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Differential effects of instruction on the development of second language comprehensibility, word stress, rhythm, and intonation: The case of inexperienced Japanese EFL learners

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Abstract

The current study examined in depth the effects of suprasegmental-based instruction on the global (comprehensibility) and suprasegmental (word stress, rhythm, and intonation) development of Japanese learners of English as a foreign language (EFL). Students in the experimental group (n = 10) received a total of three hours of instruction over six weeks, while those in the control group (n = 10) were provided with meaning-oriented instruction without any focus on suprasegmentals. Speech samples elicited from read-aloud tasks were assessed via native-speaking listeners' intuitive judgments and acoustic analyses. Overall, the pre-/post-test data showed significant gains in the overall comprehensibility, word stress, rhythm, and intonation of the experimental group in both trained and untrained lexical contexts. In particular, by virtue of explicitly addressing first language / second language linguistic differences, the instruction was able to help learners mark stressed syllables with longer and clearer vowels; reduce vowels in unstressed syllables; and use appropriate intonation patterns for yes/no and *wh*-questions. The findings provide empirical support for the value of suprasegmental-based instruction in phonological development, even with beginner-level EFL learners with a limited amount of second-language conversational experience.

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Form-focused instruction, phonological development, pronunciation, second language speech, suprasegmentals

I Introduction

Within the area of instructed second language acquisition (SLA), which has typically focused on grammar teaching (Spada & Tomita, 2010) and vocabulary teaching (Schmitt, 2008), researchers have recently begun to pay attention to examining the role of form-focused instruction in promoting second language (L2) pronunciation development (Lee, Jang, & Plonsky, 2015; Saito, 2012; Thomson & Derwing, 2015). While previous studies have examined the facilitative role of suprasegmental-based instruction as a whole due to its relative impact on native speakers' comprehensibility judgements (e.g. Derwing, Munro, & Wiebe, 1998), it is important to note that adult L2 learners acquire various aspects of suprasegmentals – word stress, rhythm, and intonation – at different learning rates, suggesting that L2 suprasegmental learning is a complex phenomenon entailing a varying amount of learning difficulty depending on the linguistic domain (Tanner & Landon, 2009; Trofimovich & Baker, 2006).

The current study aimed to revisit the effectiveness of suprasegmental-based instruction by scrutinizing which areas of suprasegmental performance are particularly susceptible to significant change. To this end, the current article reports on a quasi-experimental study, which investigated whether and to what degree a single-semester, suprasegmental-based instructional treatment could affect the comprehensibility, word stress, rhythm, and intonation development of inexperienced Japanese students of English as a foreign language (EFL). The pedagogical potential of the method was carefully examined from multiple angles via a set of outcome (trained, untrained texts) and analysis (rater judgments, acoustic analyses) measures.

II Background

To date, SLA researchers have reached the consensus that meaning-focused instruction alone may not be sufficient to ensure success in L2 learning (e.g. Norris & Ortega, 2000) and that it should be complemented with form-focused instruction. According to Spada (1997), form-focused instruction is 'any pedagogical effort which is used to draw the learners' attention to language form either implicitly or explicitly' (p. 73), and is hypothesized to be most effective when integrated into communicative-oriented and content-based classrooms (Spada, 2011). This is because L2 learners can notice and practice target linguistic features during meaningful discourse, which in turn enhances their 'form–meaning mappings' (Doughty, 2003; Ellis, 2002; VanPatten, 2004) and helps them transfer what they have learned to the real world (Lightbown, 2008; Trofimovich & Gatbonton, 2006). Several pedagogical techniques have been devised to draw learners' attention to target linguistic items with a primary focus on meaning in communicative contexts, such as explicit instruction (Spada & Lightbown, 2008), focused tasks (Ellis, 2003), and corrective feedback (Lyster & Saito, 2010).

Over the past 40 years, a great deal of attention has been directed towards the role of form-focused instruction in the development of L2 grammar (Spada, 2011) and vocabulary (Schmitt, 2008). The results have generally showed that contextualized teaching methods (e.g. form-focused instruction) are more effective than decontextualized teaching methods (e.g. audio-lingual, grammar-translation method). Specifically, form-focused instruction enables learners to use the target language not only at a controlled but also at a spontaneous speech level (learners can use their learned knowledge in real-life communicative contexts). Furthermore, the resulting instructional gains have been shown to be durable over a long period of time (learners can retain their learned knowledge even after sessions end), though this tends to vary according to the complexity of the linguistic structure(s) involved (Spada & Tomita, 2010). In contrast, pronunciation instruction has traditionally been taught in a decontextualized manner, largely because phonological learning uniquely requires both an understanding of pronunciation rules and the actual motor skills needed to produce the new sounds (Trofimovich & Gatbonton, 2006).

Recently, however, a growing number of studies have begun to examine the extent to which form-focused instruction can facilitate L2 pronunciation development as well (Saito, 2012). In their meta-analysis of previous pronunciation teaching studies, Lee et al. (2015) found an overall large effect size for instruction for both within- and between-group contrasts (d = 0.89, d = 0.80, respectively), although the researchers noted that their results should be treated with caution because of a bias towards statistically significant results from the pooled studies. Nevertheless, their meta-analysis confirmed that studies with longer interventions and which included corrective feedback yielded larger effects of instruction. For example, focusing on Japanese learners' acquisition of /ɹ/, our previous studies (e.g. Saito, 2013; Saito & Lyster, 2012) demonstrated the value of explicit phonetic information as well as corrective feedback (recasts).

Regarding the scope of instruction, ideally all L2 pronunciation features, spanning both segmentals (i.e. vowels and consonants) and suprasegmentals (i.e. stress, rhythm, and intonation), should be covered in classrooms; however, due to time constraints, teachers are often required to prioritize certain aspects of pronunciation. It has been argued that decisions about what to teach should be based on how different aspects of pronunciation enhance the intelligibility and/or comprehensibility of learners' speech (Field, 2005; Levis, 2005). Whereas some scholars have worked on elaborating a list of prioritized segmental features for intelligibility, especially in communication between non-native speakers (Jenkins, 2002), a great deal of attention has been directed towards investigating the importance of teaching suprasegmentals (the focus of the study). According to previous literature, the effective use of suprasegmentals by L2 learners may be able to camouflage their segmental errors (Gilbert, 2012). In addition, suprasegmental errors tend to hinder listeners' assessment of L2 speech more directly than segmentals do (Anderson-Hsieh, Johnson, & Koehler, 1992; Kang, Rubin, & Pickering, 2010). Suprasegmental-based instruction is thus likely more effective than segmental-based instruction, especially for the development of comprehensibility (Derwing et al., 1998; Gordon, Darcy, & Ewert, 2013). Furthermore, suprasegmentals, such as word stress and intonation, appear to be equally important at every stage of L2 oral ability learning (beginner → intermediate → advanced), while segmental precision is related to higher-level oral development (Saito, Trofimovich, & Isaacs, 2016).

