

Learners' Perceptions of Intelligible Pronunciation and the Gaps Between Teachers' and Learners' Perceptions

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This study investigated Japanese EFL learners' perceptions on priorities for intelligible pronunciation. Which aspects do they think are most important for intelligible pronunciation? Are there gaps in priorities between learners and experienced teachers? A 25-item questionnaire, which focused on 17 segmental features and 8 suprasegmental features, was used. It was administered to 142 university freshmen (72 males and 70 females). The results show that learners consider major segmentals (l, ɹ, ð, θ, v), stress, and intonation to be important, but secondary segmentals (f, æ, ʌ) are considered less important. The gaps between teachers and learners were found in *L1 effect at syllable levels* (syllabification, cognates) and *assimilation* (st, ʃi, ti).

本論では、分かりやすい発音のための優先順位に対する日本人英語学習者の認識調査を行った。研究課題は、学生にとって分かりやすい発音のために重要な要素は何か、また教員と認識の差はあるのか、である。17の分節に関する項目と8つの超分節に関する計25項目の質問紙を142名の大学1年生（男性72名、女性70名）に配布した。結果は、主要な分節(l, ɹ, ð, θ, v)、強弱、イントネーションが学生にとって重要項目であり、第2分節(f, æ, ʌ)はあまり重要視されていない。教員と学習者とのギャップは、カタカナ英語等の音節レベルにおける第1言語の影響や同化(st, ʃi, ti)に見られた。

The topic of pronunciation was emphasized by language teachers during the 1960s and 1970s when the Audio Lingual Method was dominant, but with the advent of Communicative Language Teaching, it took a back seat in classrooms (Derwing, 2012) and was neglected in classroom-oriented research (Baker, 2014). However, it has gradually been regaining popularity recently. The summative review study by Saito (2012), which carefully analyzes 15 quasi-experimental pronunciation studies, concludes that instruction contributes to improvement of learners' segmentals and suprasegmentals and their comprehensibility. Regarding important pronunciation features for intelligible pronunciation, Saito (2013) examined cognition of 120 experienced teachers, including both native speakers of English and Japanese. To bridge theory and practice, studying this topic in further depth should provide teachers

with useful information. To this end, this study first explores learners' perceptions of important pronunciation features for intelligible pronunciation and compares the learners' perceptions with the findings obtained in Saito (2013).

Intelligible Pronunciation

The terms *intelligibility*, *comprehensibility*, and *accentedness* are commonly associated with the term pronunciation. Derwing (2012) briefly explains these as follows: *Intelligibility* is "the extent to which a listener understands the productions of an L2 speaker" (p. 1-2); *comprehensibility* is how easy or difficult L2 speech is to understand; and *accentedness* is a rating of the degree of difference between an L2 speaker's productions and the local variety of the language in question. An L2 speaker with a heavy accent can still be intelligible and comprehensible, while a speaker with low intelligibility and comprehensibility is always judged as having a heavy accent (Derwing, 2012). Therefore, we should focus on improvement of comprehensibility and intelligibility for better communication.

To improve comprehensibility and intelligibility, one may wonder which should be more prioritized in classroom, segmental features or suprasegmental features. This depends on the degree of distance between the learners' first language and English (Sypyra-Kzlowaska, 2015). For example, studies on Japanese EFL learners reveal crucial L1-L2 transfer problems at segmental levels (Riney & Anderson-Hsieh, 1993). Additionally, since Japanese is a mora-timed language, while English is a stress-timed language, less focus on suprasegmental features would negatively affect Japanese EFL learners' acquisition of intelligible pronunciation. Therefore, both need focus for Japanese EFL learners.

Teacher Beliefs

Because pronunciation teaching was not prioritized until recently, the scope of understanding second

language teacher cognition on pronunciation was limited. Still, two noteworthy studies were conducted recently. Baker (2014) attempted to uncover teachers' cognitions and practices on pronunciation in class by means of semi-structured interviews, class observations, stimulated recall interviews with teachers, and questionnaires with students. The three primary findings are that controlled techniques (less communicative and teacher-oriented) are prevalent among the teachers; kinesthetic/tactile teaching is important for learner pronunciation development; and that pronunciation instruction is boring for students. While Baker's study was an in-depth case study that involved five participants, Saito (2013) targeted a larger number of participants and examined the perspectives of experienced teachers on priorities for intelligible pronunciation. In consideration of the crucial limitation of teacher questionnaire studies, raters' subjectivity (i.e., factors arising from their background, teaching experiences, familiarity with English accents, and knowledge about pronunciation), only highly-experienced teachers with similar backgrounds were recruited for the study. A 25-item questionnaire using a 1-5 Likert scale was administered to examine which pronunciation features the teachers thought to be important for teaching. The principal component analysis extracted eight factors, which led to pedagogical suggestions as to what features should be taught. These factors are as follows: crucial segmentals /v, θ, ð, w, l, ɹ/ and complex syllables (e.g., Consonant-Consonant-Vowel-Consonant-Consonant-Consonant such as *print* CCVCCC) should be taught first; then, assimilation rules and /æ, ʌ, f/, along with vowel quality (long and loud vowels) and a wide range of pitch should be taught; lastly, diphthongs /aʊ, aɪ, oʊ, ɔɪ, eɪ / and other segmentals /p, t, k, n, ŋ, h/ should be taught. Learners should also be encouraged to speak faster and reduce pauses and repetitions. Examining teacher belief on teaching is important because it may show the disparity between theory and practice in the classroom.

