

ABSTRACT

Humans go through several phases in life, and one of these phases is the aging phase. When humans are in this phase, the ability to function in the body decreases, especially in cognitive function. Departing from this research, this project uses games on the elderly with cognitive problems and observes the impact it has on the elderly who play the game. In this project we use three games and two sensors to observe cognitive changes in the elderly. The three games are Tetris Amazing, Flip Memory, and Solve IT. The game was developed using the Unity Engine as its engine. Then for the sensors we use are EEG to observe brain waves, and GSR to observe changes in stress values in the elderly. The results we got from the results of our measurements were that some respondents showed cognitive improvement in the brain as observed by EEG, then six out of nine respondents showed an increase in the relaxation value obtained after playing games continuously, and from a medical point of view the respondents were tested using the MMSE and the data obtained is that eight out of nine respondents showed an increase in value, as well as improvements in cognitive abilities.

Keywords: Game, Sensor, Elderly, Cognitive, Unity.