Though few in number, there have been a growing number of empirical studies documenting the effects of suprasegmental-based instruction for learners' comprehensibility development. These studies are summarized in Table 1.

Whereas all of the studies suggest a positive role of suprasegmental-based instruction in L2 comprehensibility, most of them have tended to treat suprasegmentals as a single instructional target. Derwing, Munro, Foote, Waugh, and Fleming's (2014) intervention study was a first attempt to explore the role of form-focused instruction in the development of various suprasegmentals, with the gains measured via various temporal (articulation rate, mean length of run) and comprehensibility measures. However, the study did not address the differential amount of learning difficulty among other suprasegmentals. To expound the underlying mechanism for successful L2 suprasegmental learning in classroom settings, more carefully-designed empirical studies are needed, as the relationship between explicit instruction, suprasegmental features with varied learnability, and their ultimate impact on comprehensibility can be highly multifaceted in nature.

In the previous L2 pronunciation literature, certain suprasegmental features appear to be more closely connected with native speakers' judgments of L2 comprehensibility than others. Whereas word stress and rhythm were strongly predictive of comprehensibility ($r > .70$), the measures related to intonation and speech rate demonstrated a weak-to-medium correlation ($r < .50$) (Isaacs & Trofimovich, 2012). Field (2005) found that the misplacement of word stress caused a detrimental effect on native speakers' successful word recognition, though it remained unclear the extent to which the lack of word stress (monotonous speech) negatively impacted speech intelligibility. Finally, Tanner and Landon's (2009) study showed that the computer-assisted listening and reading practice of native speakers' model pronunciation resulted in students' enhanced awareness and performance of word stress but not intonation. These studies indicate that L2 pronunciation teachers need to understand which suprasegmental features (potentially with different communicative values) should be highlighted to promote enhanced comprehensibility in an efficient and effective manner.

Furthermore, there is some evidence that L2 learners have differential amounts of learning for various suprasegmental aspects in relation to an increased amount of experience in naturalistic settings. Trofimovich and Baker (2006) examined the effects of short, medium, and extended L2 experience (3 months, 3 years, and 10 years of residence in the USA, respectively) on the production of various areas of English suprasegmentals: stress timing (word stress, rhythm), peak alignment (intonation), speech rate (the number of syllables per minute), and pause frequency and duration (fluency). Based on the cross-sectional data, the results suggest that Korean L2 learners acquire these suprasegmental features at different rates. First, even moderately experienced learners attained nativelike fluency performance (pause frequency, duration). Second, only highly experienced learners could exhibit nativelike stress timing. Finally, none of the groups in the study reached nativelike attainment in speech rate and peak alignment. Regarding word stress, rhythm, and intonation (the target features of the study), Trofimovich and Baker's (2006) study provided an important implication for the learning hierarchy as follows: the full/weak vowel distinction (word stress, rhythm) < tonal melody (intonation). For a more recent longitudinal investigation of the topic, see Munro and Derwing (2014).

Table 1. Overview of six suprasegmental-based teaching studies.

	Participants	Raters	Target suprasegmentals	Suprasegmentals		Comprehensibility	
				Controlled tasks	Spontaneous tasks	Controlled tasks	Spontaneous tasks
Derwing et al. (1997)	13 ESL learners	37 NS listeners	Stress, intonation, and rhythm	n/a	n/a	○	n/a
Derwing et al. (1998)	48 ESL learners	48 NS novices 6 NS experts	Stress, intonation, and rhythm	n/a	n/a	○	○
Tanner & Landon (2009)	75 ESL learners	10 NS novices 2 NS experts	Pausing, stress, and intonation	○	n/a	n/a	×
Kennedy & Trofimovich (2010)	10 ESL learners	10 NS experts	Thought groups, stress, intonation, and rhythm	n/a	n/a	○	n/a
Gordon et al. (2013)	30 ESL learners	12 NS experts	Rhythm, stress, reduction, and linking	n/a	n/a	○	n/a
Derwing et al. (2014)	7 ESL learners	28 NS novices	Word stress, sentence stress, and intonation	○	n/a	○	○

Notes. ○ indicates statistically significant instructional gain; × indicates no statistically significant gain; ESL = English as a second language; NS = native speaker.

III Motivation for current study

Given that the studies reviewed above have confirmed the overall effectiveness of suprasegmental-based instruction on L2 comprehensibility, the current investigation was designed to scrutinize the complex mechanism underlying such instruction with two research objectives in mind. First, we set out to test the generalizability of previous findings – mainly those based on experienced immigrants (e.g. Derwing et al., 2014) and intermediate-to-advanced level ESL students (e.g. Derwing et al., 1998) in Canada – to a different learning context: inexperienced Japanese EFL students (for details, see Section IV).

Our second objective was to corroborate how suprasegmental-based instruction can differentially facilitate the development of word stress, rhythm, and intonation, and how such aspects of L2 suprasegmental learning can contribute to the development of comprehensibility. Trofimovich and Baker (2006) showed that compared to the tonal-melody aspects of language (intonation), adult L2 learners demonstrated much learning of the full/weak vowel distinction (word stress, rhythm). Furthermore, this learning was correlated with an increased length of residence in the USA (see also Munro & Derwing, 2014). Similarly, there is some evidence that ESL learners tend to have more difficulty learning intonation than word stress in classroom settings (Tanner & Landon, 2009). Thus, it is crucial to further scrutinize how form-focused instruction can differentially facilitate three domains of L2 suprasegmental learning (word stress, rhythm, and intonation) and ultimately impact the global comprehensibility of L2 speech. The findings of the study would in turn provide ample pedagogical implications as to which aspects of L2 suprasegmental features (the full/weak vowel distinction [word stress, rhythm] vs. tonal melody [intonation]) teachers and students should selectively focus on in order to optimize instructional time in the classroom. Therefore, two research questions were formulated as follows:

1. To what degree is suprasegmental-based instruction facilitative of the L2 comprehensibility development of Japanese EFL learners?
2. Which aspects of suprasegmentals (word stress, rhythm, and intonation) are relatively susceptible to instructional gains?

