Perceived talker similarity in perceptual training of Korean laryngeal contrasts

Hanyong Park (park27@uwm.edu)
Department of Linguistics, University of Wisconsin-Milwaukee

In a typical high variability phonetic training, researchers often adopt training materials produced by multiple-talkers without considering the extent to which the training stimulus provides variability. Further, it is rare to consider whether trainees perceive the variability (different talkers). In the current study, I investigated whether the perceived talker similarity matters in the high variability phonetic training. The hypothesis I tested was that training effects are better for the trainees who perceive different talkers in the training materials than for those who do not.

Native speakers of English (N = 20) without any Korean learning experience were trained to learn Korean laryngeal contrast /p t s/ series in the initial position of CVC words, for under 20 minutes on three days. At the beginning of each training day, the trainees were introduced to 16 word-picture pairs by auditory presentations with corresponding pictures (familiarization). Then, they identified correct pictures for auditory prompts and received immediate feedback on their correctness (training). The participants were trained with either materials consisting of 3 dissimilarly sounding talkers or those of 3 similarly sounding talkers and one common talker was present in both materials. At the end of each training day, they were given an identification task for the trained materials spoken by the common talker, but without any feedback (daily progress). Within three days after the training, the trainees came back and were given an identification task similar to the one for daily progress. This time, the test materials were produced by the “old” common talker and a “new” talker who was not used in the training (post-test). Some trainees returned to retake the post-test 6 or 7 days later (retention).

Results indicate that not all trainees perceived multiple talkers in the training materials, though all the materials were produced by 3 talkers; 7 out of 10 trained with dissimilarly sounding talkers perceived multiple talkers, as did 4 out of 10 trained with similarly sounding talkers. Comparing multiple-talker perceivers and single-talker perceivers, the former’s daily progress scores were higher than the latter’s scores on training day 3 and also for the “old” talker identification on the retention. These results confirm the hypothesis, showing that training effects are better when the trainees perceive variability or different talkers in the training materials. The results also suggest that it is important to consider which talkers we use in constructing training materials for perceptual training.