

English Rhythm in foreign Language Education for Korean Learners

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1.0 Introduction

Phonological Rhythm Transfer: From Korean to English- English: A stress-timed language- Stressed syllables are timing beats- Unstressed syllables are uncounted for rhythm (Prator and Robinett, 1972:29)

- Korean: A syllable-timed language
- Japanese: A mora-timed language

2.0 Hypotheses

2.1 Hypothesis 1: Vowel Duration

Korean learners inconsistently shorten the length of reduced or unstressed vowels in English.

2.2 Hypothesis 2: Syllable Duration

Korean learners utter the unstressed syllables in English with inconsistent temporal reduction.

3.0 Research

3.1 Experiment 1

Research Participants: 10 Korean learners of English and
1 native speaker of American English

Method of Data Collection:

- Step 1: Explicit lessons on shortening in English vowels
- Step 2: Utterance practices with a pre-recorded model American English
- Step 3: Read, recorded, and digitized by CSL, in 16KHz & 16 bits

Material: 10 pairs of contrastive words containing stressed and reduced vowels.

Stressed	reduced	stressed	reduced	stressed	reduced
Depreciate	deprecate	add	addition	confirm	confirmation
implicit	implication	majority	major	society	social
explains	explanation	confront	confrontation	compute	computation
allege	allegation				

3.2 Experiment 2

Research Participants: 10 Korean learners of English and 1 native speaker of

American English.

Method of Data Collection:

Step 1: Explicit lessons on shortening in English vowels

Step 2: Utterance practices with a pre-recorded model American English

Step 3: Read, recorded, and digitized by CSL, in 16KHz & 16 bits

Material: 10 contrastive sentences containing stress alternations.

stressed	reduced
What explains this uni-directional paralysis? This is nevertheless the majority. Will you please confirm the policy? Add remaining ingredients and bring to a boil. Does society really exist as an entity?	But that explanation is partly true. He is a man of major talent. There was no confirmation about the policy. Addition and subtraction are learned skills. Differences were related to social backgrounds.

3.3 Experiment

Research Participants: 3 Japanese learners of English

Method of Data Collection:

Step 1: No explicit lessons on shortening in English vowels

Step 2: No practices with a pre-recorded American English sample

Step 3: Spontaneous speech recorded by using an analog cassette deck and digitized by Sound Blaster

Material: English conversation excerpts of spontaneous speech in the “Cross-Cultural Distance Learning” project by Waseda University.

4.0 Data Analysis

Waveforms, spectrograms, and pitch traces were analyzed by CSL and Pitch Works. The duration ratio of the stressed vowels and the reduced syllables was measured. Also measured was the ratio of the pitch height to observe the Korean research participants using both pitch and duration to express stress (Yang, 2002).

5.0 Results

5.1 Hypothesis 1: Supported

Korean learners of English inconsistently shorten the length of reduced or unstressed vowels in English when reading contrastive word-pairs and sentences. (Korean Data in Figures 1 & 3 show both above and below 100 %, meaning inconsistent reduction.)

5.2 Hypothesis 2: Supported

Korean learners of English utter the unstressed syllables in English with inconsistent temporal reduction when reading contrastive word-pairs and sentences.

(Korean Data in Figures 2 & 4 show both above and below 100%, meaning inconsistent reduction.)

5.3 Experiment 1

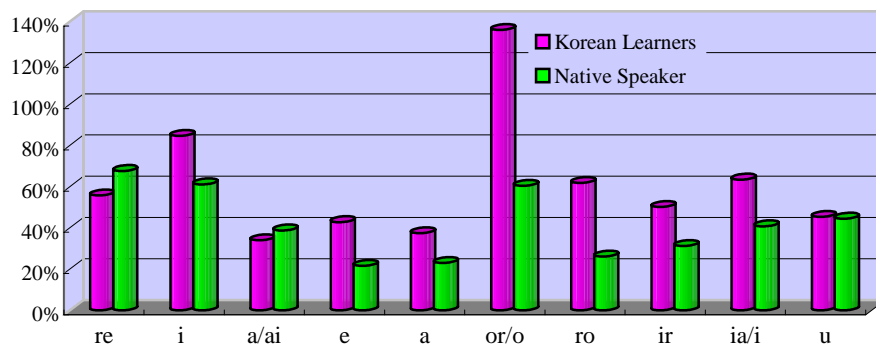


Figure 1. Ratio of Reduced vs. Stressed Vowel Durations in Word Pairs read by Korean learners and an American Speaker