Learner Beliefs and Gaps

As represented by the pioneering work of Horwitz (1985), the importance of examining learner beliefs concerning language learning is well recognized as it provides helpful insights for language teachers. In fact, there is often a mismatch between what teachers teach and what is learned by learners (Nunan, 1995). There are also mismatches between teacher and learner beliefs about the usefulness of activities for EFL (Peacock, 1998). In consideration of pronunciation teaching, differences are also assumed to exist between what teachers believe to be

important to teach and what learners believe to be important to learn, and this may result in inefficient learning. Filling the gaps between the teacher and learner beliefs will lead to more efficient mastering of pronunciation.

Purpose of the Study

Research on pronunciation has been gradually increasing, though research on teachers' cognition concerning pronunciation teaching has been conducted in a limited fashion. The next focus is an exploration of learners' cognition. Investigating learners' perception will give new insights, and a comparison of teachers' perception and that of learners will further pinpoint the direction that teachers need to take when teaching. This study attempts to do both, referring to Saito's (2013) work on teachers' cognition.

Two research questions are set: which aspects do Japanese EFL learners think are most important for intelligible pronunciation? (RQ1) and are there gaps in priorities between learners and experienced teachers? (RQ2)

Participants

The data of 142 university freshmen (72 males and 70 females) who belonged to a local national university were collected. The majority of the participants were 18 or 19 years old, ranging from 18 to 21 years of age. Out of these, 69 were engineering majors (54 males and 15 females) and 73 were health science majors (18 males and 55 females).

The participants in this study were carefully selected, with consideration given to the three following aspects:

First, to obtain the data of average Japanese university students, only non-English majors were selected. There was a risk of the data being biased if English-related majors were included, because English-related majors may have a more specific and higher interest in learning English.

Second, to compare teachers' cognitions in Saito's (2013) study and the learners' cognition in the present study, data from a similar number of participants were collected (142 compared to 120 in Saito's study).

Third, to collect data from different backgrounds, a national university in Tohoku region was chosen. The participants, who came from various prefectures in Japan to the two engineering and medical departments, were enrolled in a compulsory English course.

Additionally, they were selected based on three different English proficiency levels that were defined by a placement test—basic (37), intermediate (41), and advanced (64)—in order to meet the demand for variety in proficiency level as well. Though the sample size was not huge, the population in this study is considered to be well-balanced.

Materials

The 25-item questionnaire used in Saito (2013) was adapted for this study. It consisted of 17 segmental features and 8 suprasegmental features, which was implemented to 120 experienced teachers (61 native speakers of English and 59 Japanese). It was chosen for two reasons. First, the items were developed specifically for EFL settings in Japan, and were created by careful cross-linguistic analyses and review of a wide range of resources that deal with pronunciation problems specific to Japanese learners of English and typical of all ESL/EFL learners. Additionally, the use of the same questionnaire items and 1-5 Likert scale made it possible to compare the data found in Saito (2013) and the data in this study. The 1-5 Likert scale (1: very important; 5: not very important) was also used with the leading sentence: How important do you think it is to learn the item for intelligible pronunciation? This means the smaller the number the participants choose, the greater they think the item is important. Because the participants were not familiar with the International Phonetic Alphabet, the author demonstrated each pronunciation feature and example, with more explanation when necessary while administering the questionnaire, so that all the participants understood each item completely.

Analysis

To answer the RQ1, the mean scores and standard deviation (SD) were calculated, and a repeated measure of one-way ANOVA was employed. To answer the RQ2, the mean scores and SD of this study were simply compared with the data in Saito (2013), so that only the categories where major differences between teachers and learners are found were focused on. The eight categories (Table 1) that Saito identified by means of a principal component analysis were adopted for their robustness and for the sake of comparison.

