

Effects of prosodic position on the production of Si-Xien Hakka tones at
phrase level

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Abstract

This study examined the effects of prosodic position on duration and F0 of Si-Xien Hakka tones, namely the high-level, high-falling, mid-falling, and low-rising non-checked tones and the high and low checked tones. Each of the tones was placed in the initial, medial, and final positions of a three-syllable phrase/clause, which constituted the first part of a sentence with the [δ [δ δ], δ δ δ] structure. A corpus of three hundred and twenty four sentences (6 target tones X 3 prosodic positions X 6 following tones X 3 repetitions) was read randomly by the author for acoustic measurements. The results showed that F0 lowering and lengthening (except for the mid-falling tones) were found in the phrase/clause-final position. The final lengthening allowed the offset of the low-rising tones to reach a higher F0 target, a performance not attainable by those in other prosodic positions. Also in this final position the high level tones exhibited a flatter shape than those in other positions due to the approaching boundary breaks reducing tonal coarticulation effect. Besides, in the phrase/clause-medial position all the tones with a falling contour, including the two checked tones, demonstrated steeper down-slopes possibly due to the more compressed time for syllables to realize falling tones.

Keyword : Si-Xien Hakk, tones, prosody, prosodic position