

Velocity Profiles of Vowel Perception by Javanese and Sundanese English Language Learners

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Abstract : Learning L2 sounds is influenced by the first language (L1) sound system. This current study seeks to examine how the listeners with a different L1 vowel system perceive L2 sounds. The fact that English has a bigger number of vowel inventory than Javanese and Sundanese L1 might cause problems for Javanese and Sundanese English language learners perceiving English sounds. To reveal the L2 sound perception over time, we measured the mouse trajectories related to the hand movements made by Javanese and Sundanese language learners, two of Indonesian local languages. Do the Javanese and Sundanese listeners show higher velocity than the English listeners when they perceive English vowels which are similar and new to their L1 system? The study aims to map the patterns of real-time processing through compatible hand movements to reveal any uncertainties when making selections. The results showed that the Javanese listeners exhibited significantly slower velocity values than the English listeners for similar vowels /l, ε, υ/ in the 826-1200ms post stimulus. Unlike the Javanese, the Sundanese listeners showed slow velocity values except for similar vowel /υ/. For the perception of new vowels /i:, æ, ɜ:, ʌ, ɑ:, u:, ɔ:/, the Javanese listeners showed slower velocity in making the lexical decision. In contrast, the Sundanese listeners showed slow velocity only for vowels /ɜ:, ɔ:, æ, l/ indicating that these vowels are hard to perceive. Our results fit well with the second language model representing how the L1 vowel system influences the L2 sound perception.

Keywords : velocity profiles, EFL learners, speech perception, experimental linguistics

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