

Fried Persimmons and Dried Oysters or Why Teaching Pitch Accent Matters: A Practical Guide for Teachers of Japanese as a Foreign Language

Vance Schaefer
The University of Mississippi

Isabelle Darcy
Indiana University

Abstract

Pitch accent plays an important role in Japanese by contrasting segmental homophones, e.g., [ha.ɸi] LH (=Low+High pitch) ‘bridge’ vs HL ‘chopsticks’, distinguishing verbal conjugations (e.g., [ta.be.ru] LHL ‘eat’ vs [ta.be.ta] HLL ‘ate’), parsing syntax (e.g., [ku.ru.ma.de.ma.to.o]: LHHHHHL ‘Let’s wait at the car’ vs HLLLLHL ‘Let’s wait until s/he comes’), and characterizing language variety (e.g., regional, generational). As such, correctly realizing pitch accent is important to ensure intelligibility when speaking. Yet, pitch accent is largely ignored in Japanese as a Foreign Language classrooms. In response, this paper advocates greater emphasis on pitch accent through boosting awareness, exploiting rules, and focusing on intelligibility. A systematic approach considering second language phonology and pronunciation practice is promoted to supplement courses: metalinguistic awareness, a progression from focus on form to function (Celce-Murcia et al., 2010), repetition with attention to form while being communicative (Gatbonton & Segalowitz, 1988), and integration of the full scope of pronunciation (i.e., perception, production, patterns, phonological processes).

Keywords: Japanese, pronunciation, pitch accent, awareness, intelligibility

1. Introduction

The pronunciation of Standard Japanese (sometimes referred to as Tokyo Japanese), the variety taught to learners of Japanese as a Foreign Language (JFL), seems simple, but is in truth quite complex. Second language (L2) learners tend to consider vowels and consonants (i.e., segments) to be relatively easy to pronounce albeit with a few exceptions, e.g., [ɾ], [tsu]. Nonetheless, two areas of Japanese phonology present substantial difficulties for L1 English speakers in particular: the length distinction and the pitch accent system. In fact, the pitch accent system has been noted for being a particularly difficult problem of Japanese phonology for L2 learners (Polivanov, 1924, in McCawley, 1968, see Table 1 for examples).

Table 1. Examples of difficult contrasts in Japanese phonology for L2 learners

Different length; Same pitch accent	L H H ¹ [to.ke.i] 時計 <i>clock</i>	L H H H [to.o.ke.i] 統計 <i>statistics</i>	L H H H [to.k.ke.i] 特惠 <i>preferential treatment</i>
Different pitch accent; Same length	L H [ki.ruu] 着る <i>wear</i>		H L [ki.ruu] 切る <i>cut</i>

Despite these potential pronunciation issues, pronunciation in JFL courses appears to be neglected (Shport, 2008), being a type of “collateral damage” from the current communicative language teaching (CLT) approach which de-emphasizes accuracy in favor of global communication (The Japan Foundation, 2009). Moreover, the functional load of pitch accent, narrowly defined as the number of minimal pairs that pitch accent differentiates (e.g., [ki.ruu] example above), is considered low (approximately 14% of segmental homophones differentiated by pitch accent, as calculated based on entries in a dictionary for Japanese junior high school students, Shibata & Shibata, 1990). Yet the functional load of pitch accent is

¹ Our notation indicates mora boundary as [,], therefore a long /t:/ is represented as spread out over 2 moras, [t.ta]. A mora is a unit smaller than a syllable, so that [to.o.kjo.o] ‘Tokyo’ has four moras, but only two syllables.

much larger if we take into account the systematic change in pitch accent patterns when combining morphemes (e.g., verbal inflections), words (e.g., compound words, phrases), and phrases (i.e., accent phrases). Misplacement of pitch may activate meanings that are infelicitous with context or impede the ease of understanding. Thus, the communicative implications of the extensive usage of pitch accent with this larger functional load results in an intelligibility load (i.e., extent a feature impedes communication, cf., Munro & Derwing, 1995). Moreover, pitch accent characterizes language varieties (e.g., regional, gender), bearing a social load and role in communicative competence.

As stated in Darcy (2018), one component of effective pronunciation instruction in any area is to increase its importance and relevance for learners, by raising awareness through explicit instruction, and by assessing it. Consequently, the goal of the current paper is to advocate in favor of the teaching of Japanese pitch accent, and to offer teachers specific guidance on how to implement it. Additionally, we believe our suggestions may be applied to the teaching of lexical pitch such as tone or pitch accent in other Less Commonly Taught Languages (LCTLs), and therefore, hope readers will also consider our ideas for other LCTLs when reading this paper.

This paper is a theory-based teaching practice article and does not provide empirical research. We first provide an overview for JFL practitioners of pitch accent and its extensive role in Japanese. We then offer pedagogical suggestions designed to introduce learners to pitch accent, utilizing a systematic approach of possible teaching principles and ideas (e.g., exploiting pitch accent patterns/tendencies/frequencies, do-it-yourself activities) to supplement current teaching approaches/methods and textbooks.

2. Overview of pitch accent in Japanese

2.1 Pitch accent at the word level

Words in Standard Japanese (SJ: 標準語) are accented or unaccented (NHK, 1998) and feature different pitch accent patterns where each mora bears a low or high pitch (see Table 1, second row). In accent-bearing words, each word bears only one accent identified by the fall of pitch from H to L (Miyata, 1927) while unaccented words bear no accent and hence, no fall of pitch.

Semantic context can often differentiate complete homophones such as [ko.i] HL ‘carp’ 鯉, ‘love’ 恋, ‘dark (color)’ 濃い, or ‘come!’ 来い! (Iwasaki, 2001, p. 24). However, in some instances, semantic context may be neutralized, requiring listeners to perceive and memorize the pitch pattern for each word in order to disambiguate spoken Japanese (see example 1, where both meanings reference time).

- (1) *itsuka ni iki mas yoo*
 ‘sometime/the fifth’ particle ‘go’ polite morpheme
 volitional morpheme
 [i.tsu.ka] LHH: *Let’s go on the fifth (day of the month).*
 [i.tsu.ka] HLL: *Let’s go sometime.* (The Japan Foundation, 2009, p. 84)

In addition, while some words can be considered homophones in isolation – such as [ha.na] LH, which can both refer to ‘nose’ 鼻 (as unaccented word) or to ‘flower(s)’ 花 (as accented word) – such pairs turn into pitch accent minimal pairs once they are embedded into a sentence and influence the pitch accent of the attached particles (see example 2). Here, the pitch assigned to the phonological context ([ga]) leads to a meaning difference for the noun [ha.na] (boldfaced type marks changes in pitch in the examples).

- (2) *zoo-san wa kirei-na bana ga ari masu*
 ‘elephant-mr/ms’ particle ‘pretty’ ‘nose/flower’ particle
 ‘have’ polite morpheme
 [ha.na.ga] LHH: *Mr./Ms. **Elephant** has a pretty nose.*

[ha.na.ga] LHL: *Mr./Ms. Elephant has pretty flower(s).*

In sum, a learner needs to know if a word is accented or unaccented, and memorize the location of the accent when a word is accented. Once the location is known, the pitch of each mora of a word can be relatively easily assigned according to the following seven rules. Here, we use the word [a.tsu.me.ma.ʃi.ta] '(I) collected (something)' 集めました to illustrate each step. For this word, the student needs to know that the accent is on [ma].

