A novel educational game for teaching emotion identification skills to preschoolers with autism diagnosis

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Emotion recognition is essential in human communication and social interaction. Children with autism have been reported to exhibit deficits in understanding and expressing emotions. Those deficits seem to be rather permanent so intervention tools for improving those impairments are desirable. Educational interventions for teaching emotion recognition should occur as early as possible. It is argued that Serious Games can be very effective in the areas of therapy and education for children with autism. However, those computer interventions require considerable skills for interaction. Before the age of 6, most children with autism do not have such basic motor skills in order to manipulate a mouse or a keyboard. Our approach takes account of the specific characteristics of preschoolers with autism and their physical inabilities. By creating an educational computer game, which provides physical interaction with natural user interface (NUI), we aim to support early intervention and to enhance emotion recognition skills.

Keywords: autism, facial emotion recognition, gesture-based interaction, Kinect, natural user interface