**Effects of L3 Japanese on Production and Perception of L2 English Word-Initial Stops by Mandarin Trilinguals**

**Abstract:** This study targets Mandarin trilinguals with advanced proficiency in L3 Japanese, exploring their production of L2 English word-initial voiceless stops. Thirty-one Mandarin trilinguals, 34 Japanese bilinguals, and 26 Mandarin bilinguals participated in a production experiment by producing English words containing word-initial /p, t, k/ and a perception experiment by listening to three English stop continua with synthetic stimuli varying in VOT values. The VOT values of each stop and the category boundaries along each continuum were measured. Results showed that the Mandarin trilinguals produced /p, t, k/ with mean VOT values falling between those of the Japanese and Mandarin bilinguals. Along the bilabial and alveolar continua, the Mandarin trilinguals exhibited category boundaries at similar VOT values to those of the Japanese bilinguals, but at significantly shorter VOT values than the category boundaries of the Mandarin bilinguals. These results suggest that the Mandarin trilinguals’ production and perception of English stops were influenced by the phonetic systems of both L1 Mandarin and L3 Japanese.