IV Method

1 Design

This study adopted a pre- and post-test design. In total, one experienced Japanese speaker participated as an instructor, 20 Japanese first-year university students from two intact classes participated as EFL learners, and four native-speaking English teachers participated as experienced raters.

The two classes were assigned to serve as the experimental group (n = 10) and the control group (n = 10), respectively. In Week 1, the EFL students were given an explanation of the study's purpose, signed a consent form and filled in a background survey containing their bio-data and English learning experience. In Week 2, they took the pretest. From Week 5 onwards, 10 students in the experimental group received approximately 30 minutes of form-focused instruction on the full/weak vowel distinction (word

Table 2. Summary of the procedure.

	Control (n = 10)	Experimental (n = 10)
Week 1	Project explanation	
Week 2	Data collection 1 (Reading aloud: Text A)	
Week 3	In-class presentation	
Week 4	In-class presentation	
Week 5	FonM	FonF (intonation)
Week 6	FonM	FonF (word stress)
Week 7	FonM	FonF (intonation)
Week 8	FonM	FonF (word stress)
Week 9	FonM	FonF (intonation)
Week 10	In-class presentation	
Week 11	FonM	FonF (word stress + rhythm)
Week 12	Data collection 2 (Reading aloud: Texts A & B)	
Week 13	In-class presentation	
Week 14	In-class presentation	

Notes. FonF for focus on form lessons; FonM for focus on meaning lessons.

stress, rhythm) and tonal melody (intonation). Following this, they engaged in meaning-oriented lessons aimed at improving their presentation skills. The instruction was provided over six weeks and totaled three hours. The 10 students in the control group received meaning-oriented lessons that were comparable in terms of duration, but lacked any focus on English suprasegmentals. All of the participating students took the post-test in Week 12. Both classes were taught by the first author, a Japanese EFL teacher with near-native English proficiency and post-graduate education in applied linguistics and L2 pronunciation teaching.

All of the participants' suprasegmental performance was elicited via controlled tasks (reading aloud) at the beginning and end of the project, and was assessed by a range of objective/subjective measures according to comprehensibility, word stress, rhythm, and intonation. The procedure of the study is summarized in Table 2.

2 Participants

a Japanese speakers. The participants consisted of 20 first-year university students from two intact English presentation classes. The first class was assigned to the experimental group (receiving form-focused instruction) and the second to the control group (receiving meaning-oriented instruction only). At the time of the project, all of them were registered in three other English compulsory classes (i.e. writing, reading, and discussion) per week. At this institution, classes were divided into four levels based on students' TOEIC scores. Both groups that participated in the project were at the beginner level. The participants' scores ranged from 420 to 435, with no significant group differences according to an independent sample t-test ($p > .05$).

The analysis of the background survey revealed that all participants started to learn English at the age of 13 and received six-year English education in secondary school, which was typically grammar-based with limited attention to pronunciation. They were

thus all classified as 'inexperienced' learners with little overseas experience, and limited exposure to English outside of the classroom.

The two groups were also comparable in their pronunciation performance at the outset of the project. A set of independent sample *t*-tests found no significant group differences in any contexts at a $p < .05$ level (for details, see Section V).

b Experienced raters. Four experienced native speaking raters (3 males, 1 female) were recruited for the comprehensibility analysis (M_{age} = 45.3 years; range 36–53 years). Selection of the raters was based on their first language, professional and academic background, familiarity with the Japanese language, as well as their willingness and availability to participate. They were all native speakers of North American English. Three of them were graduates of applied linguistics programs who had experience living in Japan (M = 16.3 years; 7–29) and teaching English at Japanese universities (M = 10.9 years; 1.5–26). They were all proficient in Japanese (intermediate to advanced level), and their mean of self-rated familiarity with Japanese accented English (1 = not at all, 6 = very much) was 5.76 (5–6).

3 Experimental group

Ten students in the experimental group received a total of three hours of instruction on suprasegmentals (six times) over six weeks. For the first 30 minutes of Weeks 5, 6, 7, 8, and 9, the instructor started with form-focused instruction on word stress and intonation in turn in order to maximize the instructional effects through spaced learning. Rhythm, defined as alternations between stressed and unstressed syllables (Isaacs & Trofimovich, 2012), was introduced in Week 11, after students became familiar with the concept of word stress.

a Form-focused instructional treatment. According to cross-linguistic reviews (e.g. Saito, 2014), Japanese learners of English are reported to have several L1–L2 (first language / second language) transfer problems at the suprasegmental level, which consequently leads to listeners' impaired understanding of their speech (e.g. Hanh, 2004; Kang et al., 2010).

1. Word stress (2 lessons): Whereas inexperienced Japanese learners of English likely pronounce multisyllabic words with wrong stress patterns ('COMputers') (i.e. misplacement), they also have difficulties marking primary stressed syllables with multiple cues (vowel length, pitch, intensity). This is because in Japanese, stress is marked only by higher pitch.
2. Rhythm (1 lesson): Since Japanese is a mora-timed language, many inexperienced Japanese learners tend to equally pronounce each syllable without following the vowel reduction patterns necessary for English rhythm.
3. Intonation (3 lessons): Inexperienced Japanese learners likely continue to use Japanese intonation patterns while speaking English (i.e. misplacement). Their speech tends to be perceived as monotonous, because their pitch movement might not be distinctive enough with final-rising or final-falling intonation.

Based on these cross-linguistic differences, the instructional materials were developed by selecting relevant activities from pronunciation textbooks (Avery & Ehrlich, 1992; Celce-Murcia, Brinton, Goodwin, & Griner, 2010; Gilbert, 2012), and adapting them to the participants' levels and needs of the classes.

b Teaching procedure. At the beginning of each lesson, a set of rules about the target suprasegmentals were briefly introduced. The students first carefully listened to and repeated the instructor's model pronunciation, and then practiced the target features at a controlled speech level via sentence and paragraph reading tasks (approximately 10 minutes). After each form-focused instruction and practice session, the students proceeded to a range of free production activities, adapted from Celce-Murcia et al. (2010) and Gilbert (2012) (approximately 20 minutes). While the main focus of these activities lay in meaning, the students were always encouraged to pay secondary attention to the accurate use of target suprasegmental forms. To promote such incidental focus on form, the instructor provided corrective feedback in response to students' misuse of the target suprasegmentals. Sometimes the feedback took the form of recasts of individual words for word stress, or of the whole sentence for intonation and rhythm. At other times, metalinguistic information was provided to optimize students' learning. For an example lesson plan, see Appendix 1.