- 1) Each mora in a word bears either a L or H pitch. The accent is on [ma]: ???**H**??
- 2) The accented mora bears a high pitch followed by a drop from H to L. The moras [ma.ʃi] are thus HL: ???**HL**?
- 3) The first mora is pitched low unless the accent falls on that mora making it high (Initial Lowering Rule, Haraguchi, 1977). The first mora [a] is low since the accent does not fall on it: **L**??HL?
- 4) The first and second mora of a word must differ in pitch so that when the first mora is low, the second must be high or vice-versa. The exception is a heavy first syllable, i.e., long vowel, diphthong, or vowel followed by nasal, e.g., [ko.o.ko.o] 'high school' LHHH or HHHH (both possible). The second mora [tsu] is high since the first mora is low: **LH**?HL?
- 5) Moras between the first low mora and the accented mora are high in pitch. The moras between the first mora [a] and the accented mora [ma] are all high: L**HH**HL?
- 6) Once the pitch falls from high to low within a word, it cannot rise again.
- 7) Moras following the accented mora are low in pitch. The moras following the accented mora [ma] are low: LHH**HL**L

The pitch accent pattern is realized in relation to the accent: In this word there is a gradual rise to the accent and then, a subsequent fall:



(Figure generated by Online Japanese Accent Dictionary, OJAD, Minematsu et al., 2016)

If there is no accent in a word (i.e., accentless), the initial mora is generally low with subsequent moras having a high pitch, including the following particle (i.e., LH...) (McCawley, 1968; Poser, 1984).

Given the importance of knowing where the accent falls, many teachers will want to know the best way for learners to memorize the accent location. First, developing learners' awareness about the importance of this aspect of each word is paramount so that learners pay attention to the accent location for each new word they learn. Second, tendencies exist among the pitch accent pattern types and frequencies, allowing learners to make educated guesses. For instance, the initial accented HL(L) pattern is the most common for 1- and 2-mora nouns while the unaccented LHHH(H) pattern is frequent in 3- and 4-mora nouns - although the HLL(L) pattern is almost as common for 3-mora words (Tanaka & Kubozono, 2012). Learners therefore need to notice and memorize the exceptions. Tendencies are also determined by the origin of the word (e.g., native Japanese, Sino-Japanese, loanwords from Western languages). All words other than Western loanwords are commonly unaccented, but when accented, the accent generally falls on the third mora from the end, i.e., antepenultimate mora (Kawahara, 2015), just as it generally does for loanwords.

2.2 Effects of inflection and phrasing on pitch patterns

As shown above in example (2), pitch accent patterns may shift with regularity when combining morphemes, words, and phrases. Shifts due to inflection (e.g., verbal conjugation) are part of the tacit knowledge native speakers use in understanding changes in inflectional form and the corresponding meaning (cf., Koso & Hagiwara, 2009).

In the conjugation of verbs and adjectives, i.e., adding morphemes to the stem, where there are again accented and unaccented types, pitch may shift on the stem of accented verbs: [ta.be.ru] LHL ‘will eat/(habitually) eat’ vs. [ta.be.ta] HLL ‘ate.’ These pitch patterns may differentiate pitch accent minimal pair verbs across forms:

- (3) Infinitive: [na.ru] LH ‘to ring’ 鳴る vs HL ‘to become’ 成る;
 Future (negation): [na.ta.na.i] LHHH ‘won’t ring’ vs LLLL
 ‘won’t become’ Simple past: [na.ta] LHH ‘rang’ vs HLL
 ‘became’ (NHK, 1998, Appendix p. 7).

Again, learners can take advantage of several tendencies. Accented adjectives are more common than unaccented ones. In contrast, accented and unaccented verbs are in roughly equal proportion (Tanaka & Kubozono, 2012), but accented verbs for the non-past tense forms are accented on the penultimate syllable (e.g., [ta.be.ru] LHL *tabèru*, *taberàrèru*, *tabesasèru*, *tabesaseràrèru* where the accent grave indicates accent) and on the antepenultimate syllable for past tense forms (e.g., [ta.be.ta] HLL *tàbeta*, *taberàreta*, *tabesàseta*, *tabesaseràreta*) (Vance, 2008).

When modifying nouns, the shift in pitch patterns is fairly predictable if the second element is three or four moras long, but less so if one or two moras (McCawley, 1968). Example (4) below shows how the pitch pattern of [ka.ki] HL ‘oyster’ changes when modified by ‘fried’ as compared to the change in pitch accent of [ka.ki] LH ‘persimmon’ when modified by ‘dried’ (Han, 1963, p. 7). Potentially confusing learners should there ever be such food items as ‘fried persimmons’ or ‘dried oysters.’

- (4) [ka.ki] HL ‘oyster’ → [ka.ki.ɸu.ra.i] LHHLL ‘fried oyster(s)’
 [ka.ki] LH ‘persimmon’ → [ho.ʃi.ga.ki] LLLL ‘dried persimmon(s)’

Words also combine into accented or unaccented phrases [i.e., accent phrases (AP)] with fairly recursive pitch patterns which could be exploited by learners, e.g., LH+LH(L) → LHHH(L) as seen in (5). A full discussion of APs is beyond the scope of this paper, but we recommend consulting these works: McCawley, 1968; Pierrehumbert & Beckman, 1988; Poser, 1984; Tanaka & Kubozono, 2012; Vance, 2008.

- (5) [to.ɾi.ga] LHH + [na.i.ta] LHH → [to.ɾi.ga.na.i.ta] LHHHHH
 鳥が鳴いた ‘bird’ nominative particle ‘chirp’ verb stem
 informal past tense morpheme
The bird(s) chirped.
 [ha.na.ga] LHL + [sa.i.ta] LHH → [ha.na.ga.sa.i.ta] LLLLLL
 花が咲いた ‘flower’ nominative particle ‘bloom’ verb stem
 informal past tense morpheme
The flower/Flowers bloomed. (NHK, 1998, Appendix pp. 213-215)

As seen in example (6), wordplay can isolate segmental differences allowing learners to focus directly on the pitch accent and segmentation of APs, as may be done for stress in the English wordplay of *Can you can a can as a canner can can a can?*

- (6) すもももももももももすももももももものうち
 李も桃、桃も桃、李も桃も桃のうち
 [su.mo.mo.mo.mo.mo.mo.mo.mo.mo.mo.su.mo.mo.mo.mo.
 mo.mo.mo.mo.no.u.chi]
 LHHHLH, LHHLH, LHHHLHHLHHHH
A plum is also (a type of) peach, a peach is also (a type of) peach, both plums and peaches are in the peach (family) (Schaefer & Darcy, 2015, p. 285)

The teacher can point to writing conventions indicating

where one might pause (i.e., thought groups/syntactic phrasing) and the resulting pitch pattern(s): Phrasing is mirrored to some extent by punctuation while pitch accent is cued by *kanji* (i.e., Chinese characters) to write content words (e.g., nouns, verbs stems) and *hiragana* (one of two moraic “alphabets”) to write function words (i.e., grammatical morphemes/words). Thus, utterances can be disambiguated: [e.g., [ku.ru.ma.de.ma.to.o]: LHHHHHL ‘Let’s wait at the car’ 車で待とう vs HLLLLHL ‘Let’s wait until (they) come’ 来るまで待とう.]

Retaining the original pitch accent patterns sounds without modification is possible. However, native speakers will likely feel this speech to be disjointed and unnatural as if a first-grader is reading the sentences (NHK, 1998, Appendix p. 214). This is a tendency that L2 learners may also exhibit. As such, JFL instructors should not overly enunciate sentences in this unnatural manner (cf., foreigner talk or teacher talk) at the risk of exposing learners to unnatural language. Moreover, instructors should explain and/or implement activities working on the changes in pitch accent when words combine, particularly when L1 English learners are given lists of words marked for pitch accent.

