ABSTRACT

With the emergence of technological expansion, the present generation has received advantages beyond imagination. While this development has benefited in building up a sophisticated society, the same is disturbing the social norms and community living. Notably, young individuals or children who spend more time on electronic and computing devices are becoming socially detached. This adversely affects social communication skills. To deal with such problems, investigators have started using technology for pedagogical purpose and also for training skills to children. Several studies have shown the effectiveness of story-telling platforms implemented using the computational power. An important pre-cursor to story-telling is to create a story. Most of the existing platforms allow a single user to either author a story on his/her own or, the system itself provides an existing story for the user. For nurturing effective social communication skills while using the digital media, platforms need to encourage multiple users to understand each other's thought and collaboratively create a story. Also, based on the created story, the users need to be offered stories with variations in terms of story-telling thereby making the collaborative sessions interesting.

Motivated by this need, in my research work, I have developed a collaborative computer-based environment that supports story-authoring as well as story-telling based on the story created by the users (players henceforth). I used Virtual Reality (VR) based setting for the rendering effect. While the players collaboratively created a story, an artificially intelligent engine of our system kept a track of the order of story components chosen by the players to get an estimate of whether the

players followed each other's thoughts. Subsequently, the engine computed the overall performance score based on individual player's performance score and the total task completion time. Additionally, based on the order of the story components chosen by the players while authoring a story, the engine estimated points in story-creation where the players did not understand each other's thoughts. I conducted an experimental study with typically developing individuals of varying age groups recruited from my neighbourhood. The results indicate the feasibility of my system to quantify the varying task performance ability in a collaborative setting along with its implications on individuals of varying age groups. Additionally, such a system can hold promise in encouraging one to understand other's thoughts while promoting social skill learning.