Stress Processing Sensitivity in Reading Korean and English Words*

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Abstract. The present study explored the sensitivity to stress patterns of sixty-four ninth-graders learning to speak and read in Korean as a first language (L1) and English as a second language (L2) concurrently. Students' productive stress processing abilities were assessed in reading Korean real words, English unfamiliar real words, and English pseudo-words. Results unveiled that the Korean-speaking English language learners (ELLs) performed differently between Korean and English in terms of number of syllables and stress placement within a syllable structure. More specifically, their stress processing performances between the two languages clearly differed when the number of syllables increases and their stress assignment differences across the two languages were much larger on dissimilar stress patterns than similar ones. These findings suggest that unfamiliar L2-specific prosodic information such as stress may present additional challenges to L2 learners, especially when their L1 is not stress-based.

Keywords: stress processing sensitivity, prosodic information.

1. Introduction

Spoken words can be characterized in terms of suprasegmental or prosodic features, markedly stress, determined by acoustic frequency, intensity, and/or duration. Such a stressed-syllable is relatively louder and longer than other syllables in the same word or phrase (Ladefoged, 2001). In some languages such as Korean, French, and Czech, stress pattern of words is somehow predictable and syllable-based. For example, in Korean, stress mostly falls on the first syllable, otherwise on the second syllable, displaying no significant linguistic difference (Lee, 1990; Park, 2004). In French, stress dominantly falls on the final syllable with a full vowel, with no distinctive minimal pairs of words differed by its stress pattern and in Czech, stress almost always falls on the first syllable of a word (Jannedy, Poletto and Weldon, 1994). These syllable-based languages do not show meaning and grammatical differences influenced by their stress patterns.

In other languages such as English, although the placement of stress is less predictable, stress can involve in lexical contrasts, causing a difference in meaning (i.e., TRUsty-truSTEE). In addition, it can change grammatical functions of words. For example, the word *progress* functions as a noun when the stress is placed on the first syllable, whereas as a verb when the stress is placed on the second syllable. The other stress-based languages in which speech sounds is controlled by stress are Spanish and Dutch (Goetry, Wade-Woolley, Kolnsky and Mousty, 2006). These languages do also illustrate lexical contrasts defined by their stress patterns.

Current understanding of the stress pattern across languages suggests that the linguistic role of stress pattern widely differs with respect to lexical and grammatical functions and the rule of stress assignment is language specific. Recent studies on first-language (L1) stress sensitivity have demonstrated that L1 speakers of stress-based languages (i.e., English, Spanish, and

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Dutch) are more sensitive to stress patterns than those of syllable-based languages (i.e, Korean and French). For example, given the discrepant lexical function of stress between Spanish and French, adult L1 speakers of French produced more errors in judging whether a string of pseudo-words differing in stress pattern display the same stress pattern or not than adult L1 speakers of Spanish (Dupoux, Pallier, Sebastian-Galles and Mehler, 1997). In another follow-up study of phoneme-and stress-contrast sensitivity, Dupoux and colleagues (Dupoux, Peperkamp and Sebastian-Galles, 2001) found that adult L1 speakers of Spanish and French performed similarly on the phoneme contrast judgment (i.e., /kypi/-/kyti/). However, the Spanish-native monolinguals significantly outperformed the French-native monolinguals on the stress contrast judgment (i.e, /'kipi/-/ki'pi/).

In the meantime, the sensitivity to stress patterns has not received much attention in L2 reading research until recently because suprasegmental information is not manifested in most written systems. In a recent pioneering study of sensitivity of prosodic features among monolingual and bilingual first graders, Goetry and associates (Goetry, Wade-Woolley, Kolinsky and Mousty, 2006) compared the stress and phonemic awareness of French-native, Dutch-native monolingual, French-native children taught in Dutch, and Dutch-native children taught in French. The results showed that the four groups of first-graders performed similarly on phonemic awareness judgment (i.e., /'tepy/-/'tapy/) but differed on stress sensitivity judgment (i.e., /'tipy/-/ti'py/). The Dutch monolinguals notably outperformed the French monolinguals. The other bilingual first-graders had the intermediary performances. More importantly, Goetry et al. (2006) also suggest that early literacy development in a second stress-based language can be influenced by stress sensitivity by observing the correlation between stress awareness and word reading in the French monolinguals schooled in Dutch, not in the Dutch monolinguals schooled in French.

