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# Phonetic Relation between First and Second Language Acquisition

English Education Consideration to Phonetic and Phonological Acquisition for Japanese Learners of English

大 山 健 一

OHYAMA, Kenichi

本論文は、母語習得論と第二言語習得論においてどのように音声学的関係性が重要であるのかを提唱している。前者の母語話者がどのようにして言語を習得するのかという理論と、後者の非母語話者がどのようにして言語を学習するのかという理論とは全く異質なものと考えられる傾向がある。特に英語教育学では第二言語習得論や外国語習得論と英語教授法との結び付きを重視している。しかしながら、母語話者の習得する言語と非母語話者の学習する言語が全く別のものとして扱ってはならないはずである。その理由の1つに挙げられるのは、母語習得論と第二言語習得論には相違点だけではなく、類似点も存在しているためである。よって、母語話者が使っている言語を学習対象として、非母語話者はその習得を目標とするのが妥当であると考えられる。この母語習得論を基にした第二言語習得論という枠組みから、日本人が英語を学ぶ際に注目しなくてはならない点は何であるのかを提唱する。

## 1. Introduction

This paper proposes how phonetic relation is significant between first language acquisition and second one. The former indicates how native speakers acquire languages, and the latter does how nonnative speakers learn ones. Both of them tend to be separated out; especially, English education mainly focuses on methods in teaching English related to second and foreign language acquisition. Such an idea, however, should not be regarded as acquiring languages by natives which is different from

learning ones by nonnatives. This is mostly because there are not scarcely different aspects but also similar ones between the two acquisition theories. Reckoning languages using by native people as one of the learning targets, nonnative people need to acquire the target. According to the first-language-based second language (L1-based L2) acquisition, the consideration can be a sort of references to phonetic and phonological acquisition for Japanese learners of English.

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キーワード：母語習得論、第二言語習得論、音声・音韻習得論、言語習得論、英語教育学

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## 2. Phonetic Aspects Based on Language Acquisition

### 2.1. Phonetic Aspects Based on First Language Acquisition

According to the Native Language Magnet (NLM) model (Kuhl & Iverson, 1995), infants can acquire listening skills as their mother tongue by six months old. To acquire spoken-based skills can precede to do written-based ones. In another word, acquiring listening and speaking skills is superior to doing reading and writing ones.

Considering another first language acquisition, four- to five-month-old infants can utilize rhythmic information to discriminate rhythmically similar languages (Nazzi et al., 2000). This is because the infants have already acquired native specific rhythmic properties to distinguish their native language from the other.

Taking the government course guidelines in elementary schools from 2020 into account, the primary goal as English study in Japan respects listening and speaking, not reading and writing. The idea can lead to the top-down process. The learning process focuses on getting used to using English rather than obtaining knowledge about English.

Phonetically, regarding the top-down process such as gist listening, people teach language sounds without written materials: words and phrases. This means that infants acquire sounds not through letters but through pictures, linking each sound to each meaning. After acquisition of sounds, like the bottom-up

process such as selective listening, they tend to learn words and phrases as meanings of sounds.

### 2.2. Phonetics Aspects Based on Second Language Acquisition

With respect to second language acquisition, people tend to learn their second language, distinguishing which linguistic aspect of their mother tongue is similar to and different from that of the other. They can encounter another language which is neither their first nor second language. This is regarded as the interlanguage (Selinker, 1972). As people learn one target language, they can understand that the language is not the same as their own one. In this process, the learners use a sort of the third language, if they can not accomplish acquisition of the target. Under such circumstances, teachers have some tendency to deem that students use the wrong answers, when studying English in Japan. Teaching foreign languages, however, these answers are not necessarily incorrect. This is mostly because the students have already been aware of differences between Japanese and English such as vowels and consonants. It is necessary for teachers to ascertain students' awareness of the interlanguage, and to consider finding wrong answers which are different from both Japanese and English.

On the contrary, whether acquiring the interlanguage or not, students can use correct English aspects. In this stage, however, they tend correctly to deal with English in some cases whereas they do incorrectly to. Unlike

the interlanguage, they can be made to misuse English languages by another linguistic trouble. This is the overgeneralization. If students acquire English knowledge, they are apt frequently to use such knowledge. Although these students have already acquired English aspects, teachers assist their students not to overgeneralize English. It is significant for teachers to determine students' overgeneralization, and to consider finding wrong answers which are different from Japanese and that are similar to English.

Regarding one second language as their target one, people must hold a certain situation, where linguistic characteristics of their mother tongue are similar to or different from those of their second language. This is connected with the Phonetic Distance (PD). If one language is similar to the other, the distance of the former is close to that of the latter; if one language is different from the other, the distance of the one is far from that of the other. When Japanese learners study English segmental [a]-like sounds and if they tend to recognize all of them as Japanese [a] one, then the PD of the [a] is close to that of [a]-like sounds. In another view, when Japanese people tend to understand that to speak English sounds is faster than to do Japanese ones, the fact leads to that there are some different suprasegmental or prosodic elements between the two languages: English as stress-based rhythm and Japanese as mora-based one. This means that the PD of English rhythm is far from that of Japanese one.

