English /r/-/l/ perception for Japanese speakers: Training methods and age effects

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Second-language (L2) phoneme perception has been the focus of much research over the past few decades. However, the mechanisms underlying the learning of L2 phonemes are still not clearly understood. In this talk, a series of three perceptual training studies will be introduced to cast some light on the learning mechanisms of the English /r/-/l/ perception and production for Japanese speakers. The first study examined the effects of identification and discrimination training with the hypothesis that two different training methods should affect different levels of processing. The results demonstrated that both training methods improved Japanese speakers' English /r/-/l/ perception and production in similar ways, but the combination of two different training methods did not provide a greater increase in learning. The second study examined the age effects on the improvement of the English /r/-/l/ perception and production. It was hypothesized that younger learners should improve their perception and production more than older learners. The results demonstrated that younger learners had an advantage on improving their English /r/-/l/ perception possibly due to their less L1-interfered phonetic processing, although younger children aged 6-8 years old did not improve their perception as much as older children. Finally, the third study examined the effect of audiovisual training. It was hypothesized that children should have an advantage over adults in integrating visual information to auditory perception. Although the results demonstrated that both adults and children improved their identification accuracy in the audiovisual condition more than the single modality (audio-only, visual-only), it was unclear whether children had an advantage over adults due to a possible ceiling effect. The theoretical implications for understanding learning mechanisms and age effects are discussed.