pemahaman konsep matematika sebelum dan sesudah game edukasi digunakan. Hasil rata-rata posttest sebesar 79,43 dengan kualifikasi baik dan berada di atas KKM yaitu 75,00, sehingga game edukasi ini dinyatakan efektif untuk meningkatkan kemampuan pemahaman konsep matematika siswa.

ABSTRACT

Diah Apriyantini, Ni Putu (2024*), Development Of Educational Games Based On Realistic Mathematics to Improve The Ability to Understand Concepts in Fifth Grade Mathematics at SD No 1 Dalung.* Thesis, Educational Technology, Postgraduate Program, Ganesha University of Education.

This thesis has been approved and examined by Supervisor I: Dr. I Wayan Sukra Warpala, S.Pd., M.Sc. and Supervisor II: Dr. I Gde Wawan Sudatha, S.Pd., S.T., M.Pd.

Keywords : educational games, ability of understand mathematical concepts, realistic mathematics

Learning in the 21st century requires teachers to have good digital skills and literacy, so there is a need to integrate digital technology in the learning process. This research was conducted because of the low ability of students to understand mathematical concepts and the lack of variety of learning media used to support the mathematics learning process. This research aims to develop realistic mathematics-based educational games to improve the ability to understand concepts in fifth grade mathematics subjects. The development model used in this research is the ADDIE development model. This research involved fifth grade students at SD No. 1 Dalung. The types of data obtained are qualitative and quantitative data. The data collection instruments used were questionnaires and essay tests. The research data were analyzed descriptively qualitatively, descriptively quantitatively, and inferential statistics (t-test). The validation results of educational games are that learning content experts are well qualified, learning design experts are well qualified, learning media experts are very well qualified, so that educational games are declared valid or suitable for use in the learning process. The results of individual trials were 83.11% with good qualifications and the results of small group trials were 80.45% with good qualifications, so that educational games were declared practical to use. Based on the results of the t-test, there was a significant difference in the learning outcomes of fifth grade students in their ability to understand mathematical concepts before and after the educational games were used. Average resultspost test amounting to 79.43 with good qualifications and above the KKM, namely 75.00, so this educational game is declared effective in improving students' ability to understand mathematical concepts.