Technology for Pronunciation Instruction: From Research to Practice
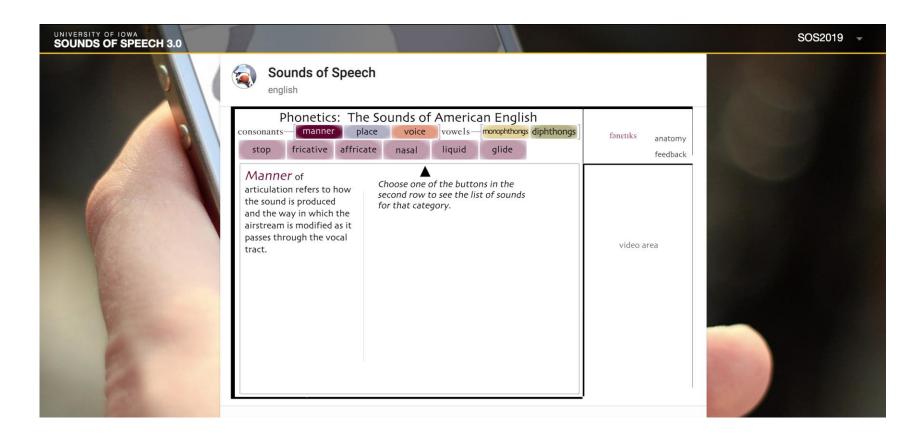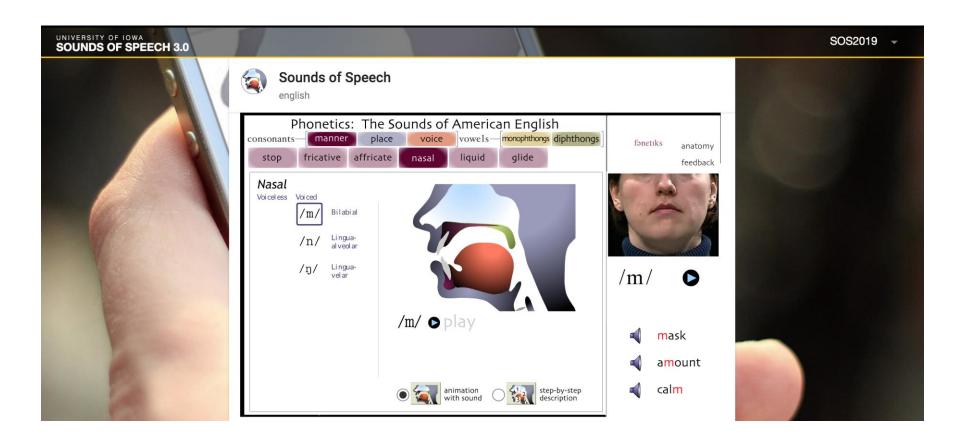
Ivana Rehman

The disconnect

- Teachers want activities that seems to work.

- Researchers are interested in why, and to what extent an activity seems to work.

- There are many ways to connect research and practice, and here are some of them… →

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Sounds of Speech – U of Iowa