Based on the findings of existing research on cross-linguistic comparisons of L1 and L2 stress awareness, stress processing ability may play a crucial role in learning to read in a second stress-based language such as English, Dutch, or Spanish, especially when students' L1 is not stress-based. Moreover, spoken word processing is largely related to written word identification (Morais, 2003). At this point, it is significant to explore the stress assignment sensitivity of word reading in Korean, a syllable-based language, compared with that in English, a stress-based language as there has been little exploitation of learning to concurrently speak and read in an L1 with transparent stress rule and an L2 with opaque stress rule. In addition, previous studies have mainly focused on the perceptive sensitivity of stress contrasts. Consequently, more attention needs to be raised in interpreting the productive sensitivity of stress assignment.

As discussed earlier, the stress pattern of Korean is somewhat predictable and regular without distinguishing meanings and grammatical functions of words. On the other hand, because the stress rule in English varies depending on word classes (Roca and Johnson, 1999), to some degree, it is less predictable and irregular with lexical and grammatical contrasts. Indeed, if Korean-speaking English language learners (ELLs) face exclusively distinctive stress patterns of English, which is not relevant to their L1, they may confront drastic restructuring of their interlanguage stress assignments and deal with unstable prosodic representations across the two languages. As a result, they would be at risk for difficulties in learning to speak and read in English as a stress-sensitive L2 and displaying prosodic information of English words.

Given the discrepant stress assignment between Korean and English, the primary goal of this current study is to investigate the stress processing sensitivity of Korean-speaking ELLs in terms of number of syllables in a word and syllable structure in the word. The three research questions addressed in this study are as follows:

(1) Given the distinctive stress assignment between Korean and English, what are the stress processing abilities of Korean-speaking ELLs in the L1 (Korean) and in the L2 (English)?
(2) Depending on the number of syllables, how does students' stress sensitivity differ between the two languages?
(3) Within a syllable structure, how sensitive are they to stress patterns across the two languages?

Investigating language-specific stress awareness engaged in L1 and L2 word reading can shed light on the degree of cross-language transfer and can furthermore suggest that dissimilar L2-specific prosodic features increase particular difficulties in L2 stress processing due to overgeneralized stress rules gained from L1.

2. An Overview of Stress Assignment Rule Differences

In Korean, regardless of word classes (i.e., noun or verb), stress is typically assigned depending on number of syllables. In disyllabic words, for example, stress is almost always placed on the first syllable and in Korean polysyllabic words, depending on the weight of the first syllable, stress patterns of the words are divided into two categories. In other words, if the first syllable is heavy[1], stress is almost always placed on that syllable. If not, either on the first or on the second syllable, displaying no significant linguistic meaning and function changes (Lee, 1990). The stress assignment rules in Korean are represented as follows:

(a) Two syllable morphemes: Stress falls on the first syllable.
(b) Three or more syllable morphemes: If the first syllable is heavy, stress falls on that syllable. Otherwise, either on the first or on the second syllable, with no important linguistic difference implied (Lee, 1990, pp. 50-51).

However, stress rules in English are varying with classes of words, playing a role of meaningful and grammatical contrasts. Stress of nouns and verbs is governed by different rules, respectively (cf. Roca and Johnson, 1999).

(a) Nouns and suffixed adjectives: The penultimate syllable is stressed if it is heavy; otherwise stress falls on the antepenultimate syllable.
(b) Verbs and unsuffixed adjectives: The ultimate syllable is stressed if it is heavy; otherwise stress falls on the penultimate syllable.