In sum, pitch accent on words in Japanese is not necessarily static but dynamic, playing a role in signaling or interpreting grammar in spoken Japanese.

2.3 Pitch patterns across language varieties

Pitch accent characterizes language variation, e.g., regional, gender, generational, etc., forming a speaker’s identity. The use/non-use of language varieties may facilitate or hinder a speaker’s participation in various social groups or Japanese society (i.e., social load) and consequently, could impede usage of L2 Japanese outside of the classroom, a necessary component in improving L2 pronunciation (cf., Derwing & Munro, 2015).

Dissimilarities between Japanese regional dialects are most apparent in accent placement and the resulting lexical pitch patterns, contributing to the unique prosody of each variety as seen in Table 2 (Kubozono, 2012, p. 1396). Regional dialects are quite prevalent in

Japan with the Kansai dialect (spoken in Kyoto, Osaka and Kobe) having 20-plus million speakers. More surprisingly, dialectal pitch patterns may be “reversed” as seen for 'bridge' and 'chopsticks' (Table 2) or flout the initial lowering rule (Haraguchi, 1977) in the Kansai dialect, e.g., [sa.ku.ra] ‘cherry blossom tree’ HHH or [a.ri.ga.to.o] LLLHL ‘thank you.’

Table 2. Pitch accent differences in regional dialects

	[a.ri.ga.to.o] Thank you	[ma. ku.do.na.ru.do] McDonald’s	[ha.ʃi] chopsticks	[ha.ʃi] bridge
Tokyo	LHLLL	LHHHLL	HL	LH
Kansai	LLLHL	LLLHLL	LH	HL
Kagoshima	LLLHH	LLLLHL		

Additionally, gender differences in pitch accent exist: delay in F0 fall in lexical pitch signaling femininity (Hasegawa & Hata, 1994) and more dynamic pitch movement in accented accent phrases by female speakers (Takano & Ota, 2017). Generational differences also exist: differences in lexical pitch patterns (NHK, 1998) or unrealized lexical pitch accents by younger speakers in read-aloud speech regardless of region, resulting in the flattening of sentential pitch (Takano & Ota, 2017).

In sum, a better awareness of pitch accent with its intelligibility and social load should enhance greater communicative competence among L2 learners.

3. Second Language Acquisition and Teaching

3.1 Perception and acquisition of pitch accent by L2 learners

Native speakers unconsciously make use of their implicit knowledge of the Japanese pitch accent system when they recognize and activate spoken words (Otake & Cutler, 1999) and word forms (e.g., verbal inflections, Koso & Hagiwara, 2009). Pitch accent is also processed differently in the brain according to dialect (Sato et al., 2013). Indeed, pitch accent is sufficiently salient to L1 Japanese speakers that they develop sensitivity to pitch variations, which in turn helps them perceive non-native tonal contrasts with accuracy

rates comparable in some cases to L1 tone language listeners (e.g., Thai: Schaefer & Darcy, 2014; Mandarin: So & Best, 2010). As such, pitch accent is a salient part of speaking Japanese.

L1 English learners of Japanese experience difficulties implicitly acquiring pitch accent with native-like proficiency (Shport, 2008; see Goss, 2018 for a review of L2 phonological research on Japanese lexical pitch accent), belying the efficacy of mere exposure as implemented in a CLT approach. Learners with L1 English may apply English stress (i.e., higher pitch but also longer vowels) to the accented syllable of Japanese (Kondo, 2007) with unintended outcomes, since vowel length in Japanese distinguishes meaning. Also, using the rising intonation of English questions (roughly LH) on isolated words that carry an HL pattern could have unintended results. For example, *ame?* HL “Rain?” should be HL with a final rise on the L (NHK, 1998: Appendix p. 109), and not LH, which means ‘candy.’ Similarly, in perception, L2 listeners exhibit differences by pitch patterns: They perceive the rising LHHH(H) pattern most accurately followed by the falling HLLL(L) and rising-then-falling LHLL(L), LHHL(L) and LHHH(L) patterns (Hirano-Cook, 2011; Nishinuma, Arai, & Ayusawa, 1996).

Training improves the perception of Japanese pitch accent (Hirano-Cook, 2011), which then could improve production (cf., Mandarin tones, Wang, Jongman, & Sereno, 2003). Moreover, teaching suprasegmentals appears to enhance intelligibility more so than teaching segments, and even more so than no instruction, at least in English as an L2 (Munro & Derwing, 1995). While we are not aware of studies specifically designed to test this claim for intelligibility or comprehensibility in L2 Japanese, it seems that non-target-like suprasegmentals (e.g., pitch accent) produce a greater sense of a foreign accent to native speakers of Japanese than do non-target-like segments (Sato, 1995). Yet, despite the importance of pitch accent in conveying accurate meaning and its salience to native listeners, it is seldom covered explicitly in JFL courses (Shport, 2008).

Shport’s (2016) study on the influence of training on the identification of lexical pitch accent patterns has revealed certain pedagogical implications: 1) identification of pitch patterns can improve after a mere one hour of training combined with some

explicit instruction, 2) some patterns are easier to learn to perceive, and 3) the unaccented pattern poses the greatest challenge in perception by L1 English speakers. Shport elaborates on these implications in light of previous studies. Variability in stimuli facilitates perception: sentential context (e.g., initial, medial), multiple stimuli and speaker variability. Crucially, training (i.e., identification tasks) without feedback does not appear to result in perceptual improvement while training with feedback does. Explicit instruction – and not merely exposure – results in improvement (such findings support enhancing awareness of pitch accent through explicit instruction, feedback, and variability in materials, e.g., multiple words, speakers, sentential contexts, or in other words, authentic language use (See Shport, 2016 for details and references).

3.2 Pitch accent in textbooks

A cursory search for pronunciation comments and activities in the lessons of the first two volumes of popular JFL textbooks used in American universities² reveals little to no explicit comments or activities in three of the four textbooks, implying an expectation of learners to acquire pitch accent through mere exposure. These textbooks seem to reflect the recent emphasis on the Communicative Language Teaching (CLT) approach where pronunciation is meant to be learned implicitly through communicative activities. They contain a page or two as reference showing the possible pitch accent patterns for words along with occasional basic rules for these pitch accent patterns. There is some partial marking of vocabulary or phrases. The *Genki* series (Banno et al., 2011) features limited supplementary materials marking pitch accent in passages in the accompanying textbook.

By contrast, *Japanese: The Spoken Language* (Jordan & Noda, 1987) textbook pays significant attention to pronunciation, dedicating 18 pages in the introduction (of which a little over three entire pages are devoted to pitch accent with an extra half page of pitch accent minimal pairs) with vocabulary lists, dialogs, and all Japanese words marked for pronunciation and accent placement in each chapter. This

² *Genki I, II* (Banno et al., 2011), *Japanese: the Spoken Language I, II* (Jordan & Noda, 1987), *Nakama I, II* (Hatasa et al., 2015), *Yokoso I* (Tohsaku, 1999), *Yokoso II* (Tohsaku, 2004).

emphasis on pronunciation may derive from this textbook's predecessor, *Beginning Japanese* (Jordan & Chaplin, 1962) which reflected the Audiolingual Method (ALM) and its emphasis on pronunciation and oral skills at the time when this textbook was conceived. The Jordan method (Jordan & Noda, 1987) is exceptional in emphasizing pitch accent, although marking isolated words in *rōmaji* (i.e., Roman alphabet transcription) is perhaps not the most ideal teaching method, particularly without explanations given that pitch accent is not static. Certainly, the Jordan method provides insights into teaching pronunciation which could be incorporated into current pedagogical approach(es) such as CLT.