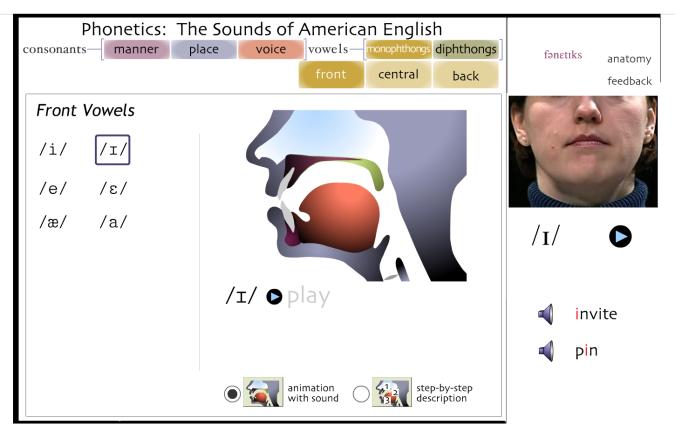Applied Linguistics & Technology

Sounds of Speech – U of Iowa

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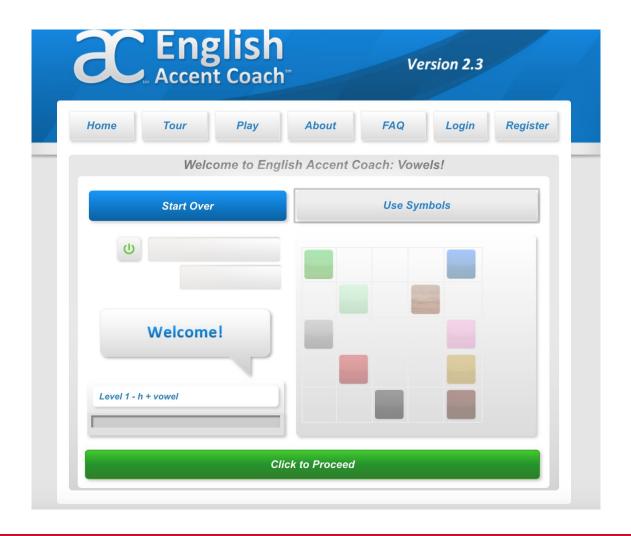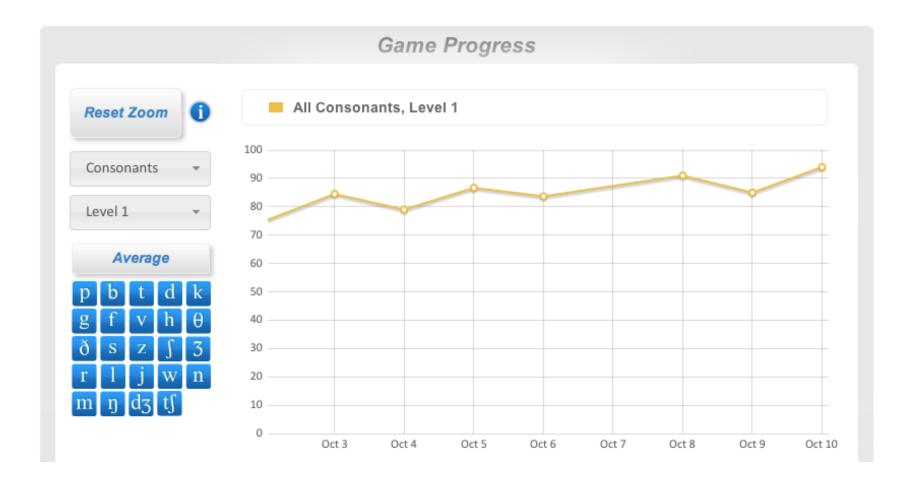# Results from Research

- Carey (2004): visual representations of vowel space and mouth movement resulted in improvement of production for the target vowel.

- Kartushina et al. (2015): training with visual articulatory feedback containing acoustic information about tongue position and mouth openness was effective in improving the production accuracy of target vowel production.

- Suemitsu et al. (2015): visual input enhances learning.

English Accent Coach

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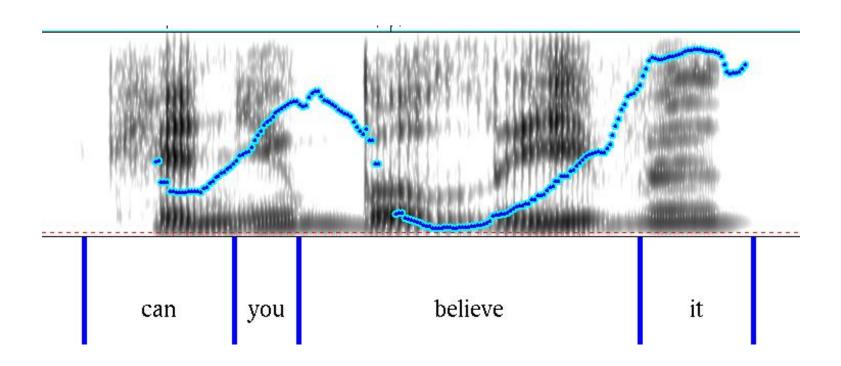
Results from Research

- HVPT works → increasing the variability of the input results in greater and more generalizable gains in L2 speech perception (Thomson, 2011).

- EAC works (Thomson, 2011)
  - incorporating a research-based technique into a CAPT application.

Praat

Results from Research

- Hardison (2004):

  - training to improve prosody using a real-time computerized pitch display and native-speaker utterances as feedback → resulted in significant improvement.

ASR as feedback

- Using existing Automatic Speech Recognition software for generating feedback:

- Siri, Google Assistant, Cortana, etc:

  - Learner speaks to the software

  - ASR writes what it heard

  - Learner uses it as feedback

Results from Research

- McCrocklin (2014):

  - Learners generally had positive reactions to working with ASR

  - This type of learning resulted in increased learner autonomy

  - Found to be useful, convenient, and fun by learners → increased motivation.

- Guskaroska (forthcoming):

  - Improvement for vowel contrasts.

A Resource for Teachers

- Pronunciation for Teachers: meant to provide professional help and resources for those interested in teaching pronunciation in all educational contexts.

- pronunciationforteachers.com

A Resource for Teachers

Conclusion

- Teachers should take advantage of already available software to enhance pronunciation learning in their classrooms.

- Teachers should take advantage of available research in order to know the best ways to use technology for pronunciation learning.

- Help bridge the gap!

Thank you!

- QUESTIONS?