After the suprasegmental-based instruction, students received instruction on how to create presentations, design visuals, and clearly deliver the presentation material. The textbook used for this part of the lesson was 'Speaking of Speech' (Harrington & LeBeau, 2009). Over the 14 weeks of the semester, the students watched model presentations on the attached DVD, conducted activities in the textbook, and made individual and group presentations.

4 Control group

Comparatively, the 10 participants in the control group received meaning-oriented lessons on English presentation skills, in which they carried out similar activities on presentation structure and effective visuals with no particular focus on suprasegmentals. From a methodological point of view, the purpose of including the control group was two-fold. First, given that we used identical materials in the pre-/post-test sessions (see below), the control group's performance was expected to reveal any test–retest effect. Second, their performance would also shed light on the extent to which a mere exposure to nine-week meaning-oriented instruction could make any contribution to the development of L2 suprasegmentals (without any explicit instruction).

5 Pre-/post-tests

a Material preparation. Speech data for this study were elicited from a paragraph reading task, in which students read two different presentation introductions: a trained text (Text A) and an untrained text (Text B) (see Appendix 2). Text A was used both as a pre-test and a post-test, while Text B was used only as a post-test. Both texts were written with consideration to ensure that they included frequent multisyllabic words, and yes/no or *wh*-questions.

According to *Lexical Tutor* (Cobb, 2011), all of the words in the texts, except for three in Text A (Africa, safari, vacation), were within the first 2,000 word families. Since the three words could be considered as loanwords in Japanese (Daulton, 2008), our assumption was that the participants knew all the words.

b Procedure. The data collection for the reading aloud task was conducted with recording software, Audacity, in a computer room. All instructions regarding the software use were provided in Japanese to ensure that the students understood the task procedure. After familiarizing themselves with the software, the students were instructed to read the script silently for one minute, and then to read it as if it were a part of presentation. They recorded the reading twice into a microphone individually, but only the second reading was used for data analysis.

6 Comprehensibility analyses

Following the research standards in L2 speech research (Derwing & Munro, 1997), the overall impression of comprehensibility was assessed based on native speaking raters' intuitive judgements.

a Procedure. Each rating session was conducted individually and took approximately 60 minutes. All speech samples were played in a randomized order using computer-based software developed in previous research (Saito, Trofimovich, & Isaacs, 2015). Upon listening to each speech sample only once, the raters used a free-moving slider to assess comprehensibility. If the slider was placed on the leftmost end of the scale, the rating was recorded as zero, indicating 'very hard to understand'. If the slider was placed on the rightmost end indicating 'easy to understand', the rating was recorded as 1,000. The slider was placed in the middle of the scale at the beginning of each sample. With no numerical labels appearing on the scale, raters were informed that a movement of the slider was converted into a rating score, and they were encouraged to use the entire scale as much as possible. For any discussion regarding the validity of the scale, see our validation article (Saito et al., 2015).

Prior to the main rating session, four raters were first provided with the definition of comprehensibility (i.e. the degree of ease or difficulty in listeners' understanding of L2 speech). Subsequently, they practiced the rating procedure with three speech samples not included in the main analyses. Finally, they proceeded to evaluating the 40 samples of Text A, followed by the 20 samples of Text B.

b Rater consistency. According to Cronbach's alpha analyses, the four raters showed a satisfactory level of consistency in their comprehensibility judgement of 60 speech samples ($\alpha = .75$). As the Cronbach's α was above the suggested benchmark value of .70 (Larson-Hall, 2010), the raters' comprehensibility scores were averaged across per each speech sample.

7 Suprasegmental analyses

The effect of form-focused instruction on learners' suprasegmental development was analysed via the acoustic measures used in Isaacs and Trofimovich (2012). A linguistically

trained coder analysed word stress and rhythm via auditory impressions, and intonation by listening and visuals (spectrograms) via *Praat* (Boersma & Weenink, 2012). To check the validity of the first coder's acoustic analyses, another trained coder analysed 15% of the speech samples. A fairly consistent inter-rater agreement was found between the two coders (*kappa* = .70, 63, and 74 for word stress, rhythm, and intonation, respectively).

1. Word stress: This category was analysed by dividing the number of instances of primary stress errors in multisyllabic words by the total number of multisyllabic words; 26 multisyllabic words were identified and used for word stress analyses (15 instances for Text A; 13 instances for Text B) (for details, see Appendix 3). Stress errors were divided into (a) misplaced primary stress (misplacement) and (b) the lack of any attempt to mark primary stress (absence).
2. Rhythm: This category was analysed by dividing the number of correctly reduced syllables by the total number of expected vowel reduction in unstressed syllables in multisyllabic words as well as function words (e.g. 'do you LIKE TRAveling?' contains four expected reduced syllables).
3. Intonation: This category was analysed by dividing the number of intonation errors at the end of phrases by the total number of obligatory contexts where certain pitch patterns were expected to take place. In this study, we calculated the number of declarative statements with falling tone (n = 3 for Text A; n = 3 for Text B), level tone (n = 5 for Text A; n = 4 for Text B), yes/no questions with rising tone (n = 2 for Text A; n = 2 for Text B), and *wh*-questions with falling tone (n = 0 for Text A; n = 1 for Text B). Finally, intonation errors were divided into (a) misplaced intonation (misplacement) (e.g. the use of rising tone for *wh*-questions) and (b) absent intonation (absence) (i.e. the lack of any distinctive pitch range to indicate intonation patterns). To check the melodic change in speech signals (falling vs. rising intonation), the coder relied on acoustic information presented in *Praat* (i.e. fundamental frequencies) as a primary cue; however, the coder also adopted her impressionistic judgements where the spectrogram was unclear and difficult to decode (for a similar methodological decision, see Trofimovich & Baker, 2006).

