

Study on Phonological Knowledge of Third Language Effect on Second Language

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1. Background and Research Objectives

High human mobility in the modern world encourages people to use more than two languages, for example, native language, English as a lingua franca, and language of foreign living country. Knowledge of these three languages may influence with each other because linguistic knowledge is complex and mostly tacit. Cross-linguistic influence among knowledge of sound structure of language, i.e., phonological knowledge, is difficult to be observed, since it is more tacit than other linguistic knowledge such as morphsyntax and lexicon, and therefore, language users are often not consciously aware of how they produce and perceive a specific sound.

Perceptual Assimilation Model (PAM) is proposed for accounting how the native listeners perceive the non-native speech sounds. In PAM, the listeners tend to perceive the unfamiliar non-native speech in terms of their native categories. Although PAM can provide a mechanism to predict the influence from the native language (L1) to the non-native languages, the influence between the non-native languages, especially the backward transfer from knowledge of Third Language (L3) to Second Language (L2), is still not clear.

In this research, we focus on investigating how phonological knowledge of a non-native language influences on that of another non-native language. The research objectives are both to clarify whether the learning of L3 can influence on the perception of L2 and to clarify whether PAM can be applied to the influence between non-native languages (L2 and L3).

2. Research Content

The necessary condition to examine the L3 effect on L2 is that both L2 and L3 have a contrastive feature which does not exist in L1. This suggests that L3 learning may bring about improvement on the perception of the contrastive feature of L2 rather than L1. We chose the vowel lengths of Chinese (L1), English (L2) and Japanese (L3) as an investigation object because the contrast between short and long vowels is present in English and Japanese but not in Chinese.

We hypothesize that learning of L3 has a positive effect on the vowel length perception of L2, which means that the category of vowel length in L2 is created rather than be assimilated into L1. It implies that PAM should be extended. Disproof of our hypothesis may imply that PAM can also be applied to the influence between non-native languages.

We claim that this hypothesis can be scrutinized by an experimental design consisting of two tasks. One is to examine whether the subjects can discriminate the vowel length category of a provided sound from the other provided sound accurately. The other is to examine whether they can identify the category (short/long vowel category) of provided sounds accurately.