

Assessing Pronunciation: English Consonants Hard to Articulate for Japanese EFL Learners

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Abstract

The purpose of this paper is to present some important facts for assessing Japanese learners' pronunciation of English. It deals with English consonants which are hard to articulate for Japanese learners of English because their Japanese pronunciation habit interferes with acquisition of English pronunciation. First I will show how English consonants are incorrectly pronounced in terms of manner and place of articulation, which is often the case of language transfer from Japanese to English. Secondly I will pick up English sound sequences which are extremely hard for Japanese learners to produce because such sequences do not exist in the Japanese sound system or the phonation mechanism is different between English consonants and Japanese ones. Lastly I will point out how the notion of "mora" in Japanese leads to Japanese learners' wrong pronunciation of English consonants. It will be made clear through this research that phonation of Japanese consonants is quite different from that of English consonants and that the rhythm of the Japanese language (mora-timed rhythm) affects the learners' pronunciation of English.

Keywords:

English consonants, articulation, contrastive analysis, language transfer, mora

1. Introduction

Commonly, in most English classes in Japan the learners would say that the contrast of / l / and / r / is very hard to make. The main reason for this difficulty is that the Japanese language does not have phonemic contrast of these phonetic segments. It is proven that a Japanese baby of six to eight months can discriminate the speech sounds / l / and / r /, but that of 10 to 12 months cannot (Kohno, 2001). This fact implies that the baby begins to acquire the Japanese sound system as he/she grows and accordingly gets bound by the system.

The English speech sounds / f /, / v /, / θ / and / ð / do not exist in the Japanese sound system, so they should be naturally hard for Japanese learners to articulate. As a result, some learners find it difficult to distinguish between "berry" and "very", "sink" and "think", or "Zen" and "then".

The points mentioned above are widely recognized among English teachers in Japan, so the pronunciation of the above sounds is properly taught in classroom. However, there exist some other English sounds which are actually difficult to pronounce for Japanese learners and are seldom or never taught because they are not overt and hard to notice.

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The purpose of this paper is to show how these English sounds are pronounced by Japanese learners, using the method of contrastive analysis, and to present useful clues for English pronunciation instruction.

(See Appendix to refer to English consonants and Japanese consonants.)

2. Interference of Japanese Articulation Habit

One of the features of Japanese consonants is that closure and narrowing for articulating them are very weak and they quickly move to the following vowel (Fujii, 1986). Japanese voiceless consonants are very weakly pronounced, so the difference of intensity between voiceless and voiced consonants is not as distinctive as is observed in Indo-European languages (Joo, 1998). We must also notice that Japanese sounds are produced with little movements of lips or mouth compared to English sounds. These points are reflected in Japanese learners' wrong pronunciation of English consonants as is shown below.

2.1. Plosives

It is well known that Japanese plosives / p /, / t /, / k / have much shorter voice onset time (VOT) than their English counterparts (Nakashima, 1996). In other words Japanese plosives are pronounced with weak aspiration or sometimes even loosely. This may lead to Japanese learners' mispronunciation of English plosives.

2.1.1. / b /

The Japanese consonant / b / is occasionally realized as [β] (voiced bilabial fricative) between vowels: for example the Japanese word “abunai”(dangerous) is pronounced like [aβunai]. So in English the word “subway” might be pronounced like [saβuwei] with [β] followed by [u] (voiced velar approximant, close to a vowel [u]). Japanese learners will not notice that their Japanese pronunciation habit results in this kind of phenomenon because this is a natural phonetic process.

2.1.2. / g /

The Japanese consonant / g / is often realized as [γ] (voiced velar fricative) between vowels, so the English word “again” is occasionally pronounced with [γ]. This phonetic change is also natural in Japanese, so it is hard for Japanese learners to keep the quality of the English consonant / g / during the phonation.

2.2. Fricatives

The difference of English and Japanese phonemic systems causes the following wrong pronunciation of English consonants: English fricatives / z / and / ʒ / become affricates / dz / and / dʒ / respectively in Japanese learners' pronunciation of English (Fujii, 1986).

2.2.1. / z /

The Japanese consonants / z / and / dz / do not make a phonemic contrast, so Japanese people usually do not notice the difference of these sounds. In Japanese / z / becomes [dz] in the word initial position and after [n]: for example, “kaze” (wind), “dzannen” (sorry), “sondzai” (existence), etc. So Japanese learners often pronounce the English word “zoo” like [dzu] instead of [zu].

2.2.2. / ʒ /

Japanese learners of English (or even English teachers) often confuse / dʒ / and / ʒ / as in the pronunciation of words such as “judge” [dʒʌdʒ] and “usual” [juʒuəl] because these segments do not make a phonemic contrast in Japanese.

3. Sound Sequences Leading to Mispronunciation

The following sound sequences are really hard for Japanese learners to articulate because they do not exist in the Japanese sound system.

3. 1. / j / + / i / or / I /

The words like “yes” or “young” are not so difficult to pronounce for Japanese learners even if it is not perfect. However the words like “yeast” or “year” are not easy to articulate for them because the sound sequence / j / + / i / or / I / does not exist in Japanese and they cannot approximate the tongue closely enough to produce / j / correctly. Thus Japanese learners often cannot distinguish between “yeast” and “east”, or between “year” and “ear”. The / j / + / i / or / I / sequence is probably the most difficult one for Japanese learners (Fujii, 1986).