Based on the three research questions addressed earlier, this present study would predict that depending on number of syllables in a word and syllable structure in the word, the sensitivity to stress patterns of Korean-speaking ELLs differs between Korean and English. More specifically, the performance on stress processing across the two languages would noticeably differ on dissimilar and non-overlapping stress patterns than similar and overlapping ones because unfamiliar stress-sensitive L2 (i.e., stress assignment rule) may present additional challenges to bilinguals whose L1 is less stress-sensitive.

3. Methods

3.1. Participants

In the context of English as a foreign language (EFL), sixty-four ninth-graders learning to speak and read in Korean and English simultaneously were recruited to voluntarily participate in this study (mean age: 15.97 years; 32 boys, 32 girls). All of the participants were native speakers of Korean with similar socio-cultural backgrounds, attending the same middle school located in Kyunggi-do (province). Based on the results of a demographic questionnaire the participants were individually asked to fill out, the mean stay of English-speaking countries was 0.04 years and all of them have been staying at Seoul metropolitan area and Kyunggi-do in which standard Korean is spoken. All of their family members including the subjects spoke Korean at home. In short, all of the subjects had limited exposure to English as an L2 and spoke standard Korean.

3.2. Testing Items

[1][1] A heavy syllable is one with a branching rhyme (VC) or a branching nucleus (VV), contrasted with V, which` is a light syllable. The number of segments on onset does not matter with regard to the weight of syllables (Spencer, 1996).

In order to examine how Korean-speaking ELLs process a stress in a Korean word, twenty-five Korean real words were selected and split into 5 subcategories with respect to their syllable structures, the number of syllables, the placement of stress in a word (see Appendix A). In particular, nouns are dominantly employed for Korean (L1) testing items to match comparability of English (L2) items in terms of their syllable structures and stress patterns. That is, the Korean verbs and adjectives corresponding to a syllable structure and stress pattern in English do exist but rarely. Additionally, because there exist no Korean words stressed on the second syllable, only the syllable structure of 'CV.CVC under the two syllable category in Korean was used.

In the same way, thirty English real words were selected to observe Korean-speaking ELLs' stress awareness of English (see Appendix B) and fall into 6 subcategories. Twenty items for each subcategory, total of 120 words, were initially field-tested with the participants and then the items with which more than 50% of the subjects were familiar were excluded. Equally important, the selected thirty unfamiliar real words are manipulated by changing the onset of stressed syllable and considering place of articulation and, if it does not work, then manner of articulation (i.e., 'magic -> 'nagic).

3.3. Procedure

The participants were individually assessed in reading Korean real words, English unfamiliar real words, and English pseudo-words. The order of the three language tasks was counterbalanced and the randomized items were visually presented on the screen of a laptop. Within a language task, the students were asked to read target words one by one. Prior to the administrations of each of the two English real and pseudo-word tasks, two trial items per each syllable structure were given to the students. All of the three tasks were conducted by a fluent Korean-English bilingual experimenter, who recorded the students' responses over the three tasks in a quiet room. Each session was audio-taped for later coding of accuracy via a MP3 player.

3.4. Coding

The recorded responses of the participants' production of each Korean and English stimulus were transferred onto a computer. In order to identify a placement of stress in a word, Praat program [2], commonly used for acoustic analysis (Ladefoged, 2003; Yang, 2000) was downloaded from the following link at http://www.fon.hum.uva.nl/praat/. Because a stressed syllable has a longer vowel than the other vowels in a word (Ladefoged. 2001), the waveforms retrieved from the recorded files were edited to measure the durations of vowels in a word. That is, a stress is typically assigned to the longer vowels than the neighboring vowels in the word.

Each item within a syllable structure was scored as 1 when each participant has a correct placement of stress in a word. The score of the Korean syllable structure of 'CV.CVC was used twice because there are no Korean words stressed on the second syllable in two-syllable words. Thus, total score of each language task was 30. Accuracy of stress placement of each item was calculated per subject, then summed up, and averaged in terms of syllable structure, number of syllable, and language task. The mean of stress awareness was converted into correct percentage of stress sensitivity.

