

〈研究ノート〉

## Acquisition of L2 English intonation by Japanese learners<sup>1</sup>

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**要旨：**英語イントネーションの中で、適切な音調の選択とその実現、あるいは正しい核強勢の配置は、情報の新旧や様々な「意味」を示すのであるから、学習者であっても身につけるべき重要な方策であると言われている。しかし、そのようなスキルはいつ、どのように習得されていくのか、そもそも日本人英語学習者が授業を通じて身につけることができるものなのかということを探るべく、これまでにいくつもの研究が行われている。本研究では、44人の英語を専攻している大学生を対象に、学習者が苦手とするイントネーションの音調や核強勢を含む文を読んでもらい録音したデータを分析した。その結果、音調の種類別に習得率に明らかな差が見られることが分かった。また、イントネーションに関する授業の前と後とで習得された音調や、反対に身につきにくいものがあることもわかった。今後、効果的な教授法に結びつけられることが期待される。

**Keywords:** L2 English, acquisition, intonation

### Introduction

Since Saito (2006), which looked at certain patterns of deviation from native-speakers' norm of nuclear-stress placement of English intonation commonly found among Japanese Learners of English, the author has been attempting to ascertain the process of acquisition of L2 English prosody.

Ueda and Saito (2010) and (2012) were such studies, which observed how students' production of tonicity (nuclear-stress placement) and knowledge of the placement rules changed over a period of time, but not necessarily in any neat and orderly fashion, and that without formal instruction, progress could not be hoped for. Not only pronunciation practice, but also formal instruction, proved to be important for L2 acquisition of intonation.

The latter study was a longitudinal one where the observation lasted for one year. However, the students had remained in a Japanese university throughout this time, carrying out studies which was not necessarily on phonetics or production skills of English, and given the difficulties of L2 intonation acquisition as observed by Jenkins (2000: 154) or Mennen (2015), it seemed essential to take a closer look at how that time was spent.

With this in mind, Saito (2018) compared two groups of students, those who remained in Japan but were given formal instruction on English intonation, and another group who spent one academic year abroad where English was spoken around them. It was found that even after spending up to ten months in an English-speaking environment, the study-abroad students' intonation was far from native-speaker-like and had not made much progress as regards placement of the nuclear stress in a sentence. The level of acquisition of tonicity, at least, was not very different from their fellow students who had remained in Japan.



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However, in the 2018 research the number of students who contributed the data was small—only five in each group—and also, light was not shed on the types of sentences or on the different tones required by a certain type of sentence. Therefore, the present study is another longitudinal research but this time focusing on the types of intonational phrase and the degree of difficulty of acquiring such prosodic features of English.<sup>2</sup>

### **Methodology: The Subjects**

A total of 44 students, mainly aged between 19 and 21, who attended one of the compulsory English courses for students majoring in English (but not necessarily in phonetics or linguistics) at the Tokyo University of Foreign Studies, took part in this experiment. Nineteen students (13 females and 6 males) were taking the author's English phonetics course in the Spring Term, and 25 students (16 females and 9 males) in the Fall Term, both in the year 2019. The two classes, which were one 90-minute lessons a week for 13 weeks, covered such areas of English phonetics as connected speech, rhythm, and intonation, and the syllabus for the course was exactly the same for the two classes, except for the short reading material distributed in class.

The first recordings were conducted in June 2019 for the Spring-term class, and in November for the Fall-term class, in a quiet, empty classroom where students went in one by one to read the sentences for the TA to record. This was just before the topic of the lecture moved on to English intonation, which covered explanation on types of tone and tonicity and on different sentence types. The students were notified beforehand that they would be making a recording, but no further details were given, and so the first recording was made without prior knowledge or training of intonation. The lectures on intonation were stretched over a period of three to four weeks with a within-class exam at the end of the course. The second, after-lesson recordings were conducted at the end of the course, within the time set for the written exam—again, the students went to the classroom next-door to make their recordings, but this time they were told that it would constitute a part of their final exam. The sentences they read out and recorded were exactly the same as those used for the first recording and were shown only at the recording session: no prior practice or training using the same sentences was possible.