V Results

The goal of the statistical analyses was to examine the extent to which the students in the experimental group, who received form-focused instruction over six weeks, could improve the global (comprehensibility) and suprasegmental (word stress, rhythm, and intonation) aspects of their L2 speech. We also aimed to explore the differential effects of form-focused instruction according to two lexical contexts, focusing on their improvement within the trained lexical items (pre-test [Text A] → post-test [Text A]) and their generalizability beyond the trained lexical items (pre-test [Text A] → post-test [Text B]). In order to separate the test–retest effect (Text A read twice) and potential difficulty between the test materials (Text A vs. Text B), the experimental group's performance was compared to that of the control group, who took the same pre- and post-tests without receiving any suprasegmental-based instruction.

1 Effects of instruction

To investigate the presence and absence of significant instructional effects on the students' comprehensibility and suprasegmental scores over time, a set of paired samples *t*-tests were conducted for the control and experimental groups, respectively. The alpha level was adjusted to $p < .025$ by way of Bonferroni corrections, and the magnitude of the pre-post development was calculated through Cohen's *d* analyses. The results of the descriptive and inferential statistics are summarized in Table 3 (for comprehensibility) and Table 4 (for suprasegmentals).

a Control group. The results did not find any statistically significant improvement for the control group in any linguistic (comprehensibility, suprasegmentals) or lexical (trained vs. untrained) contexts at a $p < .025$ level. This in turn suggests that the students' performance was relatively similar even after taking the same tests twice (Text A for pre- and post-tests) and reading two different materials (Text A for pre-test vs. Text B for post-test).

b Comprehensibility. The raters' comprehensibility judgement scores are summarized in Table 3. The experimental group significantly enhanced their comprehensibility scores ($p = .025$) with large effects ($d = 0.85$) when their performance was tested in the novel lexical contexts (Text B). Yet, their improvement did not reach statistical significance in the trained lexical conditions (Text A).

c Suprasegmentals. The results of the objective analysis of the students' suprasegmental performance (i.e. word stress, rhythm, and intonation) appear in Table 4.

1. Rhythm: The experimental group significantly improved their accuracy in vowel reduction in both trained and untrained lexical contexts with large effects ($d = 1.42$ for Text A, 0.89 for Text B). As for word stress and intonation, however, the experimental group's significant improvement was observed only according to type of error (absence vs. misplacement).
2. Word stress: The experimental group made more absence errors (i.e. no emphasis on stressed syllables in multisyllabic words) ($M = 51.33\%$) compared to

Table 3. The descriptive and inferential statistics of comprehensibility.

Text type	Group	Pre-test (1,000 points)		Post-test (1,000 points)		Improvement (pre-test to post-test)		
		M	*SD*	*M*	*SD*	*t*	*p*	*d*
A	Experimental	570	74	600	54	1.06	.315	0.34
	Control	572	71	604	80	0.81	.440	0.25
B	Experimental	n/a	n/a	604	70	2.69	.025*	0.85
	Control	n/a	n/a	596	101	1.22	.253	0.38

Notes. Text A for trained lexical items; Text B for untrailed lexical items. *$p < .025$.

Table 4. The descriptive and inferential statistics of suprasegmental scores based on objective analyses.

	Text type	Group	Pre-test (%)		Post-test (%)		Improvement (pre-test to post-test)		
			M	*SD*	*M*	*SD*	*t*	*p*	*d*
Word stress (misplacement)	A	Experimental	3.34	3.52	1.33	2.81	−1.96	.081	−0.62
		Control	0.67	2.11	1.33	2.81	1.00	.343	0.32
	B	Experimental	n/a	n/a	0.77	2.43	−1.66	.132	−0.52
		Control	n/a	n/a	0.00	0.00	−1.00	.343	−0.32
Word stress (absence)	A	Experimental	51.33	14.42	32.00	14.33	−4.41	.002*	−1.39
		Control	48.00	20.80	46.67	22.22	−0.34	.744	−0.11
	B	Experimental	n/a	n/a	33.85	8.27	−3.75	.005*	−1.19
		Control	n/a	n/a	56.15	15.41	1.42	.189	0.45
Rhythm	A	Experimental	24.12	14.35	32.75	16.64	4.13	.003*	1.42
		Control	24.51	17.10	27.25	18.05	0.56	.587	0.18
	B	Experimental	n/a	n/a	35.53	12.24	2.80	.021*	0.89
		Control	n/a	n/a	33.42	15.04	2.40	.040	0.78
Intonation (misplacement)	A	Experimental	14.00	10.75	3.00	4.83	−2.91	.017*	−0.92
		Control	10.00	10.54	13.00	9.49	1.15	.279	0.47
	B	Experimental	n/a	n/a	5.00	7.07	−2.86	.019*	−0.91
		Control	n/a	n/a	11.00	7.38	−0.26	.798	0.08
Intonation (absence)	A	Experimental	8.00	9.19	3.00	6.75	2.24	.052	−0.71
		Control	15.00	17.80	15.00	18.41	0.00	1.00	0.00
	B	Experimental	n/a	n/a	5.00	7.07	1.00	.343	−0.32
		Control	n/a	n/a	15.00	14.34	0.00	1.00	0.00

Note. Text A for trained lexical items; Text B for untrailed lexical items. *$p < .025$.

misplacement errors (i.e. emphasis on unstressed syllables in multisyllabic words) ($M = 3.34\%$) at the beginning of the project. While suprasegmental-based instruction did not lead to any significant change in the participants' misplacement errors, it greatly helped reduce the number of absence errors ($M = 32.00\%$) with large effects ($d = 1.39$ for Text A, 1.19 for Text B).

3. Intonation: The results showed that the participants made slightly more misplacement errors ($M = 14.00\%$) than absence errors ($M = 8.00\%$) at the time of the pre-tests. Within-group, the instruction led the participants to notice and correct the misuse of English intonation patterns ($M = 3.00\%$) with large effects ($d = 0.92$ for Text A, 0.91 for Text B), although its impact on the absence of intonation did not reach statistical significance ($p > .025$).

VI Discussion

To date, many SLA studies have demonstrated that form-focused instruction is an effective technique to develop the overall L2 skills (perceived comprehensibility) of

intermediate and advanced ESL students (e.g. Derwing et al., 1998, 2014). Our first research objective was to test the generalizability of previous findings with inexperienced EFL Japanese students who had a limited amount of L2 conversational experience. In line with previous research, the present study showed that even inexperienced learners (without any experience abroad) could benefit from suprasegmental-based instruction in the context of meaning-oriented classrooms (i.e. teaching presentation skills). In practice, pronunciation still tends to be overlooked, particularly at the beginner level, as emphasis is placed on teaching lexis and grammar. Teachers might perceive pronunciation as an extra burden for learners at this level, who may already be struggling with other linguistic aspects (Zielinski & Yates, 2014). Our findings serve as important evidence to support the benefits of pronunciation instruction for lower proficiency-level students.

