PENGEMBANGAN *MOBILE LEARNING* BERBASIS ETNOMATEMATIKA BALI PADA MATERI LUAS BANGUN DATAR UNTUK MENINGKATKAN KEMAMPUAN NUMERASI DAN KETERAMPILAN METAKOGNITIF SISWA KELAS V SD ERA KURIKULUM MERDEKA

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ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui rancang bangun, kevalidan, kepraktisan dan efektivitas *mobile learning* berbasis etnomatematika Bali pada materi luas bangun datar serta meningkatkan kemampuan numerasi dan keterampilan metakognitif siswa kelas V SD. Subjek dalam penelitian ini adalah produk *mobile learning* berbasis etnomatematika Bali untuk meningkatkan kemampuan numerasi dan keterampilan metakognitif. Objek penelitian adalah validitas, kepraktisan, dan efektivitas *mobile learning* berbasis etnomatematika Bali. Metode pengumpulan data yaitu wawancara, observasi, tes uraian dan kuisioner. Rancang bangun bersumber dari analisis kurikulum, kebutuhan dan karakteristik siswa. Data validitas bersumber dari ahli media pembelajaran dan ahli materi matematika SD. Data kepraktisan bersumber dari siswa kelas V menggunakan uji perorangan dan uji kelompok kecil. Data efektivitas bersumber dari pelaksanaan *pre-test post-test*. Hasil penelitian menunjukkan bahwa: (1) validitas produk yang telah dihasilkan memperoleh nilai rata rata untuk media sebesar 3,8 dan materi 3,7 (sangat layak) ; (2) kepraktisan produk memperoleh hasil penilaian uji perorangan sebesar 92% (sangat baik) dan uji kelompok kecil 93% (sangat baik); (3) nilai signifikansi (2-tailed) pada uji-t menunjukan angka 0,001 atau $p < 0,05$ sehingga *mobile learning* berbasis etnomatematika Bali pada materi luas bangun datar efektif meningkatkan kemampuan numerasi dan keterampilan metakognitif siswa kelas V SD Negeri 5 Kampung Baru. Berdasarkan hasil tersebut dapat disimpulkan bahwa *mobile learning* berbasis etnomatematika Bali pada materi luas bangun datar yang telah dikembangkan, dinyatakan valid, praktis dan efektif dalam meningkatkan kemampuan numerasi dan keterampilan metakognitif siswa, sehingga layak digunakan secara berkelanjutan pada kegiatan pembelajaran.

Kata kunci : *Mobile Learning*, Etnomatematika Bali, Kemampuan Numerasi, Keterampilan Metakognitif

DEVELOPMENT OF BALINESE ETHNOMATHEMATICS-BASED MOBILE LEARNING ON FLAT BUILDING BROAD MATERIALS TO IMPROVE NUMERACY SKILLS AND METACOGNITIVE SKILLS OF GRADE V ELEMENTARY SCHOOL STUDENTS IN THE MERDEKA CURRICULUM ERA

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ABSTRACT

The purpose of this study is to determine the design, validity, practicality and effectiveness of mobile learning based on Balinese ethnomathematics on flat building broad materials and improve numeracy skills and metacognitive skills of grade V elementary school students. The subject in this study is a mobile learning product based on Balinese ethnomathematics to improve numeracy skills and metacognitive skills. The object of the research is the validity, practicality, and effectiveness of mobile learning based on Balinese ethnomathematics. The data collection methods are interviews, observations, description tests and questionnaires. The design is sourced from the analysis of the curriculum, needs and characteristics of students. The validity data is sourced from learning media experts and elementary school mathematics material experts. Practicality data was sourced from grade V students using individual tests and small group tests. Effectiveness data is sourced from the implementation of pre-test post-test. The results of the study show that: (1) the validity of the products that have been produced obtained an average score for the media of 3.8 and the material of 3.7 (very feasible); (2) the practicality of the product obtained the results of the individual test assessment of 92% (very good) and the small group test of 93% (very good); (3) The significance value (2-tailed) in the t-test showed a number of 0.001 or $p < 0.05$ so that mobile learning based on Balinese ethnomathematics on flat building materials was effective in improving the numeracy ability and metacognitive skills of grade V students of SD Negeri 5 Kampung Baru. Based on these results, it can be concluded that Balinese ethnomathematics-based mobile learning on the flat building broad material that has been developed, is declared valid, practical and effective in improving students' numeracy skills and metacognitive skills, so that it is suitable for sustainable use in learning activities.

Keywords: Mobile Learning, Balinese Ethnomathematics, Numeracy Ability, Metacognitive Skills