

Cross-linguistic Influences on the Production of L3 Monophthongs: Evidence from L1 Uyghur- L2 Chinese- L3 English Trilinguals

Studies on L2 speech acquisition show that influence from L1 can make bilinguals sound different from monolinguals. The Speech Learning Model (Flege, 1995) proposes that L2 sounds acoustically distant from L1 are easy to perceive and form a new category, while L2 sounds acoustically close to L1 sounds tend to merge with the L1 category, leading to cross-linguistic influence (CLI). However, much less work has been carried out on trilingual speech, and there is no consensus on the source of cross-linguistic interactions, especially among typologically distant languages (Wremble, 2015). This study aims to examine the extent to which there is evidence of CLI in L3 English vowel production and to explore how this relates to their phonetic similarity to L1 and L2 sounds, measured using acoustic distance.

Data collection has been completed with forty participants: 20 Uyghur–Chinese–English trilinguals and 20 Chinese–English bilinguals (12 females and 8 males in each group). The Age of Acquisition (AoA) for L3/L2 English was matched across groups (starting in the 3rd grade), and their general language proficiency was assessed via an Elicited Imitation Task (EIT) and background questionnaires. Participants completed three reading-aloud tasks targeting monophthongs of three languages embedded in bilabial-alveolar frames (/p, b/ _ /t, d/). Target words were elicited using language-specific carrier phrases (e.g., *Say it ___ again*). Normalised vowel formant values (F1, F2) from trilingual speakers will be compared with those of bilinguals. Acoustic distance, measured by Mahalanobis distance, will be used as an objective measure of similarity between each L3 vowel and its corresponding L1 (DIS₁) and L2 (DIS₂) categories.

Data analysis for this study is still ongoing, but based on the SLM, we predict that smaller acoustic distances between L3 English vowels and their closest L1 Uyghur and L2 Chinese vowels correspond to stronger CLI in trilingual speech. The presentation will discuss emerging patterns of CLI in relation to acoustic distance, which may include cases where some L3 vowels: (1) are acoustically closer to L1 than L2, (2) are acoustically closer to L2 than L1, (3) may show similar distances to both L1 and L2 vowels, suggesting there may be a threshold of acoustic closeness required for cross-linguistic influence to occur. Findings will be discussed in the context of similarity-based accounts such as the Speech Learning Model and the Linguistic Proximity Model (Westergaard, 2017), which proposes property-by-property transfer based on structural similarity rather than full transfer in L3 acquisition.

References

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