

SPEECH THERAPY FOR KIDS

Ryan Drapeau, Nick Huynh, Aaron Nech



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PROBLEM

An estimated **8-9%** of children are affected by speech disorders. **50-70%** of them struggle academically up until they graduate^[1].

Children can spend **several years** in therapy to treat a speech disorder^[2].

In many cases, a very small number of certified speech therapists manage and treat a **large number** of children^[2].



This makes practice time very **sparse** leading many parents to seek additional therapy in the home setting^[2].



Unfortunately, an additional therapist privately paid is also very **expensive**, out of budget for many parents^[2].

SOLUTION & EXAMPLE USE

We propose a children's game to practice speech as "homework" from the therapist.



Therapist assigns Kimbee game as homework.



Students practice speech while playing, getting instant feedback on their pronunciation.



Student speech and context information is saved on a central web server for review by therapist.



Therapist listens to student speech prior to next appointment and uses this information to better target therapy.

RESULTS & FUTURE WORK

Overall we have received very positive feedback regarding this technology for use in a speech therapy setting.

- Deploy this project in Arlington, WA under therapist Richard Kreider.
- We would like to add more target speech sounds. Currently, we only support targeting the 'R'-'W' sound replacement.
- Add more mini games to increase student interaction and desire to play.
- Create a token economy in the game that increases desire to play and a feeling of reward.

CITATIONS

1. R. Kreider. Personal interview, January 2015.
2. Statistics on Voice, Speech, and Language. <http://www.nidcd.nih.gov/health/statistics/pages/vsl.aspx>, March 2015