

Bidirectional L1-L2 interaction in children's production

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The effect of age of acquisition on second-language vowel production was investigated. Eight English vowels were recorded shortly after the NJ participants' arrival in the USA (T1) and then one year later (T2) by 16 Native Japanese (NJ) adults and children as well as 16 age-matched Native English (NE) speaking adults. Based on acoustic measurements of F1 and F2 values, native Japanese adults had more accurate production at Time 1 but made no changes across Time. The native Japanese children, on the other hand, showed significant differences from NE children's production for /ɪ/, /ɛ/, /ɑ/, /ʌ/ and /ʊ/ at Time 1, but produced all eight vowels in a native-like manner at Time 2. Both groups showed better performance on duration except for /ɑ/-/ʌ/ distinction. A follow-up examination of native Japanese children's productions of Japanese /i/, /a/, /u/ revealed significant changes for Japanese /i/ and /a/ related to L2 learning. The results suggest that L2 vowel production is heavily affected by age of acquisition and that there is a substantial interaction between first- and second-language vowels.

As for the Korean vowel production, forty Korean learners of English varying in age (adult vs. child) and amount of experience (6 months vs. 6 years), as well as twenty age-matched native English speaking adults and children produced eight English and seven Korean vowels. In order to examine prosodic aspects of production, English words containing stressed and unstressed syllables were also elicited. Results for adult groups revealed that the production of Korean vowels was influenced by L2 experience, indicating plasticity in the L1. Both studies suggest that L2 vowel production is affected importantly by age of acquisition and that there is a dynamic interaction, whereby the first and second language vowels affect each other.