4. Results and Discussion

In investigating stress processing sensitivities of Korean-speaking ELLs, a series of repeated-measures ANOVAs was conducted to measure differences between language tasks, number of syllables, and syllable structures separately. In addition, Bonferroni multiple comparisons were

[2] The program was developed by Paul Boersma and David Weenink at the Institute of Phonetic Sciences, University of Amsterdam.

carried out to compare specific language tasks, number of syllables, and syllable structures respectively.

Table 1 shows the means observed for the three language tasks depending on number of syllables and stress placement within a syllable structure. Inspection of Table 1 indicates that overall, Korean-Speaking ELLs performed better on the Korean words than on the English real/pseudo-words and regardless of language task, the mean accuracy of stress awareness generally decreases when number of syllable increases. More important, their productive sensitivity of stress placement was more accurate in responding to similar stress patterns between Korean and English than dissimilar ones.

Table 1: Means observed for the three language tasks depending on number of syllable and stress placement within a syllable structure (N = 64).

	Language Task								
	Korean Real Word			English Real Word			English Pseudo Word		
Number of Syllables	To-Be-Stressed-Syllable	M	SD	To-Be-Stressed-Syllable	M	SD	To-Be-Stressed-Syllable	M	SD
2 Syllables	1st	5.00	.00	1st	4.44	.99	1st	4.19	1.41
	1st	5.00	.00	2nd	3.00	1.27	2nd	2.58	1.32
3 Syllables	2nd	4.89	.57	1st	3.45	1.21	1st	3.64	1.25
	1st	5.00	.00	2nd	1.39	0.79	2nd	1.17	.77
4 Syllables	1st	4.94	.24	2nd	.48	.62	2nd	.36	.55
	1st or 2nd	4.98	.13	3rd	1.73	1.22	3rd	1.41	1.19

Note: Maximum score of each stress placement within a syllable structure = 5.

4.1. Results for Research Question 1

In order to answer the Research Question 1 regarding comparison of stress awareness between Korean and English, the accuracy percentages of the three languages tasks are presented in Figure 1. Results in Figure 1 show that the participants' productive awareness of stress assignment was most accurate in Korean real word (M = 29.82), followed by English unfamiliar real word (M = 14.50) and English pseudo-word (M = 13.34). A repeated-measures ANOVA showed the significant within-subjects effects of language task, F (2, 126) = 952.49, p< .001. Additionally, Bonferroni analyses across the three tasks confirmed that the Korean-speaking ELLs differently performed across the three language tasks (Real Korean vs. Real English: p< .001; Real English vs. Pseudo English: p< .001; Real Korean vs. Pseudo English: p< .001).

Within a language task, a series of repeated-measures ANOVAs were employed to examine stress processing differences between 3 syllables and between 6 syllable structures separately. For Korean real word, there were no significant within-subjects effects of number of syllable and syllable structure. For English real word, however, there were significant within-subjects effects of number of syllables, F (2, 126) = 264.24, p< .001, and of syllable structure, F (5, 315) = 160.16, p< .001. Similarly, for English pseudo-word, there were also significant within-subjects effects of number of syllables, F (2, 126) = 187.85, p< .001, and of syllable structure, F (5, 315) = 140.18, p< .001. The results of three language tasks suggest that Korean-speaking ELLs perform similarly on Korean real word regardless of the number of syllables and syllable structures, whereas they perform differently on English real and pseudo-word depending on the number of syllables and syllable structures. In other words, their stress processing abilities are stable in Korean and unstable in English.

