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Feelings: Using Storytelling and Music to Support Identification of Emotion

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Abstract

This paper describes the experience of using Feelings, a prototype of an app to be utilized as an educational tool for children with autism. A review of the literature supporting the design, as well as an overview of the experience for the user is included in this paper.

Keywords: Universal Design for Learning; Autism; Feelings; Alexithymia; Music therapy

Abbreviations: ASD: Autism Spectrum Disorder

Introduction

"Children with autism spectrum disorder (ASD) often struggle with social skills, including the ability to perceive emotions based on facial expressions. Research evidence suggests that many individuals with ASD can perceive emotion in music. Examining whether music can be used to enhance recognition of facial emotion by children with ASD would inform development of music therapy interventions" [1].

This project considers the power of storytelling and the combination of multiple representations (audio and images) as stated by the guidelines of Universal Design for Learning-UDL [2]. Storytelling has been used as strategy for building emotions discrimination with positive results in the past [3-5].

The prototype for this app was created in response to a need for tools designed for inclusion. The framework for this project is the Scherer's model that is used for characterization of emotion, covering objective and subjective aspects in a comprehensive discussion of the role of emotions [6].

Feelings reinforce emotions discrimination by association of movements and gestures in an audiovisual piece with music synched with the body language of the character in the story. Stories have been selected carefully looking for sympathy of the user [7].

Feelings use storytelling and musical cues to motivate children to associate real life situations with the events causing emotions.

For children with autism, recognition of emotions is a challenge. Feelings promises to reinforce emotions discrimination by association; using storytelling to recreate a daily situation where feelings are involved, and the user is invited to be part of the creative team by adding the soundtrack for the story. Based on the effectiveness of designing following Universal Design for Learning-UDL guidelines, Feelings combines the following elements: movements and gestures-body language of a character in an animated story, the power of storytelling, the positive impact of music interventions for children with autism, and a friendly interface to bring multiple representations of a feeling. The experience for the user is described in this paper.

Discussion

Feelings is an interactive game where participants will pass from one level to the next one by finishing the selection of soundtracks for the stories in each level. A host, Tina, invites the user to be part of the team creating an animated story by choosing the music that matches with the story.

A daily situation is shown and described by the host. The host presents a specific event during the story that motivates a feeling.

The same question is asked for each story in all levels: How is she/he feeling now? The following elements are presented to the user as their resources for the decision-making process:

- The image of the event: In the image, the body language contains the elements to make comment related to the feeling, the question to be answer: How is she/he feeling now? and the emotions that reinforce the feelings options for considerations.

- Two options of soundtracks representing the emotions will be presented in the first level, and three for the second level.

The user will select a soundtrack for the described situation. If Tina agrees with the option chosen, she will ask the child to continue with one more story in the same level until all the stories have their own soundtrack. In case Tina doesn't agree with the selection, she will encourage the participant to try a different selection. There are not good or bad answers, but opportunities to reconsider. Each level will add a new feeling among the options. For the prototype, two stories for level one was designed, and one story illustrates the second level.

Asking questions to teachers, and parents of children with autism based on the developed prototype is the next step of Feelings to be able to report on the feasibility of this instructional design app. The results of this feasibility exploration as well as the prototype will be utilized to look for funds to make this project a reality.

Conclusion

Using media and technology to create new tools to support the educational, and or entertainment needs of children with unique needs contribute to a field where social impact comes first. Conversely, when the design criteria focus on covering the needs of a minority, the needs and interests of the majority are guaranteed: the result is a Design for All.

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