Interestingly, the results showed that the effect of suprasegmental-based instruction on comprehensibility development was clearly observed in the context of the untrained (rather than trained) lexical items. Different from conventional pronunciation teaching methods (e.g. audio-lingual method), we carefully elaborated the instructional treatment (i.e. explicit information followed by controlled and spontaneous practice activities) in accordance with the recent L2 education literature (Spada, 2011). In this regard, our findings here suggest that the gains resulting from such a psycholinguistically appropriate teaching method (i.e. form-focused instruction) are relatively large, especially for items extending beyond their learned materials.

It is noteworthy that the students' comprehensibility development was not clearly observed in the trained lexical context. One possible reason could be related to the complex relationship between comprehensibility, suprasegmental errors, and other linguistic problems. As shown in the previous literature (e.g. Isaacs & Trofimovich, 2012), comprehensibility can be equally related to various linguistic errors, given that listeners likely attend to every piece of linguistic information available in accented L2 speech to extract as much meaning as possible. Therefore, the absence of significant improvement in comprehensibility in the original text could be due to the fact that the students' other pronunciation errors (e.g. segmentals, syllable structures) may have offset the gains in suprasegmentals.

Another possibility could concern the slightly unequal number of multisyllabic words (n = 15 for Text A; n = 12 for Text B), suggesting that there be less risk of word-stress misplacement when the learners read Text B. If misplacement of word-stress is the factor that most strongly impacts comprehensibility, then Text B could thus be less susceptible to this type of problem. The descriptive statistics appear to be consistent with this thesis:

- Text B readings elicited higher comprehensibility ratings than Text A readings; and
- Text B readings exhibited fewer word-stress misplacements (actually none at all in the control group).

Comparing the number of word-stress misplacements in Text B readings with the number of word-stress misplacements in Text A readings therefore produces a larger

difference than the 'direct' comparison of the pre- and post-test readings of Text A. In the case of the experimental group, this difference is large enough to reach significance. The control group, however, performed better (on this performance measure) on Text A than the experimental group, and so there was less room for a Text A vs. Text B difference in the control data.

To answer our second research question (regarding the differential effects of suprasegmental-based instruction on the development of word stress, rhythm, and intonation), we also conducted a range of objective analyses on the students' suprasegmental performance in the pre- and post-tests. As reviewed earlier, adult L2 learners in naturalistic settings tend to display a different amount of learning difficulty according to two broad dimensions of suprasegmental learning: the full/weak vowel distinction (word stress, rhythm) and tonal melody (intonation) (e.g. Trofimovich & Baker, 2006). According to the results of the current study, however, the experimental group's improvement was clear not only in word stress and rhythm, but also in intonation with large effects. Their gains were also generalizable both in trained and untrained lexical contexts. To this end, our findings indicated that suprasegmental-based instruction could equally impact all aspects of L2 suprasegmentals regardless of their varied learning difficulty.

At the same time, it is also important to remember that the participants demonstrated differential improvement patterns for word stress and intonation according to error type (misplacement vs. absence). That is, instruction helped the experimental group reduce the number of absence errors for word stress, and the number of misplacement errors for intonation. One reason for such instructional gain patterns could be related to the pre-existing differences in learners' proficiency at the beginning of the project. The experimental group initially made considerably more absence than misplacement errors in word stress. In light of this, instruction may have quickly helped the students notice the concept of L2 English word stress in order to avoid producing monotonous speech. In contrast, the students produced more misplacement than absence errors prior to the treatment, arguably because they may have been aware of the importance of changing pitch, but lacked any explicit understanding of how to adequately employ English intonation patterns in context. Thus, instruction appeared to push the students to learn such explicit rules and to apply them to not only a trained text, but to an untrained text as well.

Another reason could be attributed to the cross-linguistic interaction between L1 Japanese and L2 English. On the one hand, Japanese word stress is mainly marked with a higher pitch. The explicit instruction in this study may have enabled the learners to notice the need to lengthen and intensify vowel qualities to produce appropriate English stress. As such, the Japanese learners' English word stress acquisition can be characterized by adding acoustic attributes (lengthening and intensification) to their existing concept of Japanese word stress (higher pitch). On the other hand, Japanese learners need to learn, in particular, unique intonation patterns for questions in L2 English, which uses a rising tone for yes/no questions and a falling tone for *wh*-questions (a rising tone is used for both types of questions in Japanese). In this regard, instruction can induce learners to notice the cross-linguistic differences between Japanese and English intonation patterns, which could in turn reduce the occurrence of wrong intonation usage in English (e.g. a rising intonation for *wh*-questions).

VII Conclusions

Motivated by a growing number of studies on L2 suprasegmental instruction (typically involving intermediate-to-advanced ESL learners) (e.g. Derwing et al., 1998, 2014), the current study examined the effectiveness of form-focused instruction on developing the word stress, rhythm, and intonation abilities of inexperienced Japanese EFL learners. There are two main conclusions drawn from the findings. First, form-focused instruction can be beneficial for even lower-level learners with limited conversational speaking experience in the L2. Second, the results showed that form-focused instruction can allow L2 learners to equally improve various areas of L2 suprasegmental learning (the full/weak vowel distinction, tonal melody), which arguably entails a different amount of learning difficulty in naturalistic settings (Trofimovich & Baker, 2006). In particular, the instruction, which explicitly addressed cross-linguistic differences, helped learners mark stressed syllables with longer and clearer vowels, reduce vowels in unstressed syllables, and use appropriate intonation patterns for yes/no and *wh*-questions.

Despite providing insights into the value of suprasegmental-based instruction in the EFL context, the study has several methodological limitations which should be acknowledged. First, the current dataset only included speech samples elicited from read-aloud tasks. Considering the relatively low proficiency levels of the participants, this task was thought to be appropriate. Using controlled speech samples also allowed us to make direct comparisons within and between individuals. Nevertheless, our research was limited, as whether such gains could be maintained in spontaneous speech remains unanswered. Future research should overcome this issue by including extemporaneous speech samples which are representative of natural speech (Lee et al., 2015).