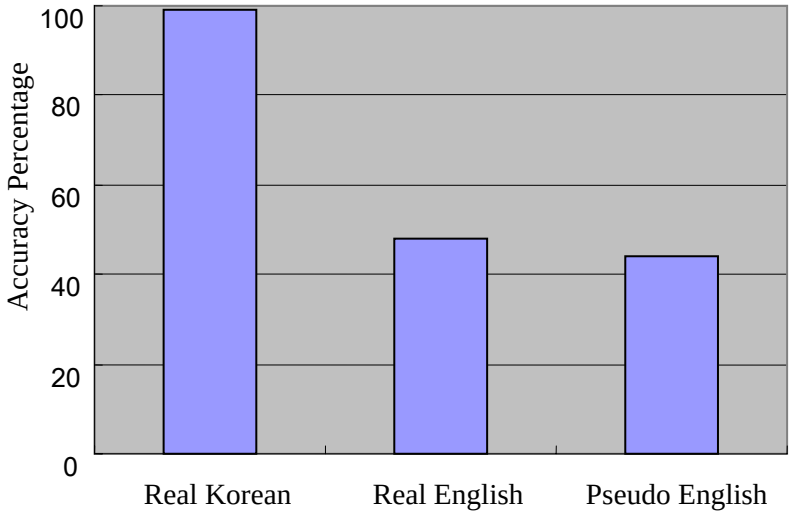

Figure 1: Performance of the stress awareness in Korean real words, English unfamiliar real words, and English pseudo-words.

4.2. Results for Research Question 2

In order to examine the Research Question 2 concerning the stress sensitivity between Korean and English in terms of number of syllables, the correct percentages of the number of syllables across the three language tasks are shown in Figure 2. Findings in Figure 2 provide that for 2-syllable word, the subjects' stress processing accuracy in Korean real word (M = 10.00) was higher than that in English real (M = 7.44) and pseudo-word (M = 6.77). For 3- and 4-syllable word, the similar performances on stress placement were observed (for 3-syllable word: Korean, M = 9.89, Real English, M = 4.84, Pseudo English, M = 4.81; for 4-syllable word: Korean, M = 9.94, Real English, M = 2.21; Pseudo English, M = 1.76).

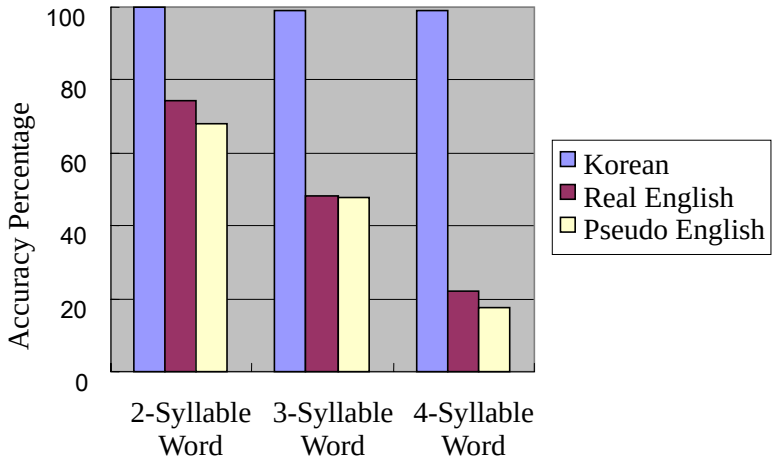

Figure 2: Performance of the stress awareness across Korean real word, English unfamiliar real word, and English pseudo-word in terms of the number of syllables.

In the following step, a string of repeated-measures ANOVAs was conducted to compare their stress processing differences of the three language tasks within a given number of syllables. One ANOVA for 2-syllable word revealed the significant within-subjects effects of language task, F (2, 126) = 92.08, p< .001. In addition, Bonferroni analyses also showed the mean differences

among the three tasks (Real Korean vs. Real English: $p < .001$; Real English vs. Pseudo English: $p < .05$; Real Korean vs. Pseudo English: $p < .001$). Similarly, for 3-syllable word, the significant differences were obtained between tasks, F (2, 126) = 408.93, $p < .001$. In particular, multiple comparisons measured by Bonferroni analyses demonstrated the mean differences between Korean real word and English real word ($p < .001$), and between Korean real word and English pseudo-word ($p < .001$), but not between English real and pseudo-word. In examining differences of 4-syllable word, another ANOVA also showed the significant differences between tasks, F (2, 126) = 1537.50, $p < .001$. Moreover, Bonferroni analyses also showed the mean differences among the three tasks (Real Korean vs. Real English: $p < .001$; Real English vs. Pseudo English: $p < .05$; Real Korean vs. Pseudo English: $p < .001$). The findings suggest that overall, in all 2-, 3-, and 4-syllable words, the Korean-speaking ELLs perform better on Korean real word than on English real word and pseudo-word. Furthermore, the effects of language task are more pronounced as the number of syllables increases by observing the effect size of 2-, 3-, and 4-syllable word ($\eta^2 = .59$, .87, and .98 respectively). In a word, the stress processing performances between Korean and English obviously differ when the number of syllables increases.

