A cross-linguistic study of intonation:

English learners’ production of Mandarin intonation

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Learners of non-tonal languages have to learn to manipulate complicated F₀ patterns arising from the interaction between lexical tones and sentential intonation. This study examines how native English speakers deal with the effect of lexical tones in producing Mandarin intonation. Considering the boundary tone is indicative of statement-question contrasts, this study compares tonal features of sentential final syllable carrying four lexical tones in different intonations by native Mandarin and native English speakers. Acoustic analyzes indicated that both English and Mandarin speakers produced higher F₀ of the boundary tone in question than in statement regard- less of the lexical tones, but no difference in duration and intensity between statement-question contrasts was found. Pitch values in English speakers’ utterances were generally lower than that of Mandarin speakers. Perceptual test showed that the accuracy rate of statements across four lexical tones for English and Mandarin speakers were close to each other, but English speakers’ question utterances were poorly perceived in comparison to Mandarin speakers’ utterances, suggesting that English speakers had difficulty in producing Mandarin question sentences, especially when the final syllable carries tone 1 or tone 4. English speakers’ poor performance on question intonation was attributed to the influence of their native prosodic system.