

English obstruent perception by native Mandarin, Korean, and English speakers

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This study investigates the accuracy and confusion patterns of eight English obstruents /p b t d f v θ ð/ in the onset and coda position identified by Mandarin and Korean-speaking L2 learners as well as by a control group of native English speakers. According to theoretical models that underscore the influence of L1 categories on L2 perception (e.g. PAM: [1], [2]; SLM: [3]), L1 Mandarin and Korean speakers are expected to differ in their perception of English onset and coda obstruents due to the different correspondence between their respective L1 consonants and those in English. Specifically, Mandarin has /f/ in the onset position while none of the target fricatives exist in Korean. As for the coda position, Mandarin does not allow any obstruent while Korean neutralizes underlying stops and fricatives into homorganic voiceless lax stops. On the other hand, theories advocating for language universal markedness suggest that some L2 sounds would be more difficult than others regardless of the L1 background. To examine these hypotheses, we compared English obstruent identification by 41 Mandarin, 40 Korean, and 17 English speakers, each tested in their native country. The results showed that all three groups were significantly more accurate in perceiving obstruents in the onset than in the coda position, more accurate in identifying voiceless than voiced targets, stops than fricatives, and labials than coronals. The L1 English speakers generally achieved higher accuracy than the L2 learners except in the identification of /θ/ and /ð/. The two learner groups did not differ in their overall accuracy in the onset position, yet in the coda position the Mandarin group outperformed the Korean group. With regard to the specific obstruents, in the onset position the Mandarin group achieved higher accuracy than the Korean group on /b/, /d/, and /f/, while in the coda position the Mandarin group achieved higher accuracy on /d/. The three groups' mean accuracy rates on the eight target sounds in the two prosodic positions are presented in Figure 1.

In addition to accuracy rates, all three groups' erroneous responses were analysed based on the voicing, manner, and place confusions. It is found that both the Mandarin and Korean groups exhibited a stronger bias toward voiceless consonants in the coda position than the English group. As for the manner confusion, the two learner groups were more biased toward fricative responses in the coda position than the English group, while the Korean group showed additional confusion of misidentifying fricatives as stops. Finally, all three groups showed some bias toward labials in the coda position, which appears to result from an aversion to the /θ/ and /ð/ responses. These findings suggest that L1 experience plays an important role in L2 sound perception. However, the presence of a similar L1 counterpart of the L2 target sound does not necessarily guarantee the ease of its acquisition. While some of the learners' featural confusion patterns can be explained by their L1 influence, the general similarity of the two learner groups is indicative of a robust and pervasive language-independent tendency in L2 speech perception. Furthermore, the comparison of the learners and native speakers shows that the perception of some obstruents may be inherently difficult.

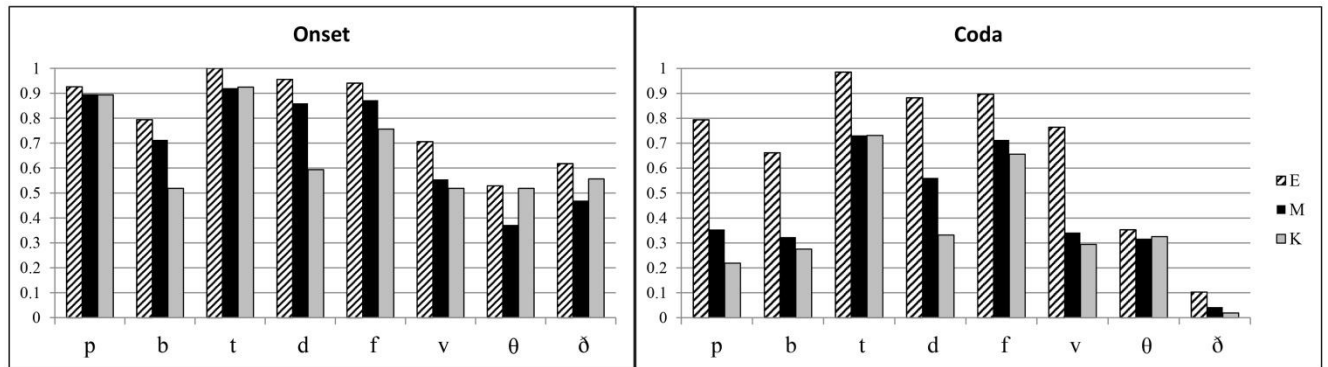


Figure 1. The three L1 groups' mean accuracy rates for the eight English obstruents in the onset (left) and coda position (right).

References

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