Abstract

At present, the call for environmental cleanliness is just a word. Awareness of littering is still lacking, while the impact of littering can damage the environment and the surrounding ecosystem, which over time can turn harmful to humans. In order for littering to become a habit, awareness about environmental cleanliness must be instilled from an early age because at that age a child's character is formed.

On the basis of these problems, utilizing the technology that is currently developing as a medium of learning about environmental hygiene using educational games is very appropriate, as an effort to train children's awareness in understanding the importance of maintaining environmental cleanliness. Because these activities are carried out not on the basis of orders or the will of others, but because of their own desires.

The development of a basic educational game called "Pick It UP" is intended to educate children to learn to be clean from an early age, in this game there are Non-Player Character features that require behavior design using the Finite State Machine algorithm with three working principles State (state), Event (occurrence), Action (action).

The result of this research is that all features in the developed game design have been successfully implemented and function properly, especially the FSM method applied to NPC behavior. NPC successfully patrols automatically and performs state alerts with an average score of 4.9 (maximum score = 5). The difficulty level of the game also received an average score of 3.5 (maximum score = 5). The Pick it Up game succeeded in attracting interest for children and the educational content of "Environmental Hygiene" in this game can be easily understood by children.

Keywords : Finite State Machine, Educational Game, Environmental Hygiene, Non-Player Machine, Technology.