### **The Data**

As was for Saito (2018), the data was collected by recording students' pronunciation of English before and after they participated in a lecture on English intonation. The subjects were given the same set of eleven sentences to read, which were printed on separate cards that they could flip through. The subjects were able to take their time looking at what they had to read and repeat as many times as they wished. The sentences were so designed that each contained items of intonation—especially tonicity and tone—regarded as causing difficulty to Japanese learners of English.

After the second recordings were made, the two sets of eleven sentences were compared for each subject, focusing on tone-type and tonicity. This was done by ear by a postgraduate student specializing in phonetics,<sup>3</sup> and later checked by the author. It is remarkable how little the two recordings by the same subject differed. In most cases, the same speaker would produce the same type of tone and place the nuclear stress on exactly the same

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<sup>2</sup> At the outset, this study had intended to compare the progress of acquisition of intonation of different sentence types by those who were given formal instruction in the classroom, in Japan, and those who had lived in an English-speaking country for a certain period of time. However, the spread of the Covid-19 pandemic and the consequent situation where almost all study-abroad programs were stopped, has made it difficult, if not impossible, to carry out the original plan.

<sup>3</sup> I would like to thank Kimihiko Kimura, who has carried out the two sets of before- and after-lesson recordings as well as transcribed and edited the data.

syllable, whether correctly or incorrectly. However, for particular sentences, changes could be seen, for the better, as to the way the prosody was realized. The number of subjects who showed some kind of progress, by giving a more appropriate tone or tonicity in the second round, is shown with a plus sign (+) alongside the sentences in the tabulation below.

### Results and Discussion

Here, the sentences have been grouped according to the number of correct readers, focusing on tone-type (fall, rise, fall-rise) and tonicity (placement of the nuclear stress). In descending order of the number of subjects who produced the correct combination of tone and tonicity for both before- and after-lesson recordings—given in [ ] brackets—the sentences show the type of tone by arrows, and placement of the nuclear stress in bold letters. The +numbers in parentheses show the number of students who made some kind of improvement, either of tone or tonicity, after around four 90-minute lessons on English intonation.

Group 1	【98% of cases correct on average】
1. I think you're ↗right.	【44 correct both times】
2. (Haven't you been in touch with John yet?) No, I thought I'd be able to meet him on the ↗bus.	【43 correct both times】
3. (Do you have something to write with?) Here, you can use my ↗pen.	【42 correct both times】

Group 2	【76% of cases correct on average】
4. Which book did you buy at the ↗bookshop?	【36 correct both times】 (+3 after lessons)
5. (Would you like to come over to our house for dinner this evening?) I'd love to, but I can't. I haven't finished my ↗homework yet.	【31 correct both times】 (+8 after lessons)

Group 3	【39% of cases correct on average】
6. In the picture, I can see a pencil and a red book on a large ↗desk.	【19 correct cases both times】 (+9 after lessons)
7. (How was the new restaurant?) Well, ... the ↗waiters were nice....	【15 correct cases both times】 (+20 after lessons)

Group 4	【14% of cases correct on average】
8. (What's up? Why do you look so upset?) My ↗wallet's gone!	【9 correct cases both times】 (+6 after lessons)
9. Draw a small circle inside a ↗larger circle.	【7 correct cases both times】 (+5 after lessons)
10. (In Japanese: 'Knowing him, I was certain that he would come to the party!') I ↗knew John would come to the party!	【5 correct cases both times】 (+3 after lessons)
11. (I'm going to Kalamazoo this summer.) What? ↗Where did you say you were going to!?	【3 correct cases both times】 (+8 after lessons)

The sentences in each group do indeed have common features among themselves, which point to the ease or difficulty with which the type of prosody can be acquired by Japanese learners of English. Let us look more closely at what the sentences in each group have in common.

### Group 1:

Forty-two to 44 subjects, that is almost all the subjects, read the sentences in the first group with both correct tone and tonicity, before and after formal instructions on English intonation. The three sentences in this group are declarative sentences with broad focus, thus requiring a falling tone and a nuclear stress on the last content word, which in our case all happened to be monosyllabic: *right*, *bus*, *pen*. Beginning Japanese learners of English tend to place the nucleus on the last word of any sentence, and when this coincides with the nuclear-stress placement rules, the outcome is the correct answer. It could be said that the sentences in this group—declarative sentences requiring the falling tone on the last lexical item—are the easiest to acquire, coinciding with Japanese learners' pronunciation tendencies.