3.3 Modified communicative language teaching framework

The Communicative Language Teaching approach focuses on the promotion of meaningful interaction in the classroom, dispensing with non-communicative activities such as explanations of language, grammar translation, and repetitive drills, and is characterized by being conducted entirely in the target language. Yet, JFL courses at the university level tend to promote a “modified CLT approach” composed of lectures (FACT) and drill sessions (ACT). The drill sessions may resort to using some ALM-type drills within a progression of activities with a focus on form to a focus on function (i.e., communication) but with little to no overt work on pronunciation.

The present foreign/second language teaching trend has been described as being in a post-methods (Celce-Murcia, 2014) or eclectic methods (Nunan, 2015) era. The CLT approach appears to serve as the mainframe of JFL teaching, with other methods woven into the approach. Indeed, adopting a veritable “alphabet soup” of methods and approaches [i.e., Communicative Language Teaching (CLT), Total Physical Response (TPR), Audiolingual Method (ALM), Task-Based Language Teaching (TBLT)] is possible and in fact desirable in increasing teaching efficacy. Even limited explicit teaching can be effective as adults can access their analytical skills and their L1 (unlike children) to understand new language concepts more quickly (cf., Snow & Hoefnagel-Höhle, 1978). Thus, some methods are very explicit and concentrate on forms (e.g., ALM) while others are the exact opposite being implicit and concentrate on functions (e.g.,

CLT) with many falling in between on an explicit/implicit or focus-on-form/function continuum. Undeniably, the pendulum swing between the two extremes calls for a paradigm shift to find the optimal balance between the two extremes to better facilitate L2 pitch accent acquisition. An ideal approach must also consider practical constraints such as lack of effective instructional materials, lack of confidence in one's mastery of specific (pronunciation) teaching methods, or limited class time (cf., Kawasome, 2014). In response to these concerns, in the following section we offer practical guidelines and suggestions that will enable instructors to put an ideal approach into practice when teaching Japanese pitch accent.

4. A practical guide to teaching Japanese pitch accent

Before delving into practical ways of teaching pitch accent, it is important to realize that *native-like* pitch accent production by L2 learners of Japanese is not necessarily the objective. Rather, the goal is the acquisition of a minimal level of *intelligibility* (i.e., comprehension of the speaker's intended message) and *comprehensibility* (i.e., ease of understanding) despite the inevitable presence of some degree of *accentedness* (i.e., non-native-like pronunciation) (cf., Derwing & Munro, 2015; Munro & Derwing, 1995). Thus, pronunciation features should be prioritized according to their contribution to intelligibility/comprehensibility as determined subjectively by the instructor, pending greater research. It must also be kept in mind that accentedness despite actual sufficient intelligibility and comprehensibility may still impede communication as it may trigger biases and thereby, social barriers. This in turn could decrease integrative motivation among learners and opportunities for the usage of Japanese in a second-language environment.

4.1 Raising awareness with explicit activities and feedback

At the very least, it is crucial that an instructor raise awareness (i.e., noticing) of pitch accent among L2 learners, and thereby, increase the likelihood that exposure will in fact effectively facilitate learners' acquisition of pitch accent (cf., Schmidt, 1990). This need to increase awareness may be particularly true in the first year when pronunciation appears to experience the greatest development, especially in an L2 environment (Flege, 1988).

This could be done in several ways. An instructor could introduce learners to pitch accent minimal pairs and word play that isolates pitch accent (i.e., different pitch patterns distinguishing the meaning of the same sequence of segments) as a simple means to jolt learners into noticing pitch accent as early as possible, potentially facilitating the acquisition of pitch accent while imparting an appreciation of pitch accent in Japanese culture. Also, marking words/sentences for pitch accent as a visual cue may aid learners in becoming more aware of pitch accent. Yet, learners may become confused when confronted with shifting pitches and inadequate explanations as they may memorize static pitch accent patterns and not realize the dynamic nature of pitch accent. As such, the efficacy of marking texts should be further scrutinized (cf., Hasegawa, 1995), determining what (e.g., words, phrases), how (e.g., capitalized letters, colors, a line over/under words, various black dots, writing high-low “HL” patterns, diacritics, cf., Vance, 2008, p. 148), when (e.g., vocabulary lists, dialogs), etc. to implement marking. Additionally, exposing learners even briefly to the different pitch patterns of other language varieties such as the Kansai dialect or “flat-pitched” Fukushima dialect (cf., Schaefer & Darcy, 2015) or varying gender or generational differences may be an effective means to make learners aware of pitch accent and improve their perception/production (cf., Baker & Smith, 2010 for L2 French segments).

Providing explicit, pronunciation-directed feedback is a very important complement to awareness raising activities, and will enhance learners’ awareness of the importance of pitch accent. In short, feedback boosts awareness and thereby, acquisition (cf., L2 English, Saito & Lyster, 2012). This synergy between raising awareness and providing subsequent feedback is therefore a necessary component of teaching pitch accent. However, as feedback can be ambiguous, it is best if instructors openly explain to students that this kind of feedback is directed at their pronunciation (and not at the sentence structure or word choice, for instance). In addition, instructors should consider what type of feedback works best for their classroom, in terms of how to provide it (e.g., hand gestures, cards; to the individual or as a class), when to provide it (e.g., immediately, afterwards, depending on the goal of the activity:

fluency vs accuracy), and what expectations the instructor has for students' self-correction.

4.2 Automatizing pitch accent into language use

One critical benchmark of acquiring a new dimension of language is when it becomes used in spontaneous speech, i.e., when learners are able to use it correctly without thinking about it too much. In order to achieve this automatized use, research has shown that learners need to simultaneously focus on both the form and meaning of words/utterances (Segalowitz & Hulstijn, 2005). This is no easy feat as a CLT approach often sacrifices focus on form (i.e., accuracy) in favor of focus on function. By contrast, ALM focuses on accuracy through (repetitive) drills with little to no context or communicative intent. What is needed to increase awareness of pitch accent and promote more target-like (lexical) acquisition and automatization is a balance between the approaches. That is, language tasks need to be simultaneously communicative and repetitive (Gatbonton & Segalowitz, 1988), where accurate perception/production of target pronunciation is required to complete tasks (i.e., task-based learning).

Additionally, in contrast to “traditional” pronunciation practice which tends to emphasize parrot-like production without context, we recommend the full gamut of pitch accent be addressed. To enhance automatization, we propose that pronunciation practice could take what we call a “5P” approach and cover not only 1) *prehension* (i.e., *comprehension*) or metalinguistic awareness of these pronunciation features and rules, 2) *perception*, and 3) *production*, but also 4) *patterns* (e.g., frequency of pitch accent patterns) and 5) *phonological processes* (i.e., changes in pitch patterns when combining morphemes, words, or phrases).

To cover all five Ps, we outline below a template comprising several stages originally designed for teaching pronunciation in English as a Second/Foreign Language, which may be implemented to guide the teaching of Japanese pitch accent. The template overlaps the five Ps with the five steps that constitute a communicative framework for teaching pronunciation by Celce-Murcia and colleagues (2010): 1) descriptive analysis (i.e., metalinguistic

awareness), 2) listening, 3) controlled practice, 4) guided practice, and 5) communicative practice, progressing from a focus on form (low cognitive load) to one on function (communication with greater cognitive load).

