

ABSTRACT

The rapid development of technology has brought significant changes in the world of education to utilize technology in the learning process. Technology as a learning medium can be packaged in various concepts. One of them is in the form of educational games. The purpose of this research is to develop learning media that are more modern, effective, innovative, and efficient in order to increase students' interest in learning and students' understanding in the learning process.

To create educational games that are more interesting and fun for children, in the creation of this Pick it Up game several supporting NPCs (Non-Playable Characters) are added as well as missions that must be completed. With this, utilizing technology that is currently developing in society as a medium for learning about environmental hygiene by using educational games as a means of learning about cleanliness. The development of the basic educational game Pick It Up which requires a behavioral design using the Finite State Machine algorithm, aims to realize the educational goals of this game.

The results of this study are that all the features in the developed game design have been successfully implemented and function properly, especially the finite state machine method applied to NPC behavior. NPC successfully patrols automatically when the game starts and when the player approaches with an average value based on the respondents' answers is 89% (description = normal). The level of difficulty of the game also gets an average value of 63% and 50% (information = easy). The Pick it Up game that was developed succeeded in attracting interest for the children who played it and the educational content "Environmental Cleanliness" in this game could be easily understood by children.

Keywords: *Finite State Machine, Educational Game. Cleanliness, Learning Media.*