4.3. Results for Research Question 3

As far as the Research Question 3 regarding the sensitivity to stress placement within a syllable structure across the two languages is concerned, firstly, Figure 3 presents the accurate percentages of the similar and dissimilar stress patterns in 2-syllable words across the three language tasks. Results in Figure 3 demonstrate that in a similar stress pattern (for both Korean and English: 1st syllable stressed), the participants' production of stress assignment was more accurate in Korean real word (M = 5.00) than in English real (M = 4.44) and pseudo-word (M = 4.19). In a similar stress pattern, a repeated-measures ANOVA showed the significant effects of language task, F (2, 126) = 14.27, $p < .001$, $\eta^2 = .19$. Besides, Bonferroni pairwise comparisons confirmed the mean differences between Korean real word and English real word ($p < .001$), and between Korean real word and English pseudo-word ($p < .001$). However, there was no mean difference between English real and pseudo-word. The findings propose that even though there is a similar stress pattern between the two languages, the Korean-speaking ELLs perform differently across the two languages, but similarly between the two English tasks.

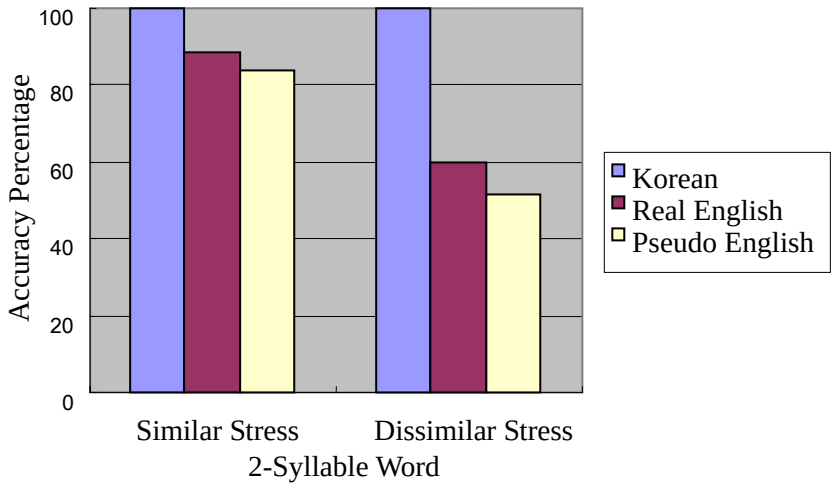

Figure 3: Performance of the stress awareness across Korean real word, English unfamiliar real word, and English pseudo-word in terms of stress placement within 2-syllable words.

Meanwhile, in a dissimilar pattern (for Korean: 1st syllable stressed; for English: 2nd syllable stressed), the subjects' stress assignment accuracy in Korean real word (M = 5.00) was higher

than in English real (M = 3.00) and pseudo-word (M = 2.58). Another repeated-measures ANOVA unveiled the significant effects of language task, F (2, 126) = 129.29, p< .001, η^2 = .67. Additionally, Theses effects were confirmed by Bonferroni analyses (Real Korean vs. Real English: p< .001; Real English vs. Pseudo English: p< .05; Real Korean vs. Pseudo English: p< .001). The results suggest that in a dissimilar stress pattern, the participants' stress processing accuracy apparently differs between Korean and English. In comparing effect size of similar (η^2 = .19) and dissimilar pattern (η^2 = .67), as expected, the performance differences between the two languages are much larger on dissimilar stress pattern than similar one.