Stage 1: Descriptive analysis/Metalinguistic awareness (prehension). Focused explanations to boost metalinguistic awareness can be flipped, i.e., done outside class through short, to-the-point videos, handouts, or exercises (e.g., marking accent, deducing patterns, etc.) leaving more in-class practice time. Class time should relegate the instructor to the role of facilitator of language acquisition, putting focus squarely on students and providing more practice and less lecturing.

Stage 2: Listening (perception). In the listening stage, learners increase their perception of the target pronunciation feature (e.g., differences between pitch patterns, pitch fall) as improving perception skills can facilitate speaking skills (cf., Flege, 1995) although it is possible with training to overcome this (Miyawaki et al., 1975). In particular, perception should in most cases precede production to enable learners to listen to and thereby, focus on pitch accent before being forced to produce it.

Stages 3-5: Practice (production, patterns, phonological processes). In the practice stages, the focus of activities should move from one on form (i.e., pitch accent patterns) to one on function (i.e., communication) (or focus on accuracy to one on fluency) with meaningful context and a degree of repetition. Effective communication should be deemed to take place only when the target pronunciation feature (e.g., pitch patterns in minimal pairs) is both intelligible and comprehensible (cf., Munro & Derwing, 1995), although a clear threshold must be determined since judgment is somewhat subjective. Returning to a previous step may be necessary to ensure or reinforce acquisition. Within such a framework, pronunciation activities can be embedded into lessons on grammar, culture, etc. Also, using technological devices (e.g., cell phones), oral recording exercises can be assigned with specific pronunciation objectives as outside homework, creating more practice and in-class time.

4.3 Implementing instruction into the curriculum/syllabus

JFL instructors can create handouts or a course packet of pronunciation files of lessons to supplement textbooks, covering pitch accent rule by rule in a progression from the level of words to phrases to dialectal variation. We provide the following sample of rules where accompanying activities can be arranged by the three stages of the template covering the 5Ps.

Rule 1: Each mora in a word has a high or low pitch. If a word is accented, it generally shows a fall in pitch.

Rule 2: Final-accented words and unaccented words have a similar pitch pattern, LHH(H...) unless a particle is added, e.g., LHH(H...)L vs LHH(H...)H, respectively.

Rule 3: Combining parts of words (i.e., morphemes) or words with one another may result in pitch patterns differing from those of the original individual morphemes or words.

Rule 4: Combining (accent) phrases with one another may result in different pitch patterns from the original individual phrases.

Rule 5: Regional varieties of Japanese may vary in pitch accent patterns.

(See Appendix for sample of supplementary activities for each rule in the three stages.)

4.4 Assessing progress and holding students accountable

In addition to instructional methods, assessment is an important part of effective pronunciation instruction as it creates accountability for both instructors and learners. It is crucial to clearly define student learning outcomes (SLOs) for pitch accent as guidelines in creating, implementing, and assessing activities. These SLOs might reference Bloom's (1956) taxonomy for a list of verbs to

establish clearly measurable achievements such as the following sample of possible SLOs to guide both the students and instructors.

Table 3. Samples of Student Learning Outcomes for learning pitch accent

Upon completion of this course, successful students will be able to:	
1. Demonstrate an awareness of the Japanese pitch accent system and its features that aid in increasing intelligibility [Stage 1 Metalinguistic awareness (prehension)]	
	<ul style="list-style-type: none"> * Identify the pitch accent on loanwords, compounds. * Describe tendencies and rules of pitch accent patterns. * Classify accented and unaccented nouns, verbs, adjectives and mark their conjugated forms for accent and the subsequent pitch pattern. * Identify the pitch accent patterns for accent phrases. * Mark accent phrases (cf., thought groups) in a talk. * Mark the fall in pitch (= accent) in accent phrases. * Mark the pitch levels (low or high) on each mora in a word according to rules when given the accent in the word.
2. Demonstrate improvement in perception of targeted pitch accent patterns [Stage 2 Listening (perception)]	
	<ul style="list-style-type: none"> * Perceive the difference between high and low pitches. * Perceive a drop in pitch (= accent). * Differentiate between minimal pairs (e.g., [ka.ki] for “persimmon/oyster”). * Perceive a change in pitch accent patterns.
3. Demonstrate improvement in production of targeted pitch accent patterns [Stage 3 Practice (production, patterns, phonological processes)]	
	<ul style="list-style-type: none"> * Produce high and low pitches with appropriate range. * Produce the falling pitch with target-like timing and range. * Produce minimal pairs accurately. * Produce the different pitch patterns of accented verbs and adjectives. * Adjust pitch patterns when combining morphemes/ words into compound words, phrases, etc. when necessary.

The JFL practitioner must 1) diagnose the major L2 pitch accent issues in terms of intelligibility and comprehensibility, 2) devise and implement a treatment plan with clear objectives, and 3) assess the efficacy of the treatment. To determine the source of pitch accent problems and adjust pedagogical priorities, the instructor must ask questions such as the following: Are learners aware of pitch accent? Can they perceive/produce pitch heights, falls, and patterns? Have they acquired the pitch pattern as part of a word? Can they adjust pitch patterns when combining words and accent phrases? In response to these questions, the instructor should tailor teaching methods and lessons to cover individual learner needs. This includes heritage speakers of Japanese non-standard dialects and what we term “advantaged” learners, i.e., international students, bilingual domestic students, etc. who come with language backgrounds that may give them an advantage in learning Japanese pitch accent or for that matter other linguistic aspects of Japanese (e.g., Mandarin, Thai tone languages; *Kyungsang* Korean dialect, Swedish pitch accent dialects).

5. Conclusion

Pitch accent is a key component of linguistic and communicative competence, increasing global language proficiency with its role in vocabulary, grammar, listening, discourse, and language variation. Where non-target-like pitch accent production might impede intelligibility, it is imperative that pitch accent, its rules, patterns, and tendencies be taught just as grammar rules usually are. There is thus a need to return to some manner of emphasis on pronunciation teaching. The following suggestions could be considered:

1. Boost awareness in the early stages, using minimal pitch accent pairs, wordplay, etc. (cf., noticing, Schmidt, 1990).
2. Provide feedback in some form to learners, ideally explicitly, considering how, when, what, etc. to do so.
3. Emphasize intelligibility over nativeness, valuing an L2

accent and identity.

4. Employ a systematic approach: 1) Progression on focus on form to focus on function (Celce-Murcia et al., 2010), 2) Simultaneous focus on meaning with repetition (Gatbonton & Segalowitz, 1988), 3) Comprehensive 5P approach to teaching the full scope of pitch accent including dynamic/static aspects, 4) Measurable student learning outcomes (SLOs) with diagnostics (pre-test, post-test), 5) Assessment of treatment(s).
5. Create more time to practice pronunciation, 1) flip the course as much as possible to work on pitch accent, e.g., outside recording assignments, and 2) embed pitch accent practice into other lessons on grammar, culture, etc. This may include adopting a do-it-yourself approach to supplement textbooks and prioritize learners' needs, e.g., heritage speakers and "advantaged learners."

In conclusion, this paper advocates the active teaching of pitch accent in JFL courses. We do not claim our views are definitive or comprehensive, but rather hope that what has been touched upon in this paper will begin a dialogue among JFL practitioners and thereby, promote in JFL courses the awareness and active learning of pitch accent and its extensive role considering the information and suggestions presented in this paper. We also hope that more reflective teaching practices, classroom research, and second language phonology research will be conducted to better understand the learning/teaching of the full scope of Japanese pitch accent.

