Effect of Digital Intervention on Social and Verbal Skills in Individuals with Autism Spectrum Disorder

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Verbal communication is arguably the most common and effective method of communication between people. Children with cognitive impairments and learning disabilities, however, often face challenges with regards to the expression and understanding of ideas in a verbal form. Difficulty with such communication can have a very harmful effect on a person's ability to be independent and fully integrated into society. As such, studies have been conducted on a variety of methods to help these children develop crucial conversation skills, such as understanding social cues and continuing a conversation. Direct intervention and one-on-one speech therapy have been widely proven to be the most impactful methods. Unfortunately, such methods are costly and potentially difficult to implement at a large scale, and many speech therapists face difficulty when trying to distinguish between providing feedback and participating in conversation, an issue which is exacerbated by echolalia. This project aims to improve upon this method of therapy by developing a smart device-compatible application which will assume the role of conversation partner, leaving the clinician to provide feedback. The application utilizes a cloud storage system to pull videos of actors which correspond to conversation topics or particular questions, and it provides methods by which clinicians may give feedback to the patient. Ultimately, this project aims to understand the effects, if any, of replacing human conversation partners with an application on the effectiveness of one-on-one speech therapy for children with Autism Spectrum Disorder (ASD).