### Group 2:

The number of subjects giving the correct pronunciation at all times decreases somewhat, when the last content word happens to be a compound: beginner- and even intermediate-level learners can be found putting incorrect compound-word stress on the last element instead of the first, for words like *bookshop* and *homework*. This seems to be what a part of the students in the second group, who ended up with an “incorrect” reading, were doing: five said *bookshop* and two put a stronger stress on the second syllable of *homework*. Moreover, Sentence 5 (*I haven't finished my homework yet.*) contains the adverb *yet* which is usually de-accented unless it receives emphatic stress, but 11 subjects seemed not to be aware of this fact and placed the nuclear stress on this last item of the sentence.

Saito (2006) looked at how and why Japanese learners of English showed a tendency to pronounce certain categories of words with a high pitch which sometimes made it sound as if the item was given a contrastive, or even the nuclear, stress. The pronoun *I* and the interrogative *which*, as well as adjectives in front of a noun (*red book*, *large desk*) are such examples. As many as 18 students were found to be applying this high pitch to some or all instances of *I* and/or *which* in the present study. However, the high-pitch phenomenon will not be taken up in this paper, as long as there was a true nuclear stress appearing later in the sentence. Indeed, those who did say *I* with a high pitch very often seemed not to have any trouble with nuclear-stress placement or with choosing the right tone for the same sentence, a fact that leads us to think that this particular category of negative transfer from Japanese stays with learners even after they progress to become intermediate learners who show improvement in other aspects of prosody production.

### Group 3:

However, the Japanese English learners' tendency to pronounce prenominal adjectives with a high pitch in a sentence like 6, results in the nuclear stress being placed on *large*, thus giving the word an inappropriate contrastive accent. The 25 subjects did just that for Sentence 6 and as a result, only 19 produced the sentence correctly.

In this third group is Sentence 7, one that has the fall-rise tone, not found in Japanese, and where the tone stretches over three words or four syllables. Naturally, the nuclear stress is not on the sentence-final word, *nice*. Considering the strenuous efforts that many students exhibit in my practical phonetics courses when trying to produce this particular type of tone, I find it rather surprising that as many as 15 students out of 44 were actually able to produce the correct tone and tonicity for the recording. Moreover, as many as 20 students, who at first had no idea of how to pronounce a fall-rise tone, showed improvement in the production of this sentence by the end of

the term. Even those realizations judged to be “incorrect” showed attempts by the students to somehow produce a fall-rise tone at least, usually on the last word, *nice*.

This fall-rise tone is used for implication, and students struggle to reproduce it in class, but perhaps the very experience leaves a strong impression on the learners and that is why we are witnessing a considerably high score compared to other special intonation patterns, which all belong to the next group.

#### Group 4:

Although the contrastive stress on *large*, and the de-accenting of *desk* as a consequence, for Sentence 6 must have been unintentional, de-accenting of old information in Sentence 9 (the word *circle* for the second time in the same sentence) appears to pose difficulty even for intermediate students, because only seven subjects correctly pronounced this sentence for both before- and after-lecture recordings.

This and the remaining three sentences in the last group are all pronounced with a special kind of tone or tonicity by native speakers; are often presented in the latter half of an intonation textbook; and are not used very often in non-native speaker situations: “event sentences” (*My \wallet's gone!*); de-accenting old or shared information (*I \knew John would come to the party!*); and echoing what the other person has said to express disbelief, using the rising tone for an otherwise falling, interrogative question (*\Where did you say you were going to?*). For this last sentence, all the subjects employed the falling tone instead of the rise, except for three students, who had lived in an English-speaking environment for a certain period of time and whose English was native-speaker-like.

### Concluding Remarks

Two recordings of the same set of 11 sentences were made for each of 44 intermediate- to advanced-level students of English, and their realizations of tone-type and placement of nuclear stress were analyzed. The results point to the existence of different levels of ease or difficulty with which learners of English acquire English intonation, depending on the different tone-types and tonicity required by different sentence types.

Moreover, the results of the present experiment show that explicit instruction is indeed helpful in improving the L2 learners’ acquisition of English intonation, and that there seems to be a certain order among intonation types that could be presented to the learner for efficient training leading to effective results.

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