# ABSTRAK

## RANCANG BANGUN *GAME* EDUKASI CALISTUNG BERBASIS ANDROID SEBAGAI MEDIA PEMBELAJARAN INTERAKTIF DI TK NEGERI 2 RAMBANG

**(Gita Audia, 2026: 100 halaman)**

Pembelajaran membaca, menulis, dan berhitung (calistung) merupakan kemampuan dasar yang harus dikuasai anak usia dini sebagai bekal untuk memasuki jenjang pendidikan selanjutnya. Berdasarkan hasil observasi dan wawancara di TK Negeri 2 Rambang, proses pembelajaran calistung masih menggunakan media pembelajaran konvensional dan belum memanfaatkan teknologi sebagai media pembelajaran. Kondisi tersebut menyebabkan proses pembelajaran kurang menarik, siswa kurang aktif dalam mengikuti kegiatan belajar, sehingga hasil belajar calistung belum optimal. Oleh karena itu, penelitian ini bertujuan untuk merancang dan membangun *game* edukasi calistung berbasis Android menggunakan metode *Game Development Life Cycle* (GDLC), serta menganalisis efektivitas penggunaannya sebagai media pembelajaran interaktif pada siswa kelas B di TK Negeri 2 Rambang. Metode pengembangan yang digunakan adalah *Game Development Life Cycle* (GDLC) yang terdiri atas lima tahapan, yaitu *initiation, pre-production, production, testing,* dan *release*. Pengujian aplikasi dilakukan menggunakan metode *Black Box Testing* untuk mengetahui fungsionalitas sistem, sedangkan efektivitas penggunaan *game* dianalisis menggunakan metode *Normalized Gain* (*N-Gain*) berdasarkan hasil *pre-test* dan *post-test* terhadap 31 siswa kelas B. Hasil penelitian menunjukkan bahwa *game* edukasi calistung berbasis Android berhasil dikembangkan sesuai dengan kebutuhan pembelajaran dan seluruh fungsi aplikasi dapat berjalan dengan baik berdasarkan hasil *Black Box Testing*. Selain itu, rata-rata nilai *pre-test* siswa sebesar 67,74 meningkat menjadi 85,48 pada *post-test*. Hasil analisis menggunakan metode *N-Gain* memperoleh nilai rata-rata sebesar 0,67 dengan kategori sedang, yang menunjukkan bahwa penggunaan *game* edukasi calistung berbasis Android mampu meningkatkan hasil belajar siswa pada materi membaca, menulis, dan berhitung. Dengan demikian, *game* edukasi yang dikembangkan dapat menjadi media pembelajaran yang interaktif, menarik, dan efektif dalam membantu meningkatkan hasil belajar calistung pada anak usia dini.

**Kata Kunci:** *game* edukasi, calistung, Android, *Game Development Life Cycle* (GDLC), N-Gain.

## *ABSTRACT*

## *DESIGN AND DEVELOPMENT OF AN ANDROID-BASED CALISTUNG EDUCATIONAL GAME AS AN INTERACTIVE LEARNING MEDIA AT TK NEGERI 2 RAMBANG*

***(Gita Audia, 2026: 100 page)***

*Reading, writing, and arithmetic (calistung) are fundamental skills that early childhood learners need to master as preparation for the next level of education. Based on observations and interviews conducted at TK Negeri 2 Rambang, the learning process for calistung still relies on conventional learning media and has not yet utilized technology as a learning medium. This condition results in a less engaging learning process, lower student participation during classroom activities, and suboptimal learning outcomes. Therefore, this study aims to design and develop an Android-based calistung educational game using the Game Development Life Cycle (GDLC) method and to analyze its effectiveness as an interactive learning medium for Group B students at TK Negeri 2 Rambang. The development process employed the Game Development Life Cycle (GDLC) method, which consists of five stages: initiation, pre-production, production, testing, and release. Functional testing of the application was conducted using the Black Box Testing method to evaluate the system's functionality, while the effectiveness of the educational game was analyzed using the Normalized Gain (N-Gain) method based on the results of the pre-test and post-test administered to 31 Group B students. The results indicate that the Android-based calistung educational game was successfully developed according to the learning requirements, and all application functions operated properly based on the Black Box Testing results. Furthermore, the average pre-test score of 67.74 increased to 85.48 in the post-test. The N-Gain analysis produced an average score of 0.67, which falls into the moderate category, indicating that the Android-based calistung educational game was able to improve students' learning outcomes in reading, writing, and arithmetic. Therefore, the developed educational game can serve as an interactive, engaging, and effective learning medium to support the improvement of calistung learning outcomes among early childhood learners.*



***Keywords:*** *educational game, calistung, Android, Game Development Life Cycle (GDLC), N-Gain.*