Secondly, Figure 4 illustrates the correct percentages of the two distinctive stress patterns in 3-syllable words across the three language tasks. Results in Figure 4 shows that in a dissimilar stress pattern (for Korean: 2nd syllable stressed; for English: 1st syllable stressed), the performance on Korean real word (M = 4.89) is much better than the two other English tasks (for Real English: M = 3.45; for Pseudo English: M = 3.64). A repeated-measures ANOVA uncovered the significant effects of language task, F (2, 126) = 54.82, p< .001, η^2 = .47. Bonferroni analyses also showed the mean differences between Korean task and the two other English tasks (p< .001) but not between the two English tasks.

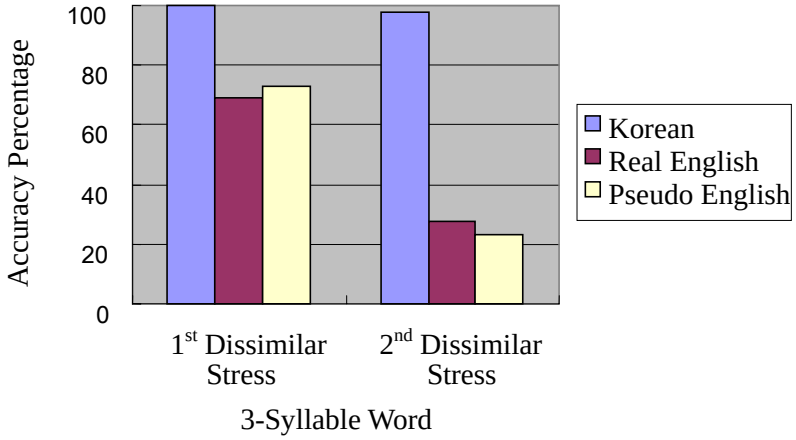

Figure 4: Performance of the stress awareness across Korean real word, English unfamiliar real word, and English pseudo-word in terms of stress placement within 3-syllable words.

In another dissimilar stress pattern (for Korean: 1st syllable stressed; for English: 2nd syllable stressed), the similar performance on stress awareness was also observed by the repeated-measures ANOVA, F (2, 126) = 769.59, p< .001, η^2 = .92 (for Real Korean: M = 5.00; for Real English: M = 1.39; for Pseudo English: M = 1.17) and was verified by Bonferroni analyses (Real Korean vs. Real English: p< .001; Real Korean vs. Pseudo English: p< .001; Real English vs. Pseudo English: p> .1). The findings of the two conflicting stress patterns in 3-syllable words imply that the subjects' stress processing abilities are noticeably uneven across the two languages.

Finally, Figure 5 explains the accurate percentages of the two idiosyncratic stress patterns in 4-syllable words across the three tasks. Findings in Figure 5 provide that in a dissimilar stress pattern (for Korean: 1st syllable stressed; for English: 2nd syllable stressed), the subjects' stress processing in Korean real word (M = 4.94) was most accurate, compared with English real (M = .48) and pseudo-words (M = .36), which was proved by the significant effects of language task in the repeated-measures ANOVA, F (2, 126) = 1947.78, p< .001, η^2 = .97, and by the mean differences in Bonferroni analyses (Real Korean vs. Real English: p< .001; Real Korean vs. Pseudo English: p< .001; Real English vs. Pseudo English: p> .1).

In the other dissimilar pattern (for Korean: either 1st or 2nd syllable stressed; for English: 3rd syllable stressed), similarly, the performance on stress sensitivity in Korean real word (M = 4.98) was much higher than English real (M = 1.73) and pseudo-word (M = 1.41), which was

witnessed by the repeated-measures ANOVA, F (2, 126) = 353.52, p< .001, η^2 = .85, and by Bonferroni analyses (Real Korean vs. Real English: p< .001; Real Korean vs. Pseudo English: p< .001; Real English vs. Pseudo English: p> .05). Again, the results of the two incompatible stress patterns in 4-syllable words suggest that the participants' productive awareness of stress assignment clearly differ between the two languages.

