

Zhang, H. (2010). "Phonological Universals and Tone Acquisition." *Journal of Chinese Language Teachers Association*. Vol. 45. No: 1, Page: 39-65.

Abstract:

This study examines disyllabic tonal combinations produced by thirty English-speaking learners of Mandarin Chinese and uses them to test three universal phonological principles, which are attributed to as responsible for tonal errors. The three relevant constraints are the Tonal Markedness Scale (\*Rising>>\*Falling>>\*Level), the Obligatory Contour Principle (two identical whole tone sequences are prohibited), and Positional Faithfulness Constraints (tones at privileged positions have identical values). It is shown that (1) Tonal markedness Scale works in the dataset: \*Tone 2>>\*Tone 4>>\*Tone 1. (2) The error rate of identical tone combinations is significantly higher than that of non-identical tone combinations. (3) Positional effects are contingent upon the tone types. Native English speakers are better at maintaining Tone 1 at the beginning of disyllabic utterances, but Tone 4 at the end of utterances. The study also reveals that the most frequently produced tone combination in the dataset is "Tone 1-Tone 4" which is accounted for as the joint effect of these three phonological constraints.