Furthermore, we strongly believe our suggestions for teaching Japanese pitch accent apply equally to the teaching of pronunciation of many LCTLs. This would include the majority of languages in the world which are considered tone languages or a sub-set of tone languages where "pitch enters into the lexical realization of at least some morphemes" (Yip, 2002, p. 4). These languages include many in Southeast Asia, Africa, and Central America as well as Chinese languages such as Mandarin and European languages such as Swedish and Serbo-Croatian. The lexical pitch system of these languages may

differ from Japanese pitch accent and one another both qualitatively and quantitatively in terms of functional load, intelligibility load, social load, inventory of pitch patterns, static vs dynamic nature, and more. Therefore, we encourage LCTL instructors to carefully consider these characteristics of lexical pitch in the target language and in the L1 of the learner and adapt our suggestions accordingly from the outset of learning and throughout. This is particularly crucial when the intelligibility load of lexical pitch is high in the target language. We further hope LCTL instructors will experiment with our guidelines of teaching lexical pitch in a comprehensive approach, culminating in task-based activities where only sufficiently target-like lexical pitch enables the completion of tasks. Finally, we also urge LCTL practitioners to collaborate with one another in developing and sharing methods and materials from the many vantages of these differing lexical pitch systems.

Acknowledgements

We would like to thank the anonymous reviewers and Dr. Danko Sipka for their generous, detailed comments and encouragement.

Author Note

Correspondence may be addressed to Vance Schaefer, Department of Modern Languages, P.O. Box 1848, The University of Mississippi, University, MS 38677.

References:

- Baker, W., & Smith, L. C. (2010). The impact of L2 dialect on learning French vowels: Native English speakers learning Québécois and European French. *The Canadian Modern Language Review / La Revue Canadienne des Langues Vivantes*, 66, 711–738.
- Banno, E., Ohno, Y., Sakane, Y., Shinagawa, C., & Takashiki, K. (2011). *Genki: An integrated course in elementary Japanese* (2nd ed.). Tokyo: Japan Times.
- Banno, E., Ohno, Y., Sakane, Y., Shinagawa, C., & Takashiki, K. (2011). *Genki: An integrated course in elementary Japanese II* (2nd ed.). Tokyo: Japan Times.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. New York, NY: David McKay Company.
- Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). *Teaching pronunciation: A course book and reference guide* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Darcy, I. (2018). Powerful and effective pronunciation instruction: How can we achieve it? *The CATESOL Journal*, 30(1), 13-45.
- Derwing, T. M., & Munro, M. J. (2015). *Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research*. Amsterdam: John Benjamins Publishing Company.
- Flege, J. E. (1988). A critical period for learning to pronounce foreign languages? *Applied Linguist*, 8, 162–177.
- Flege, J. E. (1995). Second language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech perception and linguistic experience: Issues in cross-language research* (pp. 233–272). Baltimore, MD: York Press.
- Gatbonton, E., & Segalowitz, N. (1988). Creative automatization: Principles for promoting fluency within a communicative framework. *TESOL Quarterly*, 22, 473–492.
- Goss, S. (2018). A critical pedagogy of lexical accent in L2 Japanese: Insights into research and practice. *Japanese Language and Literature*, 52(1), 1–24.

- Han, M. (1963). The problem of pitch in the teaching of Japanese. *The Journal-Newsletter of the Association of Teachers of Japanese*, 1(1), 5–9.
- Haraguchi, S. (1977). *The tone pattern of Japanese: An autosegmental theory of tonology*. Tokyo: Kaitakusha.
- Hasegawa, Y. (1995). Against marking accent locations in Japanese textbooks. *Japanese-Language Education Around the Globe*, 5, 95–103.
- Hasegawa, Y., & Hata, K. (1994). Non-physiological differences between male and female speech: Evidence from the delayed F0 fall phenomenon in Japanese. *Proceedings of the 1994 International Conference on Spoken Language Processing (ICSLP 94), September 18-22, 1994, Yokohama, Japan* (pp. 1179–1182). Tokyo: Acoustical Society of Japan.
- Hatasa, Y. A., Hatasa, K., & Makino, S. (2015). *Nakama 1: Introductory Japanese: Communication, culture, context (World languages)* (3rd ed.). Stamford, CT: Heinle.
- Hatasa, Y. A., Hatasa, K., & Makino, S. (2015). *Nakama 2: Introductory Japanese: Communication, culture, context (World languages)* (Enhanced 2nd ed.). Stamford, CT: Heinle.
- Hattori, S. (1951). *On'inron to seisbobō (Phonology and orthography)*. Tokyo: Kenkyūsha.
- Hirano-Cook, E. (2011). Japanese pitch accent acquisition by learners of Japanese: Effects of training on Japanese accent instruction, perception, and production. (Unpublished doctoral dissertation). University of Kansas, Lawrence, KS.
- Iwasaki, S. (2002). *Japanese language*. Amsterdam: John Benjamins Publishing.
- Jorden, E. H., & Chaplin, H. I. (1962). *Beginning Japanese*. New Haven, CT: Yale University Press.
- Jorden, E. H., & Noda, M. (1987). *Japanese: The spoken language part 2*. New Haven, CT: Yale University Press.
- Kawahara, S. (2015). The phonology of Japanese accent. In H. Kubozono (Ed.), *The handbook of Japanese language and linguistics: Phonetics and phonology* (pp. 445–492). Amsterdam: Mouton de Gruyter.

- Kawasome, Y. (2014). *Hatsuon gakushū no furikaeri ga nihongo kyōshi no onsei kyōikukan ni ataeru eikyō – kyōikusha to gakushūsha no futatsu no tachiba de no katari kara* [The influence of (students') reflecting on learning pronunciation on Japanese instructors' pronunciation teaching – Accounts from the perspectives of both educators and learners]. Poster presented at Waseda Daigaku Nihongo Kyōiku Gakkai 2014nen Shunki Taikai, 29 March, Tokyo, Japan.
- Kondo, M. (2007). Acoustic realization of lexical accent and its effects on phrase intonation in English speakers' Japanese. In J. Trouvain & W. J. Barry (Eds.), *Proceedings of the 16th International Congress of Phonetic Sciences: ICPHS XVI, 6 - 10 August 2007, Saarbrücken, Germany* (pp. 1649–1652). Saarbrücken-Dudweiler, Germany: Pirrot.
- Koso, A., & Hagiwara, H. (2009). Event-related potential evidence of processing lexical pitch-accent in auditory Japanese sentence. *Cognitive Neuroscience and Neuropsychology*, 20(14), 1270–1274.
- Kubozono, H. (1993). *The organization of Japanese prosody*. Tokyo: Kurosio Publishers.
- Kubozono, H. (2012). Varieties of pitch accent systems in Japanese. *Lingua*, 122, 1395–1414.
- Labov, W. (1972). *Sociolinguistic patterns*. Philadelphia, PA: University of Pennsylvania Press.
- McCawley, J. D. (1968). *The phonological component of a grammar of Japanese*. The Hague: Mouton.
- Minematsu, N., Hirano, H., Nakamura, N., & Oikawa, K. (2016). Improvement of naturalness of learners' spoken Japanese by practicing with the web-based prosodic reading tutor, Suzuki-kun. *Proceedings of Speech Prosody*, 8, 257–261.
- Miyata, K. (1927). Atarashii akusentokan to akusento hyōkihō (A new view of accent and means of representing accent). *Onsei no kenkyū*, 1, 18–22
- Miyawaki, K., Strange, W., Verbrugge, R., Liberman, A. M., Jenkins, J. J., & Fujimura, O. (1975). An effect of linguistic experience: Discrimination of [r] and [l] by native speakers of Japanese

