

Perceptual Studies on Tensification in English Loanword Adaptation in Korean

English [b, d, g, ɔ̃] map to Korean [p, t, k, ʃ] respectively in English loanword adaptation in Korean (e.g., *design* [tiʃain), *guide* [kaiti]). These English consonants can also map to Korean tense consonants [p', t', k', ʃ'] (e.g., *dance* [t'ænsi], *jelly* [ʃ'elli]). This is 'tensification' in English loanword adaptation in Korean, and it only occurs in word-initial prevocalic position. Previous studies (Kang, 2008; Oh, 2009; Kim, 2016) on tensification in English loanword adaptation in Korean argue that there are two main factors affecting the likelihood of tensification. First, when the word-initial consonant is alveopalatal [ʃ], tensification occurs most frequently. On the other hand, if the word-initial consonant is alveolar, tensification occurs least frequently. Second, when the vowel following the word-initial consonant is non-high, tensification occurs more than when the following vowel is high.

Many previous studies on the factors affecting the likelihood of tensification in English loanword adaptation in Korean were based on wordlists with English loanwords which were already borrowed into Korean or pronunciation experiments. Thus, this study used perceptual experiments to look at tensification from a different perspective. Perceptual studies on loanwords (Kenstowicz, 2003; Kwon, 2017) argue that the perceptual similarities between non-native inputs and native outputs play a key role in loanword adaptation. Based on this approach, a higher degree of perceptual similarity between non-native inputs and native outputs causes phonological changes in loanword adaptation. Based on vowel and consonant factors mentioned above, the following perceptual hypotheses are formulated: i) English forms having a word-initial alveopalatal consonant are expected to be perceived as similar to Korean words with tensification more often than English words with other consonant places (the consonant effect). ii) English words having a non-high vowel right after the word-initial consonant are expected to be perceived as similar to Korean words with tensification more often than English words having a high vowel right after the word-initial consonant (the vowel effect).

Two perceptual experiments were conducted with eight native Korean speakers ($f=4$, $m=4$). ABX formats were used in both experiments. In the first experiment for the consonant effect, X is an English [CVp] form with C being one of alveopalatal/bilabial/velar/alveolar consonants and V being one of two high vowels [i, u]. A and B are the corresponding Korean [CVp] and [C'Vp] forms. A total of 480 ABX sequences were collected. In the second experiment for the vowel effect, X is an English [dVp] form with V being one of high/mid/low vowels. A and B are the corresponding Korean [tVp] and [t'Vp] forms. A total of 480 ABX sequences were collected. In both experiments, participants were asked to choose the Korean form (A or B) which sounds more similar to the English form (X). According to the results of perceptual experiments, the consonant effect is statistically significant ($X^2 = 21.833$, $df = 1$, $p\text{-value} = 0.000019$, alveopalatal > velar > bilabial > alveolar), and the vowel effect is statistically significant ($X^2 = 31.72$, $df = 1$, $p\text{-value} = 5.927e-39$, low = mid > high), as well. These results confirm both perceptual hypotheses. If the word-initial consonant is alveopalatal, it may have highest probability of tensification (alveopalatal > velar > bilabial > alveolar). Also, the following vowel is non-high, the word-initial consonant is more likely to be tensed.

In this study, actual perceptual experiments were conducted to investigate tensification in English loanword adaptation in Korean, so this study may help to get a more fine-grained tensification model of loanword adaptation in Korean. In addition, my findings can give an opportunity to apply the perceptual studies to more broad areas in loanword adaptation in Korean in that perceptual studies have been used to explore restricted subjects such as vowel epenthesis in English loanwords in Korean.

References

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