Second, it needs to be emphasized that the current study carefully selected the raters ($n = 4$) in order to control the amount of their familiarity with Japanese-accented English (all of them were residents in Japan) and relevant knowledge of linguistics (three of them were graduate students in the department of applied linguistics). Our approach was sharply contrastive with the previous literature, which has adopted a large number of naive native speaking raters with heterogeneous backgrounds and varied exposure to foreign accented speech (e.g. $n = 26$ in Derwing & Munro, 1997). Thus, it would be intriguing for future studies to expound the extent to which expert and naive raters can differentially perceive the instructional gains resulting from suprasegmental-based instruction.

Furthermore, due to the small sample size ($n = 10$ for each group), the results of the statistical analyses should be treated with caution. In order to address the lack of research in EFL contexts, the present study reports on a preliminary attempt to demonstrate the instructional effects of suprasegmentals with inexperienced students whose exposure to the target language was much more limited compared to their ESL counterparts. However, more studies with a larger sample size and longitudinal design are necessary to generalize the findings of EFL suprasegmental development to a larger context.

Finally, the instructional materials in the current study exclusively focused on the cross-linguistic differences between L1 Japanese and L2 English suprasegmental systems. However, certain suprasegmental features (e.g. word stress) may be less

susceptible to such explicit instruction than the other suprasegmental phenomena (e.g. intonation), as the former would be characterized as 'item-based' learning (e.g. word stress is a part of word knowledge) and the latter as 'rule-based' learning (e.g. falling intonation for declarative statements; rising intonation for yes/no questions). In this regard, future studies are called for in order to test which type of instruction (rule presentations, intensive/extensive exposure) would most benefit different aspects of L2 suprasegmental learning (word stress, rhythm, and intonation).

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References

Anderson-Hsieh, J., Johnson, R., & Koehler, K. (1992). The relationship between native speaker judgments of nonnative pronunciation and deviance in segmentals, prosody, and syllable structure. *Language Learning*, *42*, 529–555.

Avery, P., & Ehrlich, S. (1992). *Teaching American English pronunciation*. Oxford: Oxford University Press.

Boersma, D., & Weenink, P. (2012). *Praat: Doing phonetics by computer version 5.3.14*. Available at: http://www.praat.org (accessed March 2016).

Celce-Murcia, M., Brinton, D., Goodwin, J.M., & Griner, B. (2010). *Teaching pronunciation: A course book and reference guide*. 2nd edition. Cambridge: Cambridge University Press.

Cobb, T. (2011). *The compleat lexical tutor*. Available at: http://www.lexutor.ca (accessed March 2016).

Daulton, F.E. (2008). *Japan's built-in lexicon of English-based loanwords*. Clevedon: Multilingual Matters.

Derwing, T.M., & Munro, M.J. (1997). Accent, intelligibility, and comprehensibility. *Studies in Second Language Acquisition*, *20*, 1–16.

Derwing, T.M., Munro, M.J., & Wiebe, G. (1997). Pronunciation instruction for 'fossilized' learners: Can it help? *Applied Language Learning*, *8*, 217–235.

Derwing, T.M., Munro, M.J., & Wiebe, G. (1998). Evidence in favor of a broad framework for pronunciation instruction. *Language Learning*, *48*, 393–410.

Derwing, T.M., Munro, M.J., Foote, J.A., Waugh, E., & Fleming, J. (2014). Opening the window on comprehensible pronunciation after 19 years: A workplace training study. *Language Learning*, *64*, 526–548.

Doughty, C. (2003). Instructed SLA: Constraints, compensation, and enhancement. In: M. Long, & C. Doughty (Eds.), *The handbook of second language acquisition* (pp. 257–310). Malden, MA: Blackwell.

Ellis, R. (2002). Does form-focused instruction affect the acquisition of implicit knowledge? *Studies in Second Language Acquisition*, *24*, 223–236.

Ellis, R. (2003). *Task-based language learning and teaching*. New York: Oxford University Press.

Field, J. (2005). Intelligibility and the listener: The role of lexical stress. *TESOL Quarterly*, *39*, 399–423.

Gilbert, J.B. (2012). *Clear speech : Pronunciation and listening comprehension in North American English*. 4th edition. New York: Cambridge University Press.

Gordon, J., Darcy, I., & Ewert, D. (2013). Pronunciation teaching and learning: Effects of explicit phonetic instruction in the L2 classroom. In: J. Levis, & K. LeVelle (Eds.), *Proceedings of the 4th Pronunciation in Second Language Learning and Teaching Conference* (pp. 194–206). Ames, IA: Iowa State University.

Hanh, L.D. (2004). Stress and intelligibility: Research to motivate the teaching of suprasegmentals. *TESOL Quarterly*, *38*, 201–223.

Harrington, D., & LeBeau, C. (2009). *Speaking of speech: Basic presentation skills for beginners*. Tokyo: Macmillan.

Isaacs, T., & Trofimovich, P. (2012). Deconstructing comprehensibility. *Studies in Second Language Acquisition*, *34*, 475–505.

Jenkins, J. (2002). A sociolinguistically based, empirically researched pronunciation syllabus for English as an international language. *Applied Linguistics*, *23*, 83–103.

Kang, O., Rubin, D.O.N., & Pickering, L. (2010). Suprasegmental measures of accentedness and judgments of language learner proficiency in oral English. *The Modern Language Journal*, *94*, 554–566.

Kennedy, S., & Trofimovich, P. (2010). Language awareness and second language pronunciation: A classroom study. *Language Awareness*, *19*, 171–185.

Larson-Hall, J. (2010). *A guide to doing statistics in second language research using SPSS*. New York: Routledge.

Lee, J., Jang, J., & Plonsky, L. (2015). The effectiveness of second language pronunciation Instruction: A meta-analysis. *Applied Linguistics*, *36*, 345–366.

Levis, J.M. (2005). Changing contexts and shifting paradigms in pronunciation teaching. *TESOL Quarterly*, *39*, 369–377.

Lightbown, P.M. (2008). Transfer appropriate processing as a model for classroom second language acquisition. In: Z. Han (Ed.), *Understanding second language process* (pp. 27–44). Clevedon: Multilingual Matters.

Lyster, R., & Saito, K. (2010). Oral feedback in classroom SLA: A meta-analysis. *Studies in Second Language Acquisition*, *32*, 265–302.

