

Auditory feedback perturbation in adults and children

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Auditory feedback plays an important role in speech motor learning. Experimental paradigms where auditory feedback is perturbed during speech production of children might give valuable insights in the role of auditory feedback in the acquisition of speech motor programs throughout development.

Studies investigating auditory feedback in speech development suggest that crucial steps are made in the development of auditory-motor integration between the ages of 4 – 9 years, but thus far direct comparisons between different age groups are absent.

In the present study, we investigated to what extent Dutch speaking children in this age span were able to compensate for and adapt to auditory feedback perturbations. Auditory feedback was perturbed by real-time shifting the first and second formant of the vowel /e/ during the production of CVC words.

Preliminary results indicate that age is an important factor in the presence of stable compensation and adaptation effects. When comparing groups, both children and adults were able to compensate for perturbed auditory feedback, but the proportion of subjects displaying this effect was greater in the adult group. Furthermore, we will discuss experimental considerations and limitations of measuring on-line and off-line compensation for perturbed auditory feedback with very young speakers.