

**Name of author:** Akiko Kato

**Institutional affiliation:** Macquarie University **E-mail:** [Akiko.Kato@ling.mq.edu.au](mailto:Akiko.Kato@ling.mq.edu.au)

**Title of proposed paper:**

An acoustic analysis of Japanese vowels produced by Australian learners of Japanese

**Keywords:**

Acoustic-phonetics of vowels, Second language acquisition, Japanese (L2) and Australian English (L1)

**Abstract of proposed paper (including list of reference):**

Second language (L2) speech learning is greatly affected by the differences in the phonological systems between L2 and learners' native language (L1) (e.g., Bohn & Flege, 1992). Learner's performance may also be influenced by weighting/reliance of L1 acoustic cues (e.g., Escudero & Boersma, 2004). However, even under the same L1 conditions, the degree of achievement in acquiring L2 phonemes varies between individual learners (e.g., McAllister et al., 2002).

The present research examines individual difference in the degree of L1 influence and the process of transferring the use of language-specific acoustic cues through a longitudinal study (2-year period) of L2 speech production. Australian learners of Japanese who began to learn Japanese at Macquarie University in 2005 produced 8 vowel types in CVCV context 5 times in random order in both Australian English and Japanese words. The acoustic variables F1/F2, F0 and vowel duration were synchronically and diachronically compared to examine:

- 1) the change in Japanese vowels produced by individual Australian informants,
- 2) the difference between Japanese vowels and Australian English vowels of each Australian informant, and
- 3) the difference between Japanese vowels of Australian informants and those of Japanese informants.

In the results from the initial phase of this research based on the first two recording sessions (4 months apart), individual differences were observed in:

- 1) the degree of L1 influences on L2 vowels, in terms of F1/F2, and
- 2) the achievement of L2 vowels' durational contrasts.

### **Reference**

Bohm, O.S. and Flege, J.E. (1992). The production of new and similar vowels in adult German learners of English. *Studies in Second Language Acquisition*, 14, 131-58.

Escudero, P. and Boersma, P. (2004). Bridging the gap between L2 speech perception research and phonological theory. *Studies in Second Language Acquisition*, 26, 551-585.

McAllister, R., Flege, J.E. and Piske, T. (2002). Factors affecting degree of foreign accent in an L2: a review. *Journal of Phonetics*, 29, 191-215.