Like the PD, it is significant to segmentally

focus on perceptual patterns and phonological contrasts between learners' mother tongue and second language. This is regarded as the Second Language Linguistic Perception (L2LP) (Escudero, 2005). The model shows that speech perception develops in steps and that learners tend to differ both in perception of their second language and in the way which the perception develops. This leads to successive developmental stages with different cue weightings. If Japanese people distinguish one vowel from the other, they have some tendency to pay attention to linguistic quantity such as duration contrasts: long or short. In addition to the contrastive quantity, however, most of English vowels contain linguistic quality: tense or lax. On the basis of the L2LP, these two elements are acquired by Japanese after they initially use the quantity and then start to integrate the quality.

Pedagogical-phonetically (Togo, 1999), people can acquire phonetic items of close distance more easily than those of far distance, and vice versa (Ohya, 2018). The former is supported by the Perceptual Assimilation Model (PAM) (Best, 1995) while the latter is done by the Speech Learning Model (SLM) (Flege, 1995). The PAM means the close PD and insists that learners easily acquire their target language when the distance is close to each other. Under the PAM, if Japanese learners can acquire English sounds, such sounds are similar to those of Japanese. On the contrary, the SLM indicates the far PD and mentions that they can learn their second language when the distance is far from each

other. Under the SLM, if the learners can acquire English sounds, the sounds are different from those of Japanese. The different interpretation leads to the case that similar aspects can assist the learners to study in the PAM or that different ones can in the SLM. For example, the [a] sound is only one in Japanese while [a]-like sounds are five in English. When some Japanese people can learn [a]-like sounds, the Japanese [a] sound causes some positive effects; moreover, the case can be supported by the PAM. When some can not study these sounds, the [a] sound induces some negative effects; the case can be done by the SLM. These two cases lead to the fact that even among one of the English segments, there is no clear evidence of whether the PAM or the SLM is superior for Japanese learners. Additionally, suprasegmental or prosodic phenomena such as rhythm and intonation are more complex than segmental ones.

### 3. Similarities and Differences between Language Acquisition Theories

#### 3.1. Similar Factors between First and Second Language Acquisition

Lightbown and Spada (2013) explain language acquisition based on the three approaches: behaviorism, innatism, and interactionism. The first behaviorism means stimuli and responses. If human beings can mimic another's utterance, they tend to express their own idea in the same way. The second innatism indicates nativeness. If people do not learn anything, they can show their emotion. This is relative to the Language Acquisition

Device (LAD) (Chomsky, 1959). The third interactionism refers to communication. If one person says something, another person as a listener is necessary to be considered. Such a situation that speakers communicate with listeners is not unilateral but bidirectional. For Japanese learners, these three approaches can let them to study both Japanese as their mother tongue and English as their target language.

#### 3.2. Different Factors between First and Second Language Acquisition

Different factors between first and second language acquisition can lead to the existence of a mother tongue. When Japanese people study English sounds, they can run across two cases based on the Language Transfer (LT) (Cook, 1991). In the first, they use Japanese sounds which are similar to English ones. Although the English sounds are not the same as Japanese ones, such Japanese sounds help the learners to acquire English ones. In the second, on the other hand, Japanese sounds can not aid them to learn English ones. This is because the English sounds are different from Japanese ones. The former case is involved by the positive transfer whereas the latter is done by the negative transfer. These two transfers are esteemed not for first language acquisition but for second one.

As well as the LT, the Age Of Learning (AOL) can make some influence on Japanese learners' acquiring second language. Taking the government course guidelines in elementary schools from 2020 into account, the AOL to

study English in Japan is earlier than before. If the AOL is close to learners' birth, their language skills are native-like or native. On the other hand, if the age is far from the birth, their skills are not native. The former case means bilingual speakers; the latter monolingual and foreign ones.

Focusing on phonetic aspects, the age to possibly acquire second and foreign sound systems is determined by six years old (Long, 1990) or by 11 or 14 years old (Lenneberg, 1967) in terms of the Critical Period Hypothesis (CPH) (Lenneberg, 1967). The idea has shifted to the Sensitive Period Hypothesis (SPH), which insists that unlike the CPH, people can acquire second or foreign language over such ages (Birdsong, 2007; Bongaerts, 1999; Piske et al., 2001). The SPH can be regarded as the modified CPH.

The Language Input (LI) can affect learners' acquisition. Even though the their AOL is close to their birth, the language exposure between quality and quantity is necessary to consider. According to the immersion education research (Harada, 2006, 2007), infants can not utilize second language as native skills, but they can do as native-like ones: they possibly distinguish their mother tongue from their target language when the LI is available.

#### 4. Conclusion

As mentioned above, the present paper focused on phonetic relation between first and second language acquisition; especially, for Japanese learners of English. These phonetic aspects are based on the NLM model,

interlanguage, overgeneralization, PD, L2LP, PAM, and SLM. Furthermore, similar and different factors between them are on the basis of the LAD, LT, AOL, CPH, SPH, and LI. The L1-based L2 acquisition can be fruitful linguistic references to phonetic and phonological acquisition for Japanese learners.

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