Table 1. Categories of Eight Pronunciation Features (Based on Saito, 2013)

Category	Example
Major segmentals	l, ɪ, ð, θ, v
L1 effect at syllable levels	Cognates (Katakana), Syllabification
Assimilation	si, ʃi, ti
Stress/intonation	sentence/lexical stress, intonation
Secondary segmentals	æ, ʌ, f
Diphthong	aʊ, ai, oʊ, ɔɪ, eɪ
Minor segmentals	p, t, k, w, n, ŋ, h
Fluency problems	fluency, speech rate

Results

The descriptive statistics of the obtained data (Figure 1) show that *stress/intonation* (1.80) received the most attention (below 2.00), followed by *major segmentals* such as /l, ɪ, ð, θ, v/ (2.03), while *minor segmentals* such as /p, t, k, w, n, ŋ, h/ (2.85) received the least attention from the participants. The one-way analysis of variance (ANOVA) showed significant differences among the variables [$F(1, 5.52) = 27.17, p < .001, \eta_p^2 = .16$]. The post-hoc analysis showed significant differences in multiple combinations (Table 2). Significant differences were found in a majority of combinations. Notably, no differences were found between *stress/intonation* and *major segmentals*; *major segmentals* and *diphthong* (/aʊ, ai, oʊ, ɔɪ, eɪ/). Simply put, *stress/intonation* and *major segmentals* were found to be quite important for learners. The *minor segmentals* were considered least important, and *secondary segmentals* (/æ, ʌ, f/), *L1 effect at syllable levels* (cognates (i.e., *katakana*) and syllabification), *assimilation* (/si, ʃi, ti/), and *fluency* received fair attention.

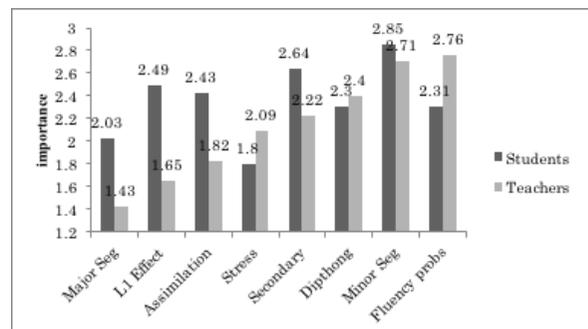


Figure 1. Comparison of teachers' and learners' perceptions.

Table 2. Results of Multiple Comparison

	Major segmentals	L1 effect at syllable levels	Assimilation	Stress/intonation	Secondary segmentals	Diphthong	Minor segmentals	Fluency problems
Major segmentals		**	**	n.s.	**	n.s.	**	*
L1 effect at syllable levels	n.s.		n.s.	**	n.s.	n.s.	**	n.s.
Assimilation	**	n.s.		**	n.s.	n.s.	**	n.s.
Stress/intonation	n.s.	**	**		**	**	**	**
Secondary segmentals	**	n.s.	n.s.	**		*	*	*
Diphthong	n.s.	n.s.	n.s.	**	*		**	n.s.
Minor segmentals	**	**	**	**	*	**		**
Fluency problems	*	n.s.	n.s.	**	*	n.s.	**	

Notes. ** means the value is significant at $p < .01$; * means the value is significant at $p < .05$; n.s. means the value is non-significant.

Next, when comparing teachers' perceptions and those of students, teachers showed higher sensitivity to the pronunciation features than the students in general (Table 3). Notable differences were found between teacher and student perceptions in *L1 effect at syllable levels* (Learners: 2.49, Teachers: 1.65). Notable differences were also found in *major segmentals* (Learners: 2.03, Teachers: 1.43) and *assimilation* (Learners: 2.43, Teachers: 1.82).

Discussion

This study set two research questions: Which aspects do Japanese EFL learners think are most important for intelligible pronunciation? (RQ1) and are there gaps in priorities between learners and experienced teachers? (RQ2) Each topic is discussed respectively, followed by limitations of this study.

The answer to RQ1 is that the learners consider *stress/intonation* and *major segmentals* to be the most important for intelligible pronunciation. Given that

Japanese is a syllable-timed language, mastering the *stress/intonation* of English language is a challenge. For Japanese EFL learners, even identifying stressed syllables in sentences is difficult (Watanabe, 1988, as cited in Riney & Anderson-Hsieh, 1993), which easily leads us to assume that they have difficulty in stressing syllables appropriately when speaking. Because primary stress does affect the intelligibility of nonnative discourse (Hahn, 2004), learners' high attention to this issue is welcome. Equally importantly, the *major segmentals* are considered to affect comprehensibility (Saito, 2012), and the learners also recognized the importance of *major segmentals*. Especially, the attention learners gave to /ɪ/ is high (mean score being 1.52). /ɪ/ is claimed to be the top priority for Japanese EFL learners (Saito & Lyster, 2011) and it indeed receives special attention in studies on Japanese EFL learners (e.g., Bradlow, Akahane-Yamada, Pisoni, & Tohkura, 1999; Bradlow, Pisoni, Akahane-Yamada, & Tohkura, 1997).