3. 2. / w / + / u / or / ʊ /

Japanese learners tend to pronounce English approximant / w / with very little lip rounding, so they often produce the words like “wound” or “wolf” like [u:nd] or [ulf] omitting this approximant. Because the sound sequence / w / + / u / or / ʊ / does not exist in Japanese, it is really hard for them to correctly articulate it by strongly rounding their lips. This lack of lip rounding for / w / also results in wrong pronunciation of words like “queen” [kuɹin] and “square” [skuɹεə].

3. 3. / h / + / i / or / I /, / h / + / u / or / ʊ /

It is usually not difficult for Japanese learners to pronounce the / h / sound as in the words like “hat”, “hell”, or “hot”, because the phonetic feature of this sound is realized as a glottal fricative both in English and Japanese. However, when they try to produce the words like “heel”, “hill”,

“who” or “hood”, they usually articulate English / h / incorrectly. The / h / sound before the vowel / i / is realized as a palatal fricative [ç] in Japanese, e.g. [çito] (“man”), and this habit is transferred to English pronunciation. The / h / sound before the vowel / u / is realized as a bilabial fricative [φ], and this habit is also transferred to English pronunciation.

3. 4. / n / + / i / or / I /

In Japanese the / n / sound before the vowels / i / becomes a palatal nasal / ɲ /, e.g. [ɲiku] (meat). As a result of language transfer Japanese learners pronounce the word “neat” as [ɲit] and the word “knit” as [ɲIt]. It is really difficult for them to keep the point of articulation for / n / during the phonation of these English words.

4. Mispronunciation Related to Japanese Mora

As is known well, Japanese has syllable-timed rhythm and English has stress-timed rhythm (Kohno, 2001). The difference of rhythm between two languages will affect language acquisition in many ways, especially in the case of learning pronunciation. This Japanese rhythm brought specific morae such as geminate stop / tt / and nasal / N / into Japanese sound system, which sometimes affect Japanese learners' pronunciation of English.

4. 1. / t /

Japanese has specific timing-control rules. In minimal pairs such as “ite” and “itte” there is durational contrast between / t / and / tt / at the phonemic level. In Japanese geminate stops are more than twice as long as their short counterparts (Toda, 2003). Influenced by this rule, Japanese learners of English tend to distinguish the word “butter” from “batter” using different length of consonants, i. e. a short / t / and a long / t / respectively, not using different vowels, i. e. / ʌ / for “butter” and / æ / for “batter”.

4. 2. / n /

The Japanese moraic phoneme / N / (voiced uvular nasal) has at least four allophones; [m] as in the word [sambaN] (“third”), [n] as in [sandaN] (“three steps”), / ŋ / as in [sangai] (“the third floor”), and [N] as in [saN] (“three”) (Joo, 1998). So it is not easy for Japanese learners to articulate the English / n / sound as an alveolar. In the minimal pairs such as “sin” and “sing” or “thin” and “thing” Japanese learners tend to pronounce these two words with the same consonant [N] at the end resulting in no word contrast.

5. Conclusions

Underlying the phenomena described above is the fact that Japanese consonants are phonated weakly compared to English counterparts. This pronunciation habit is transferred to the

production of English consonants to result in different quality of sounds. Another thing to point out is that Japanese phonetic segments are generally produced with little movement of lips and mouth: we can observe that Japanese people do not open their mouth widely or they do not move their lips actively when they speak their mother tongue. I believe this pronunciation habit strongly controls their utterance when they speak English.

We need to notice that sound sequences of the target language affect language learners' speech as is shown in the case of /j /+ / i /, / w /+ / u /, and / n /+ / i /. In relation to sound sequences we need to add that the English language with complicated syllable structures puzzles Japanese learners because the Japanese language has a very simple syllable structure of CV (Consonant + Vowel).

The rhythm rules of Japanese, which are related to CV structure, also affect the production of English sounds. It is important to notice that the existence of specific moraic stop / tt / and / N / in Japanese leads to wrong pronunciation of English sounds.

To summarize the phonetic changes caused by Japanese learners' mispronunciation of English, I will list them below.

- / b / → [β]
- / g / → [γ]
- / z / → [z] or [dz]
- / ʒ / → [ʒ] or [dʒ]
- / j /+ / i / or / I / → [i] or [I]
- / w /+ / u / or / o / → [u] or [u]
- / h /+ / i / or / I / → [ç]+ [i] or [I]
- / h /+ / u / or / o / → [φ]+ [u] or [o]
- / n /+ / i / or / I / → [ɲ]+ [i] or [I]
- / t / → [tt]
- / n /, / ŋ / → [N]

Appendix

English Consonants:

plosives: / p /, / b /, / t /, / d /, / k /, / g /

fricatives: / f /, / v /, / θ /, / ð /, / s /, / z /, / ʃ /, / ʒ /, / h /

affricates: / tʃ /, / dʒ /

nasals: / m /, / n /, / ŋ /

lateral: / l /

approximants: / r /, / j /, / w /

Japanese Consonants:

plosives: / p /, / b /, / t /, / d /, / k /, / g /

fricatives: / φ /, / s /, / ɕ /, / ç /, / h /

affricates: / ts /, / dz /, / tɕ /, / dʒ /

flap: / r /

nasals: / m /, / n /, / ŋ /, / ɲ /, / N /

approximants: / w / (/ uɣ /), / j /

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