

Pronunciation Training of Mandarin-Speaking Learners of English

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Abstract

Learning how to **perceive and pronounce** new sounds correctly in a second language (L2) can be challenging, especially when the target language contains different phonemic categories than the learner's native language. It has been shown that training L2 learners to discriminate between similar sounding phonemes improves their pronunciation skills (Lee et al., 2014). While pronunciation training methods have largely focused on improving perception skills in order to facilitate accurate production, few methods have directly targeted production skills, or compared the benefits of perceptual versus production training. The aim of this study was to look at whether pronunciation skills improve after training, if one training method (receptive or expressive) is more effective at improving pronunciation performance, and whether one type of pronunciation skill (i.e., production or perception) is more susceptible to training.

Participants were native Mandarin speakers attending English as a second language courses, and were trained on several phoneme pairs that are difficult for native Mandarin speakers to differentiate in English (Granger & Leech, 2014). In a between-subjects design, participants were randomly assigned to either a *receptive training condition*, in which they practice identifying phonemes within words, or an *expressive training condition*, in which they practice saying words containing difficult phonemes out loud and are judged on accuracy using an automated speech recognition engine. Both training conditions were administered through simple computer games that provided participants with visual and auditory feedback on each trial. The entire experiment spanned eight 30-minute sessions: a pretest session, six training sessions, and a posttest session. In the pretest and posttest, participants completed two tasks designed to assess perception skills (phoneme identification and phoneme discrimination tasks)

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PRONUNCIATION TRAINING FOR SECOND LANGUAGE LEARNERS

and two tasks designed to assess production skills (word production and unconstrained reading aloud).

Improvements in pronunciation skills were measured using gain scores from pre-test to post-test. Identification and discrimination tasks were scored on number of items chosen correctly. Word production task were scored on number of words said correctly, as determined by the speech recognition engine. Unconstrained production task were scored for fluency and comprehensibility on a ten point scale by three native English speaking judges.

A 2 x 2 x 2 repeated measures ANOVA was performed with training condition (receptive vs. expressive) as a between-subject factor, and time (pretest vs. posttest) and assessed skill (perception vs. production) as within-subject factors. Planned contrasts using t-tests followed up on the ANOVA results to assess improvement in each group and on different test, between groups. Findings will be discussed in the framework of L2 pronunciation, impact of perceptual sound categories on accurate production, and possible uses for SREs in second language training.

Keywords: Pronunciation, perception, production, second language acquisition, Speech Learning Model

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