Munro, M., & Derwing, T. (2014, March). How different can you get? Ten-year learning trajectories for two L2 groups. Unpublished paper presented at the annual conference of the American Association for Applied Linguistics, Portland, OR, USA.

Norris, J., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, *50*, 417–528.

Saito, K. (2012). Effects of instruction on L2 pronunciation development: A synthesis of 15 quasi-experimental intervention studies. *TESOL Quarterly*, *46*, 842–854.

Saito, K. (2013). The acquisitional value of recasts in instructed second language speech learning: Teaching the perception and production of English /ɹ/ to adult Japanese learners. *Language Learning*, *63*, 499–529.

Saito, K. (2014). Experienced teachers' perspectives on priorities for improved intelligible pronunciation: The case of Japanese learners of English. *International Journal of Applied Linguistics*, *24*, 250–277.

Saito, K., & Lyster, R. (2012). Effects of form-focused instruction and corrective feedback on L2 pronunciation development of /ɹ/ by Japanese learners of English. *Language Learning*, *62*, 595–633.

Saito, K., Trofimovich, P., & Isaacs, T. (2015). Using listener judgements to investigate linguistic influences on L2 comprehensibility and accentedness: A validation and generalization study. *Applied Linguistics*. Epub ahead of print 29 September 2015. DOI: 10.1093/applin/amv047.

Saito, K., Trofimovich, P., & Isaacs, T. (2016). Second language speech production: Investigating linguistic correlates of comprehensibility and accentedness for learners at different ability levels. *Applied Psycholinguistics*, *37*, 217–240.

Schmitt, N. (2008). State of the art: Instructed second language vocabulary acquisition. *Language Teaching Research*, *12*, 329–363.

Spada, N. (1997). Form-focused instruction and second language acquisition: A review of classroom and laboratory research. *Language Teaching*, *30*, 73–87.

Spada, N. (2011). Beyond form-focused instruction: Reflections on past, present and future research. *Language Teaching*, *44*, 225–236.

Spada, N., & Lightbown, P. M. (2008). Form-focused instruction: Isolated or Integrated? *TESOL Quarterly*, *42*, 181–207.

Spada, N., & Tomita, Y. (2010). Interactions between type of instruction and type of language feature: A meta-analysis. *Language Learning*, *60*, 263–308.

Tanner, M.W., & Landon, M.M. (2009). The effects of computer-assisted pronunciation readings on ESL learners' use of pausing, stress, intonation, and overall comprehensibility. *Language Learning and Technology*, *13*, 51–65.

Thomson, R.I., & Derwing, T.M. (2015). The effectiveness of L2 pronunciation instruction: A narrative review. *Applied Linguistics*, *36*, 326–344.

Trofimovich, P., & Baker, W. (2006). Learning second language suprasegmentals: Effect of L2 experience on prosody and fluency characteristics of L2 speech. *Studies in Second Language Acquisition*, *28*, 1–30.

Trofimovich, P., & Gatbonton, E. (2006). Repetition and focus on form in processing L2 Spanish words: Implications for pronunciation instruction. *The Modern Language Journal*, *90*, 519–535.

VanPatten, B. (2004). *Input processing and grammar instruction in second language acquisition*. Norwood, NJ: Ablex.

Zielinski, B., & Yates, L. (2014). Pronunciation instruction is not appropriate for beginner-level learners. In: L. Grant (Ed.), *Pronunciation myths: Applying second language research to classroom teaching* (pp. 56–79). Ann Arbor, MI: University of Michigan Press.

Appendix 1. An example lesson plan: Teaching intonation in Week 5.

A. Explicit instruction

- The instructor explains a set of rules as to which intonation patterns are used for yes/no questions (rising tone), statements (falling tone), and *wh*-questions (falling tone) in English.
- The instructor reads example sentences, using hand gestures to indicate different intonation patterns. Subsequently, students repeat after the instructor (e.g. Have you ever traveled abroad? [↑] / Why is it important for us to study English? [↓]).

B. Controlled speech practice

- Students practice perceiving and producing different intonation patterns.
- They group into pairs and work together to identify and discuss several yes/no and *wh*-questions in example sentences.

C. Free speech practice

- Finally, students write a short presentation script (e.g. introduction of the presentation titled 'My best travel destination'), mark intonation patterns, and present in pairs.

Appendix 2. Reading aloud texts used in the pre-/post-tests.

Text A (trained, 53 words, 35 word types).

Do you like traveling? Have you made a plan for the next vacation? If your answer is no, I have the best travel plan for you. In this presentation, I am going to introduce an exciting safari tour in Africa. This plan is perfect for people who love nature, wild animals, and adventures.

Text B (untrained, 54 words, 45 word types).

Who slept well last night? Anyone? Do you normally sleep well? Sleeping well is very important for us, because if we can't, we will have a lot of problems. For example, you may fall asleep during the class and miss important information. Today, I'm going to show you three ways to get enough sleep.

Appendix 3. A list of 26 multisyllabic words for word stress and rhythm analyses.

Text	Multisyllabic words (Stress indicated in capitals)	Number of syllables	Word frequency (BNC/COCA)[a]	Loanwords
A	ad-VEN-ture	3	2k	✓
A	AF-ri-ca	3	proper noun	✓
A	AN-i-mals	3	1k	✓
A	AN-swer	2	1k	✓
A	ex-CIT-ing	3	1k	✓
A, B	GO-ing[b]	2	1k	
A	in-tro-DUCE	3	2k	
A	NA-ture	2	1k	
A	PEO-ple	2	1k	
A	PER-fect	2	1k	✓
A	pres-en-TA-tion	4	1k	
A	sa-FA-ri	3	8k	✓
A	TRAV-el	2	1k	✓
A	TRAV-el-ing	3	1k	✓
A	va-CA-tion	3	5k	✓
B	AN-y-one	3	1k	
B	a-SLEEP	2	2k	
B	be-CAUSE	2	1k	
B	DUR-ing	2	1k	
B	ex-AM-ple	3	2k	
B	im-POR-tant[c]	3	1k	
B	in-for-MA-tion	4	1k	✓
B	NOR-mal-ly	3	1k	✓
B	PROB-lems	2	1k	
B	SLEEP-ing	2	1k	
B	to-DAY	2	1k	✓

Note. [a]1k = the 1st 1,000; [b]The word *going* was included in both Texts A & B. [c]The word *important* appeared twice in Text B.