

# The Effects of Imitation and Emphasis Levels on the Learning of Post-Focus Compression: A Case Study of Cantonese Speakers on English

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Focus is a communicative function to convey emphasis. Prosodic focus is marked differently in different languages by not just the features of the on-focus interval, but also the intervals before and after the focus. In particular, post-focus compression (PFC), which is the lowering of pitch range and amplitude of the whole interval after the focus, is not a universal property for all languages [1]. For example, it is prevalent in languages like English [2, 3] and Mandarin [4], but absent in languages like Cantonese, in which focus is mainly correlated with the increase in on-focus duration and intensity [5]. It is reported that PFC can be acquired naturally in L2 learning by living in the L2 environment for many years [6, 7]. But is not yet clear whether and how PFC can be taught to second-language learners through training [8].

This study aims to further investigate how PFC can be taught to Cantonese learners of English. Two research questions are raised: (i) can the production of PFC by native Cantonese speakers of English be improved by imitation training? (ii) can the production of PFC by native Cantonese speakers of English be affected by different emphasis levels? A production experiment with three sections was conducted on native Cantonese speakers to answer these questions. Section one assessed participants' pre-training focus production; in section two participants imitated recordings of the target sentences read by a native British English speaker; section three tested how much of the benefit of the imitation training was maintained in mini dialogues with three levels of emphasis. The declarative sentence *May saw Nel in the morning* was used as the target sentence. The sentence was first recorded by a native British English speaker with focus on the initial word *May*, the medial word *Nel*, the final word *morning*, and no focus on any of the words.

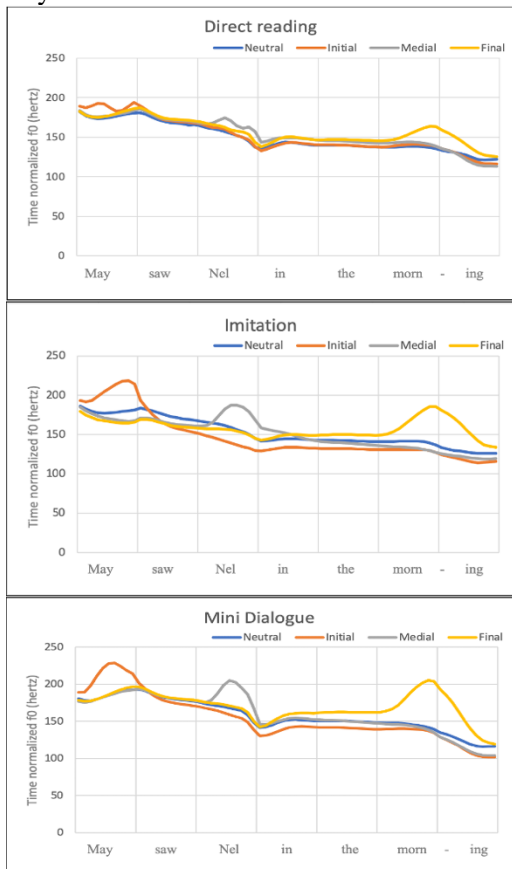


Figure 1: Time normalized  $f_0$  contour averaged across the 20 native Cantonese speakers for the three sections

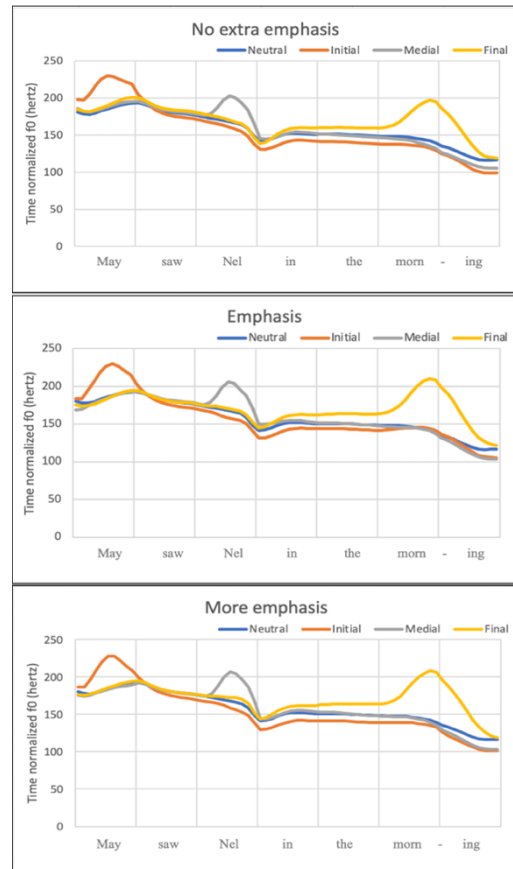


Figure 2: Time normalized  $f_0$  contour averaged across the 20 native Cantonese speakers for the three emphasis levels

Acoustic analysis was done with the Praat script ProsodyPro [9] and the time-normalized  $f_0$  contours are shown in Figure 1. Results show that there was no evidence of PFC and only very slight on-focus expansion before training. The imitation training results showed a clear increase in on-focus expansion and PFC. For the post-training mini dialogue session, on-focus expansion could be clearly seen, but PFC is less evident compared to the imitation section. For all three emphasis levels, there was clear on-focus expansion and slight amount of PFC (Figure 2). From no extra emphasis (first level of emphasis) to contrastive emphasis (second level of emphasis), there was an increase in on-focus expansion, but PFC was reduced. From contrastive emphasis to extra emphasis (third level of emphasis), on-focus expansion had decreased, but there was slightly more PFC. When comparing the three emphasis levels, on-focus expansion was the most evident at the contrastive emphasis level and the least evident at no extra emphasis level, while PFC was the most evident at extra emphasis level and the least evident at contrastive emphasis level. The fact that the extent of on-focus expansion and PFC did not increase as the level of emphasis increased suggests that the effects of emphasis might be capped at a certain level, which is consistent with the finding of Chen and Gussenhoven [10].

The results of this study show that learners' direct mimicking of native speaker's focus prosody is effective for L2 focus learning. However, it is not yet clear how long the learning effect can be retained after a brief training session. Longitudinal studies are needed in the future to further test whether L2 learners could really associate the communicative function of focus to its prosodic features, how long the effects of imitation training can last, and how many training sessions are needed in order to achieve a long-term learning effect. One way of investigation is by systematically implementing this method of training in L2 pedagogy, such as in listening and oral dialogue practices. This method could also benefit L2 speakers by guiding them to speak and convey ideas with native-like intonation, in which communication effectiveness could be enhanced.

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