- and English. *Perception and Psychophysics*, 18(5), 331–340.
- Munro, M. J., & Derwing, T.M. (1995). Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. *Language Learning*, 45(1), 73–97.
- NHK Hōsō Bunka Kenkyūjo. (1998). *NHK Nihongo batsuon akusento jiten shinpan* (NHK: Dictionary of Japanese pronunciation accent, new edition). Tokyo: Nihon Hōsō Shuppan Kyōkai.
- Nishinuma, Y., Arai, M., & Ayusawa, T. (1996). Perception of tonal accent by Americans learning Japanese. In H. T. Bunnell & W. Idsardi (Eds.), *ICSLP 96: Proceedings, Fourth International Conference on Spoken Language Processing* (pp. 646–649). Philadelphia, PA: Institute of Electrical and Electronics Engineers (IEEE).
- Norton, B. (1997). Language, identity, and the ownership of English. *TESOL Quarterly*, 31(3), 409–429.
- Nunan, D. (2015). *Teaching English to speakers of other languages*. New York, NY: Routledge.
- Otake, T., & Cutler, A. (1999). Perception of suprasegmental structure in a nonnative dialect. *Journal of Phonetics*, 27, 229–253.
- Pierrehumbert, J., & Beckman, M. (1988). *Japanese tone structure*. Cambridge, MA: MIT Press.
- Polivanov, E. D. (1974). Toward work on musical accentuation in Japanese (in connection with the Malayan languages). In A. A. Leonte'v (Ed.), *Selected works*. (D. Armstrong, Trans.). The Hague: Mouton. (Original work published 1924)
- Poser, W. J. (1984). *The phonetics and phonology of tone and intonation in Japanese*. (Unpublished doctoral dissertation). Massachusetts Institute of Technology, Cambridge, MA.
- Saito, K., & Lyster, R. (2012). Effects of form-focused instruction and corrective feedback on L2 pronunciation development of /ɪ/ by Japanese learners of English. *Language Learning*, 62(2), 595–633.
- Sato, T. (1995). A comparison of phonemes and prosody in the evaluation of spoken Japanese. *Japanese Language Education Around the Globe*, 5, 139–154.
- Sato, Y., Utsugi, A., Yamane, N., Koizumi, M., & Mazuka, R. (2013).

- Dialectal differences in hemispheric specialization for Japanese lexical pitch accent. *Brain and Language*, 127, 475–483.
- Schaefer, V., & Darcy, I. (2014). Lexical function of pitch in the first language shapes cross-linguistic perception of Thai tones. *Laboratory Phonology*, 5(4): 489–522.
- Schaefer, V., & Darcy, I. (2015). A communicative approach and dialect exposure enhance pitch accent awareness by learners of Japanese (Teaching tip). In J. Levis, R., Mohamed, M. Qian, & Z. Zhou (Eds.), *Proceedings of the 6th Pronunciation in Second Language Learning and Teaching Conference* (ISSN 2380-9566) (pp. 285–296). Ames, IA: Iowa State University.
- Schmidt, R. W. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 129–158
- Segalowitz, N., & Hulstijn, J. H. (2005). Automaticity in second language learning. In J. F. Kroll & A. M. B. de Groot, (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 371–388). Oxford: Oxford University Press.
- Shibata, T., & Shibata, R. (1990). Akusento wa dō'ongo o dono teido benbetsu shiuru ka – Nihongo, eigo, chūgoku no ba'ai [To what extent can accent differentiate homophones? The case of Japanese, English and Mandarin]. *Keiryō kokugaku*, 17, 311–323.
- Shport, I. A. (2008). Acquisition of Japanese pitch accent by American learners. In P. Heinrich & Y. Sugita (Eds.), *Japanese as foreign language in the age of globalization* (pp. 165–187). Munich, Germany: Iudicium Verlag.
- Shport, I. A. (2016). Training English listeners to identify pitch-accent patterns in Tokyo Japanese. *Studies in Second Language Acquisition*, 38(4), 739–769.
- Smyth, D. (2002). *Thai: An essential grammar*. London: Routledge.
- Snow, C. E., & Hoefnagel-Höhle, M. (1978). The critical period for language acquisition: Evidence from second language learning. *Child Development*, 49(4), 1114–1128.

- So, C. K., & Best, C. T. (2010). Cross-language perception of non-native tonal contrasts: Effects of native phonological and phonetic influences. *Language and Speech*, 53(2), 273–293.
- Takano, S., & Ota, I. (2017). A sociophonetic approach to variation in Japanese pitch realizations: Region, age, gender and stylistic parameters. *Asia-Pacific Language Variation*, 3(1), 5–40.
- Tanaka, S., & Kubozono, H. 2012. *Introduction to Japanese pronunciation: Theory and practice*. Tokyo: Kurosio.
- The Japan Foundation. (2009). *Onsei o oshieru (Teaching pronunciation)*. Tokyo: The Japan Foundation.
- Tohsaku, Y.-H. (1999). *Yookoso! An invitation to contemporary Japanese* (2nd ed.). Boston, MA: McGraw-Hill.
- Tohsaku, Y.-H. (2004). *Yookoso! Continuing with contemporary Japanese* (Media ed.). Boston, MA: McGraw-Hill.
- Vance, T. J. (2008). *The sounds of Japanese*. Cambridge, UK: Cambridge University Press.
- Wang, Y., Jongman, A., & Sereno, J. A. (2003). Acoustic and perceptual evaluation of Mandarin tone production before and after perceptual training. *Journal of the Acoustical Society of America*, 113, 1033–1044.
- Yip, M. (2002). *Tone*. Cambridge, UK: Cambridge University Press.

Appendix:

Table of sample supplementary activities for rules

<p>Rule 1: Each mora in a word has a high or low pitch. If a word is accented, it generally shows a fall in pitch.</p>		
<p>Activities</p>	<p>Stage 1 Metalinguistic awareness (prehension)</p>	<ul style="list-style-type: none"> ● Mark the accented mora in loanwords according to rules. Then, mark the remaining moras as a high or low pitch according to rules. ● According to the rules, assign the pitch of each mora in a word which has been marked for accent. ● Note the pitch pattern tendencies for 3-mora and 4-mora words. Also, note the exceptions.
	<p>Stage 2 Listening (perception)</p>	<ul style="list-style-type: none"> ● Listen and mark moras in a word as a high or low pitch. Mark the fall in pitch if there is one. ● Circle the word that you hear from pitch accent minimal pairs (e.g., rain, candy). ● Circle words with the same pitch patterns. ● Play <i>Bingo</i> - fill out a card with pictures or kanji from a list of list of pitch accent minimal pairs. * Such activities can be applied to any language using lexical pitch where learners must hear the difference between: [andɛn] in Swedish meaning <i>duck</i> (acute accent) or <i>spirit</i> (grave accent), or [ma] in Mandarin meaning <i>mother</i> (tone 1), <i>bemp</i> (tone 2), <i>horse</i> (tone 3), <i>to scold</i> (tone 4), or marking a question (no tone).
	<p>Stage 3 Practice (production, patterns, phonological processes)</p>	<ul style="list-style-type: none"> ● Describe activities in the pictures, e.g., <i>taipu/ arubaito/ doraibu/ amefuto suru</i> (loanwords) ● What fast foods do you see? ● Roleplay ordering food/taking food order at a fastfood restaurant after determining and/or listening to the pitch patterns of the items on the menu, e.g., cheeseburger, chocolate shake, etc. ● Record your pronunciation of given pitch accent minimal pairs and/or loanwords. ● Answer questions (in class/recordings): What fast foods do you not like? Which countries in Europe would you like to visit? What activities

