Digital Humanities Showcase Presentation Overview

Presentation Title: Preliminary Data of the SmartSignPlay Prototype: A Sign Language App for Families with Children who are d/Deaf or Hard of Hearing

Presentation Summary:
SmartSign*Play* is an app aimed to assist children who are d/DHH and their families learn functional signs to support early communication development. The app is interactive and can be played on smartphones and tablets. The process of developing the app and preliminary results of the pilot study will be presented.

Description of the Project:
Rationale - Approximately 95% of children who are deaf or hard of hearing (d/DHH) are born to hearing parents. Hearing parents have difficulty immediately communicating with their d/DHH infant from birth because they lack the necessary tools: knowledge of signed communication and/or training on how to teach speech to children who use hearing aids or cochlear implants. Research has shown that the critical period for developing language is between the ages of 0-24 months. The sooner we can equip parents with the tools necessary to communicate with their child, the more likely developmental delays may be prevented (Bergeron, Miller & Tucci, 2015).

Worldwide children are using touchscreen technologies at an increasingly young age (Geist, 2012). A national survey commissioned by Common Sense Media (2011) reported nearly half of American children under the age of five have used mobile devices including tablets and Smartphones. Among children aged two and older, research shows that many can easily and naturally interact with the touchscreen interface (Brown, 2011; Holloway, Green, & Livingstone, 2013). As emphasized above, learning language should start as early as possible. Thus, the researchers of this pilot study aim to collect empirical evidence on the effect of interactive technology use on language and communication development with children who are d/DHH.

Method –For this pilot study, approximately 40 families with and without children with disabilities are serving as the "test group" for the prototype of *SmartSignPlay*. Families from the local cochlear implant hospital are the main target populations recruited for the study. User feedback data is being collected on the use of the app (i.e., accuracy, frequency, duration, and learner's progress), parent and child interactions (videotape), and parent survey and interview data.

Results - Data is currently being collected. The pilot study will be complete by December 2017. The results will be analyzed both across phases, as well as across the entire participant pool once the study is complete. These preliminary results will be shared at the Digital Humanities Showcase.