

ABSTRACT

EDUCATIONAL GAME DESIGN FOR INFORMATION AND COMMUNICATION TECHNOLOGY BASED ON ANDROID USING GDLC METHOD

(Case Study : SD Negeri Ledug)

by

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The lack of interactive learning media for Information and Communication Technology (ICT) material at Ledug Public Elementary School is a major problem that causes students' understanding of ICT concepts to remain low. The input for this research is the need for innovative learning media, while the final result is an Android-based educational game. This topic is important because ICT learning in elementary schools is still dominated by conventional methods that are less engaging, and places more emphasis on practice without providing adequate theoretical explanations. For example, students only use devices without understanding the underlying concepts. This indicates a gap between the need for engaging learning and the media currently available. The proposed solution is to design and develop an Android-based ICT educational game by applying the Game Development Life Cycle (GDLC) method. The development process includes the stages of needs analysis, design, 2D asset creation, implementation using Unity, and functionality testing. The game's usability test results showed an average System Usability Scale (SUS) score of 72.61, categorizing the game as "Good" and 'Acceptable' with a Grade B- and a percentile of 65-69. Users tended to fall into the "Passive" category according to the Net Promoter Score (NPS), indicating a neutral attitude of acceptance. Pre-test and post-test data also showed a significant improvement, with an average pre-test score of 55 and a post-test score of 75.5, indicating an increase in students' understanding of ICT material after using this educational game. The main contribution of this research is to provide an interactive and effective ICT learning medium for students at Ledug State Elementary School.

**Keyword : Educational Game, Information and Communication Technology (ICT),
Game Development Life Cycle (GDLC) Method**