

The Role of Phonetic Entrainment in Second Language Vowel Learning

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In L2 communication, speakers tend to adapt their phonemes to that of the interlocuter—phonetic entrainment. L2 speakers' phoneme proficiency shows improvement after exposure to a native speech, but the role entrainment plays in facilitating L2 phoneme learning is unclear. This study addresses this issue by examining the relation between an L2 speaker's entrainment tendency on vowels and their speaking proficiency of these vowels, considering L1-L2 vowel distance.

One native speaker of American English and 30 Mandarin-speaking learners of English, all females, participated as the model talker and the L2 speakers. 36 CVC nonwords, consisting of vowels /i, ɪ, æ/ with increasing L1-L2 distance, were tested through a semi-interactive game. F1 and F2 of the vowels were examined. Linear mixed-effects modelling was used to model L2 speakers' entrainment degree, which was then correlated with their vowel proficiency.

Results on F1 showed that all L2 speakers entrained to the native speaker, confirming the prevalence and automaticity of phonetic entrainment; although not significant, the trend of their entrainment degree varying with vowels corroborates the tenet by SLM-r: the larger the L1-L2 difference the easier it will be perceived and thus learned. Yet results on F2 display much variation. We also found no significant correlation between L2 speaker's entrainment degree on vowels and their speaking proficiency of these vowels, not supporting our hypothesis of entrainment tendency as a predictor for the amount of speech learning from interaction, nor as a speech learning ability constrained by existing speaking proficiency.