Table 3. Descriptive Statistics of Learners Perceptions (Mean Score/Standard Deviation)

	Major segmentals	L1 effect at syllable levels	Assimilation	Stress/intonation	Secondary segmentals	Diphthong	Minor segmentals	Fluency problems
Learners	2.03/ 0.71	2.49/ 1.16	2.43/ 0.87	1.8/ 0.78	2.64/ 0.82	2.30/ 1.08	2.85/ 0.77	2.31/ 0.88
*Teachers	1.43/ 0.86	1.65/ 0.85	1.82/ 1.01	2.09/ 0.98	2.22/ 1.08	2.40/ 0.96	2.71/ 1.11	2.76/ 1.11

*data taken from Saito (2013)

In line with the findings above, the results offer another helpful insight into teaching. Despite the salience of *secondary segmentals*, the learners' attention to these features was not as high as expected. Especially, /f/ is considered to be the prioritized segmental feature to teach (Saito, 2011; 2013) but the learners' sensitivity to it was not high (3.00). Also, less sensitivity to /ʌ/ (2.83) may reflect the lower sensitivity of the learners to vowels than to the other pronunciation features. The knowledge that vowels are often pronounced /ə/ in weak forms (Avery & Ehrlich, 1992) will be helpful for learners in listening as well. This result suggests that teachers need to raise learners' awareness toward *secondary segmentals* in addition to *major segmentals* and *stress/intonation*.

The answer to RQ2 is that teachers and learners do not necessarily share the same beliefs as to which features are important for intelligible pronunciation. Fundamentally, teachers' sensitivity to pronunciation features is higher than that of learners, and especially, the notable discrepancy between the two is observed in *L1 effect at syllable levels* (syllabification and cognates) and *assimilation*. While English has five syllable types, combinations of open syllables (words ending with a vowel such as *key*) and closed syllables (words ending with a consonant such as *desk*), the Japanese language allows only open syllables. Put simply, Japanese does not end a word with a consonant other than *n*, and Japanese has no initial or final consonant clusters (Ohata, 2004; Riney & Anderson-Hsieh, 1993). For example, a Japanese learner who does not know these rules is likely to pronounce *blueprint* (/blu:print/) as /bulu:pulin-to/, adding a vowel after each consonant. This will negatively affect rhythm and stress when speaking, which will consequently lower intelligibility. As reported by Hahn (2004), correct placement of primary stress contributes to better intelligibility; therefore, teaching these rules and raising learners' awareness of them should be encouraged. Though *L1 effect at syllable levels* seems to be more important, *assimilation problems* also easily cause a misunderstanding. Japanese learners have problems with /sɪ/ and /ʃi/, /tɪ/ and /tʃi/ (Riney & Anderson-Hsieh, 1993), so, for example, they often pronounce *ticket* (/tɪket/) as /tʃiket/ and *see* (/sɪ:/) as /ʃi:/. *Assimilation* is listed among the top three priorities by the teachers, and filling this gap will contribute to more intelligible pronunciation among learners. To sum up, among the top three pronunciation features that are considered important by teachers, two were perceived as less important by learners. Therefore, filling the gaps between the beliefs of students and teachers should come before teaching pronunciation features.

Lastly, a weakness of this study is that RQ2 discussed the differences between teachers and learners, but the comparison was inevitably based on descriptive statistics.

Conclusion

The findings of this study suggest three implications for teaching. First, because learners think *major segmentals* (l, ɪ, ð, θ, v), *stress*, and *intonation* are important, teachers should also encourage and help them to improve these features. However, they think less of *secondary segmentals* (f, æ, ʌ), so teachers first need to convince them of the importance of these pronunciation features. Second, gaps in priorities were found between teachers and learners on *L1 effect at syllable levels* (syllabification and cognates) and *assimilation* (sɪ, ʃi, tɪ), so emphasis on these will be beneficial for learners. Lastly, and most importantly, this paper focused on the pronunciation features that learners think to be important and the gaps between teachers' and learners' priorities; however, the mean scores in all eight categories were under 3.00 in the 1-5 Likert scale (1: very important; 5: not very important), so learners' sensitivity to the pronunciation features is not necessarily low. In other words, the teachers' role is to raise their awareness further, especially with regards to important features where gaps exist between teachers and learners, and shift their teaching to improve student pronunciation regarding each feature.

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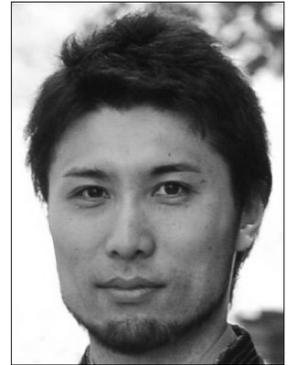
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