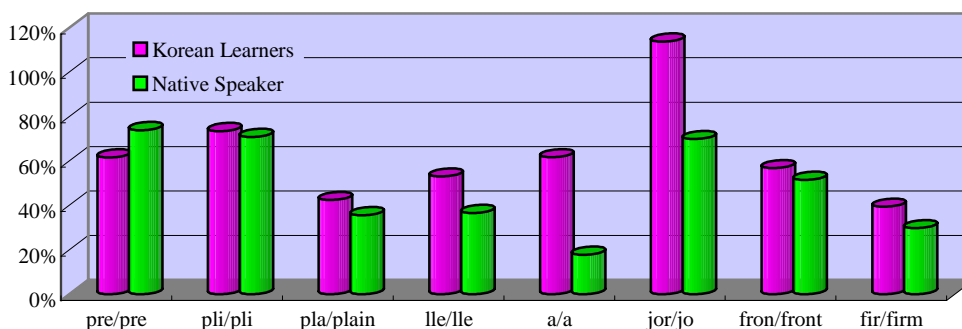
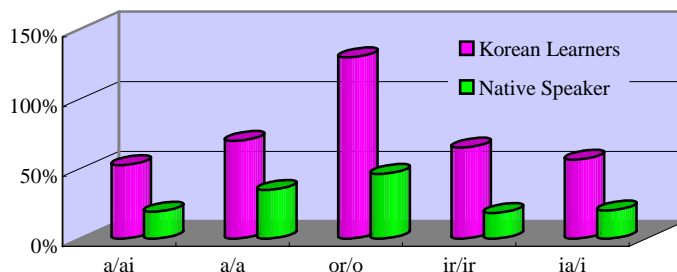


Figure 2. Ratio of Reduced vs. Stressed Syllable Durations in Word Pairs read by Korean learners and an American Speaker



5.4 Experiment 2 Figure 3. Ratio of Reduced vs. Stressed Vowel Durations in Sentence Pairs read by Korean learners and an American Speaker

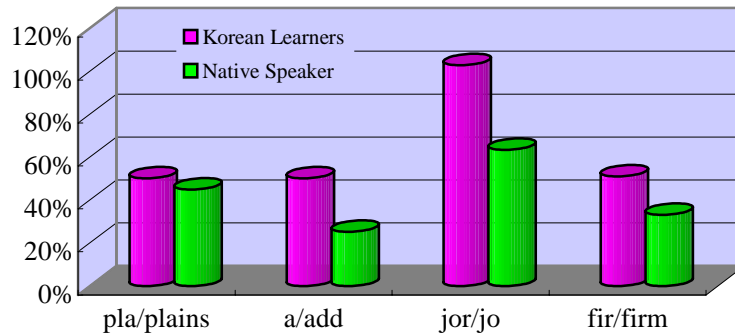


Figure 4. Ratio of Reduced vs. Stressed Syllable Durations in Sentence Pairs read by Korean learners and an American Speaker

5.5 Experiment 3

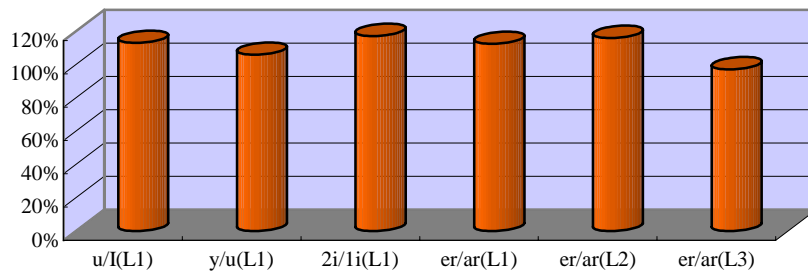


Figure 5. Ratio of Reduced vs. Stressed Vowel Durations in Spontaneous Speech of Japanese Learners

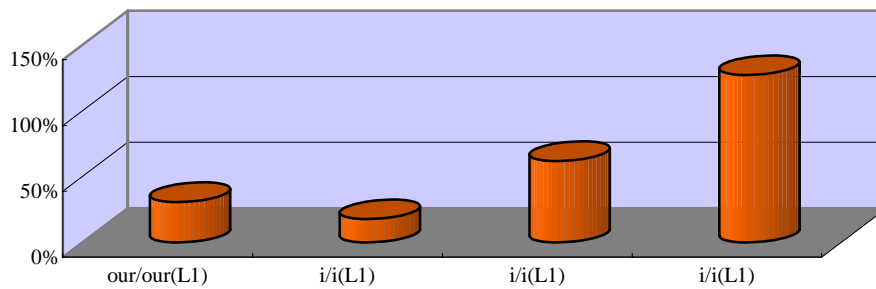


Figure 6. Ratio of Unstressed vs. Stressed Vowel Durations in Spontaneous Speech of Japanese Learners

6.0 Conclusion and Implications

Phonological rhythm transfer occurs from Korean and Japanese to English. The relative duration ratio was more salient for the English native speaker, as pitch for the Korean and Japanese learners. The vowel duration ratio for Korean and Japanese

learners of English as shown in Figures 1, 3, 5, & 6 indicates both above and below 100%, meaning inconsistent reduction. Beckman and Elam (1997) presents a number of examples that the speakers of American English produce the stressed vowels with low pitch. The validity of typological difference in phonological rhythm is also supported, in that English is a stress-timed language while Korean is a syllable-timed one.