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Towards providing real-time feedback on speech fluency for L2 learner development

A fundamental goal of second language learning is to develop fluency in the target language. Toward this end there are many computer applications that measure fluency or enable fluency-oriented practice. Many of these applications give helpful feedback or scores that may facilitate learners' ongoing fluency development. But very few (if any) give feedback in real-time. Eskenazi (1999) suggests timely feedback is necessary for learner uptake. So, real-time feedback on fluency-related features could be advantageous to learners.

In this talk, I will describe the ongoing development of a computer application called "Fluidity" which is designed to give feedback to learners in real-time during their speech practice. Fluidity measures various fluency features (e.g., articulation rate, pauses) and gives feedback in a way that emulates human-human communication via expressiveness of a virtual avatar. Learners can practice both read speech and impromptu speech, receive feedback in real-time, and review their production afterward with visualizations of their fluency.

I will demonstrate the current state of the Fluidity application and its fluency-measurement mechanisms, share some results from usability testing, and describe plans for future development.

Bio:

Ralph Rose is a member of the Faculty of Science and Engineering at Waseda University in Tokyo, Japan where he and his colleagues manage the English language program. His research interests include filled pauses (uh/um), second language fluency, and educational technology—and particularly the intersection of these three.