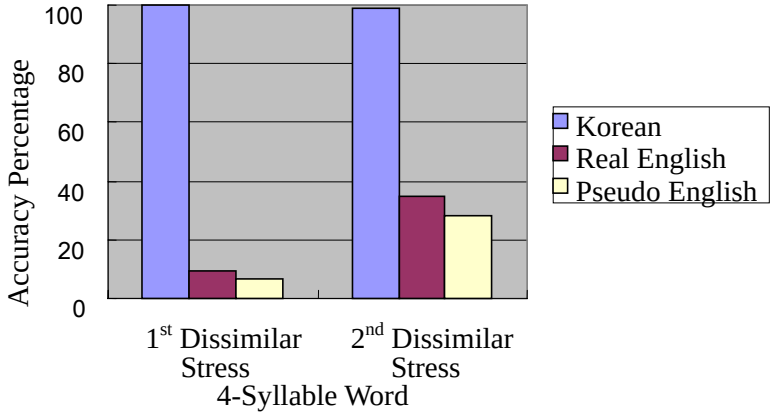

Figure 5: Performance of the stress awareness across Korean real word, English unfamiliar real word, and English pseudo-word in terms of stress placement within 4-syllable words.

4. Conclusion and Implications

The current study investigated the sensitivity to stress placement demonstrated by Korean-speaking ELLs and furthermore, examined the prosodic representations with respect to language, number of syllables, and stress pattern within a syllable structure. The study found that in general, they performed better on Korean than English. More important, when the number of syllables increases, their stress processing abilities between the two languages apparently differed. That is, their stress awareness in Korean was stable regardless of the number of syllables, whereas that in English was unstable, thus decreases when the number of syllables increases. Equally important, their stress assignment differences across the two languages are evidently pronounced when the two languages have distinctive stress patterns.

The present findings suggest that the acquisition of L2 suprasegmental information may depend on the degree to which the L1 and L2 prosodic properties such as stress share structural similarities, identifying the potential prosodic errors which may cause the difficulty in L2 prosodic processing. Especially, if students' L1 is not a stress-sensitive language, they may face difficulties in learning to read in a stress-sensitive L2 like English and dealing with prosodic features of the stress-based L2. Moreover, as the overgeneralized stress assignment rules from the L1 may lead to inappropriate lexical and grammatical functions of the L2 prosodic features, the inclusion of practices focused on developing sensitivity to the placement of stress may be helpful to facilitate L2 speaking and reading abilities.

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Appendix A: Korean Items

Number of Syllables	Syllable Structure	Korean
Two	'CV.CVC	사진, 하늘, 시간, 도심, 시골
Three	CV. 'CV.CV	너구리, 지우개, 가자미, 바구니, 개구리
	'CVC. CV.CV	갈매기, 연구소, 잠자리, 문화사, 접미사
Four	'CVC.CV.CV(C).CV(C)	날개개미, 동의보감, 길모퉁이, 장구머리, 한해살이
	(')CV. (')CV.CV.CV	쥐며느리, 귀뚜라미, 가시고기, 가로쓰기, 자유주의

Appendix B: English Items

Number of Syllables	Syllable Structure	Real Words	Pseudo-Words
Two	'CV.CVC	marriage, passive, tunnel, ribbon, heaven	narriage, tassive, kunnel, dibbon, feaven
	CV.'CVC(C)	commit, detach, demand, possess, corrupt	connit, depach, denand, poffess, connupt
Three	'CV. CV.CV(C)	negative, calorie, cinema, summary, capital	megative, talorie, finema, fummary, tapital
	(C)VC.'CV(C).CVC(C)	condition, ambitious, volcanic, advantage, incumbent	conbition, amditious, voltanic, adzantage, intumbent
Four	(C)VC.'CV(C).(C)CV(C).CVC(C)	significant, conditional, consistency, adventurous, complexity	sigmificant, conbitional, confistency, adzenturous, comklexity
	(C)V.CV.'(C)CV(V).CVC	generation, beneficial, democratic, academic, politician	genenation, benesicial, demopratic, acabemic, polipician