		can you do (using loanwords)?
Rule 2: Final-accented words and unaccented words have a similar pitch pattern, LHH(H...) unless a particle is added, e.g., LHH(H...)L vs LHH(H...)H, respectively.		
Activities	Stage 1 Metalinguistic awareness (prehension)	<ul style="list-style-type: none"> ● Mark the pitch patterns of the pairs of final-accented and unaccented words. ● Mark these words and the particle that follows them in the following sentences.
	Stage 2 Listening (perception)	<ul style="list-style-type: none"> ● Listen and mark the pitch patterns, noticing any fall in pitch. ● Follow the instructor's commands (TPR): Draw 'chopsticks'/Touch or go to (a picture of) 'bridge' (put up around the classroom). ● Play <i>Pictionary</i> or any game you can "recycle" (i.e., devise) using pitch accent minimal pairs.
	Stage 3 Practice (production, patterns, phonological processes)	<ul style="list-style-type: none"> ● What objects do you see in the picture? Where are they? ● Play <i>Go Fish</i> with cards of pitch pattern minimal pairs to collect pairs of the same word, asking your partner(s) <i>bana (nose/flower) ga arimasu ka</i> or <i>bana o kudasai</i>. ● Answer questions (in class/recordings): Where are these objects (salmon, alcohol, chopsticks, etc.) in the picture? Do you like oysters or persimmons?
Rule 3: Combining parts of words (i.e., morphemes) or words with one another may result in pitch patterns differing from those of the original individual morphemes or words.		
Activities	Stage 1 Metalinguistic awareness (prehension)	<ul style="list-style-type: none"> ● Predict the pitch pattern of words when combined (adjective+noun, noun+verb, etc.) according to rules. Compare your predictions to what is generated by OJAD (Online Japanese Accent Dictionary, Minematsu et al., 2016: http://www.gavo.t.u-tokyo.ac.jp/ojad). ● Use OJAD to look up the pitch patterns of accented verbal conjugations.
	Stage 2 Listening (perception)	<ul style="list-style-type: none"> ● Mark differences in pitch patterns in accented verbal conjugations. ● Mark pitch accent patterns of accented/unaccented adjectives, e.g., <i>shiroi</i> LHL 'white' vs <i>kiroi</i> LHHH 'yellow.' ● Mark differences in pitch patterns between

	<p>Stage 3 Practice (production, patterns, phonological processes)</p>	<p>accented/unaccented adjectives + nouns.</p> <ul style="list-style-type: none"> ● Describe items or photos of items using accented/unaccented adjectives+nouns, e.g., red/blue car etc. ● Do an information gap activity, asking questions to obtain information about people/places: <i>Satō-san</i> (HLL not LHL ‘sugar’) <i>wa akai/aoi kuruma ga arimasu ka, amai/nigai aisu koobii ga suki desu ka</i>, etc. ● Play <i>20 Questions</i> (e.g., <i>tabeta koto ga aru?</i>) trying to guess the name of a person/thing written on a piece of paper attached to your back/forehead, or <i>Whodunnit</i> asking your classmates questions about a suspect. ● Ask and answer questions about your activities, e.g., every week, weekend, etc. ● Offer advice for given scenarios: <i>tabeta hoo ga ii HLL/HLL/HL, tabenakya LHLL</i> ● Record responses to questions, e.g., What do you usually do on Saturdays? What did you do last summer?
<p>Rule 4: Combining (accent) phrases with one another may result in different pitch patterns from the original individual phrases.</p>		
<p>Activities</p>	<p>Stage 1 Metalinguistic awareness (prehension)</p>	<ul style="list-style-type: none"> ● Mark a short script of a talk for accent phrases/phrasing and the resulting pitch accent patterns according to rules. ● Compare the pitch patterns you predicted to those generated by OJAD Prosody Tutor Suzuki-kun (Minematsu et al., 2016: http://www.gavo.t.u-tokyo.ac.jp/ojad/phrasing). ● Mark the accent phrase(s) when focus is on the first or second element.
	<p>Stage 2 Listening (perception)</p>	<ul style="list-style-type: none"> ● Listen and mark the pitch patterns of the following tongue twisters, haiku, wordplay, sayings, etc., noting the phrasing/pitch accent patterns. ● Play <i>inubō karuta</i> (card game). Listen to the instructor read the first half of a saying, noting pitch accent patterns, and find the matching second half. Next play in small groups. ● Listen and mark sections of a short script of a

		<p>talk for accent phrases and their accent patterns.</p> <ul style="list-style-type: none"> ● Mark any shifts in focus. <p>* This change in pitch can be for shifting pitch patterns in other languages such as tone sandhi in Mandarin where tone 3 + tone 3 → tone 2 + tone 3 or in Thai where rising tone + rising tone → high tone + rising tone (Smyth, 2002, p. 10)</p>
	<p>Stage 3 Practice (production, patterns, phonological processes)</p>	<ul style="list-style-type: none"> ● Listen or shadow a short section of a talk and record yourself. Later, listen and evaluate your own recording. Re-record the sample according to feedback from the instructor. ● Present a short section of a talk to your classmates. ● Practice a short monologue or dialog, noticing shifts in focus.
<p>Rule 5: Regional varieties of Japanese may vary in pitch accent patterns.</p>		
	<p>Stage 1 Metalinguistic awareness (prehension)</p>	<ul style="list-style-type: none"> ● Look at the pitch patterns of words/inflections/phrases/passages, noting differences with Standard Japanese pitch patterns, e.g., LL or HH initial beginnings of words etc. ● Note other pronunciation features, e.g., long/short vowels/consonants: [ki.i] 'tree' or [i.ko] 'let's go' (Kansai dialect)
	<p>Stage 2 Listening (perception)</p>	<ul style="list-style-type: none"> ● Listen and mark the pitch patterns and pitch falls in words from the Kansai dialect (e.g., http://www.kansaiben.com/, http://www.eastudies.org/guide_kansaiben.html). ● Listen and compare the same excerpts from a Kansai dialect speaker and Standard Japanese speaker, marking the differences in pitch patterns. ● Listen to folktales spoken in different dialects, noting the differences in pitch accent patterns and other pronunciation features (e.g., http://minwa.fujipan.co.jp/hagukumu/minwa/). <p>* Listening for differences in lexical pitch varies in most regional dialects, for example Standard</p>
Activities		

		<p>Korean which does not employ lexical pitch versus Kyungsang Korean around Pusan employing lexical pitch or differences between Taiwanese Mandarin and Mainland Mandarin, e.g., <i>yazhou</i> ‘Asia’ tones 3+1 vs tones 4+1, respectively.</p>
	<p>Stage 3 Practice (production, patterns, phonological processes)</p>	<ul style="list-style-type: none"> ● “Translate” or summarize what you hear in the Kansai dialect or other regional dialects into Standard Japanese. ● Retell in Standard Japanese a story heard in a regional dialect. ● Read sentence pairs marked by pitch accent patterns of the Kansai dialect and of Standard Japanese. ● “Translate” grammar, vocabulary, dialogs, lessons, etc. into the Kansai dialect or other regional dialect. <p>* Learners need not necessarily produce the dialect, but should have an awareness and passive understanding or more if they will travel to or live in that region.</p>

*See Schaefer and Darcy (2015) and/or https://vanceschaefer.weebly.com/activities.html_for_descriptions etc.

