THESIS

A PILOT STUDY ON THE EFFECTIVENESS OF PRONUNCIATION TEACHING TO EFL

LEARNERS THROUGH FOCUS ON FORMS AND FOCUS ON FORM INSTRUCTION

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ABSTRACT

A PILOT STUDY ON THE EFFECTIVENESS OF PRONUNCIATION TEACHING TO EFL LEARNERS THROUGH FOCUS ON FORMS AND FOCUS ON FORM INSTRUCTION

Ten Japanese university students participated in a 12-week English pronunciation instruction, in which the learners practiced segmentals and suprasegmentals in controlled activities with a focus on the accuracy (focus on forms) and practiced them in meaningful communication contexts while paying attention to the pronunciation (focus on form). They received the total of 20 hours of pronunciation instruction. The participants read a diagnostic passage before and immediately after the instruction. Ten Japanese EFL students were employed as a control group. Ten native speakers of English rated the comprehensibility (ease of understanding) and the accentedness (how different from NS's norms) of the utterances produced before and after the instruction by the learners in the experimental and the control groups. The results showed that the experimental group improved in terms of comprehensibility while the control did not. As for accentedness, neither group showed any improvement.

ACKNOWLEDGMENTS

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Chapter 1 INTRODUCTION

In 2003, the Japanese Ministry of Education, Culture, Sports, Science and Technology proposed a five-year strategic plan to cultivate "Japanese with English abilities" (The Japanese Ministry of Education, Culture, Sports, Science and Technology, 2003a). The proposal expected high school graduates to have basic conversations on daily topics, and college graduates to use English at work. The government felt the need for higher levels of communication proficiency in English among Japanese citizens. Eight years later, the governmental commission admitted the goals were not fully met and made five revised proposals for developing Japanese students' English fluency, but it did not clarify the causes for the lack of expected outcomes (Commission on the Development of Foreign Language Proficiency, 2011).

As the commission suggested, promoting awareness of necessity of English in this global society and modifying university entrance exams would encourage students to feel motivated to learn English as a tool for communication, but there is an urgent need for changes in the current English classrooms to improve students' communicative skills. One aspect in need of attention is pronunciation teaching, which should not be neglected to acquire good communicative skills of foreign language (Beebe, 1978; Celce-Murcia, Brinton, & Goodwin, 2010; Elson, 1992; Lane, 2010; Morley, 1991; Wong, 1986). However, pronunciation is often peripheral in many English classrooms in Japan (Arimoto, 2005; Kosuge, 2005; Makino, 2005; Oshima, Taniguchi, & Tara, 2006; Saito, 2007).

Not only has less time been spent for pronunciation teaching in English classrooms in Japan than other areas such as grammar and vocabulary, but also very few empirical ESL/EFL pronunciation instruction studies have been conducted in classrooms or related settings (Baker

and Murphy, 2011; Derwing & Munro, 2005; Gilbert, 2010). As indicated in the following literature review, only 11 empirical studies have been published in relation to the effectiveness of pronunciation instruction in classrooms or related settings as far as I have determined.

Among the very small number of studies, only three intervention studies have been produced that reflected the situation faced by many English teachers in Japan, where almost all the people (99%) speak the same language, Japanese (CIA Fact book, 2011). The learners' L1 should be taken into account in investigating the effectiveness of pronunciation teaching, since the differences between a learner's L1 and his/her target language seem to have some influence on the second language pronunciation learning as suggested by second language phonology research approaches, such as the contrastive analysis hypothesis, error analysis, the interlanguage hypothesis and information processing theory (Celce-Murcia et al., 2010). Although native-language transfer is just "only one piece of the puzzle" in learning a foreign language acquisition (Celce-Murcia et al., 2010), focusing on phonological features problematic to a certain language group of English learners can be hypothesized to be more effective than covering a wider range of segmentals and suprasegmentals during a limited teaching time frame. However, most of the past classroom English pronunciation teaching studies did not seem to actively consider the roles of the learners' native language. In fact, seven of the 11 past studies concerning ESL/EFL pronunciation instruction had participants of different L1s.

Even the three studies for Japanese learners of English may not offer reliable resources for English teachers in Japan. One of them was very short (one hour), and all focused only on either segmentals or suprasegmentals (for details, see the next chapter).

With a goal of classroom application in mind, this thesis attempts to investigate the effectiveness of pronunciation teaching to Japanese learners by conducting an intervention study

with a design based on informed decisions in reference to preceding ESL/EFL pronunciation research. The study formulates the two hypotheses, the details of which will be discussed later.

Hypothesis 1: There will be a statistically significant ($p<.05$) improvement in the pre- and post-tests in terms of comprehensibility after receiving FonFS and FonF pronunciation instruction.

Hypothesis 2: There will be a statistically significant ($p<.05$) improvement in the pre- and post-tests in terms of accentedness after receiving FonFS and FonF pronunciation instruction.

Through verifying the hypotheses, this study would be able to offer some practical importance for pronunciation teaching for EFL learners who are expected to achieve higher levels of communication proficiency. Although there are a limited number of pronunciation intervention studies available as I mentioned, the next chapter presents a review of 14 experimental and quasi-experimental studies, which enables me to create a research design for my study.

Chapter 2 LITERATURE REVIEW

This chapter reviews the total of 14 ESL/EFL experimental and quasi-experimental studies in order to make an informed decision for my study. The first 3 studies, which were analyzed in Norris and Ortega (2000), are to be reviewed below with a special attention to the categorization of focus on forms (FonFS) and focus on form (FonF). The review specifically shows what activities would be involved in FonFS and FonF instruction in the studies. The remaining studies reviewed below were those concerned with pronunciation instruction in classrooms or related settings, which were varied in terms of learners' L1, intervention period, the target, as well as the focus on meaning, with an indication that there seems no intervention studies published that would be applicable for the EFL classroom teaching in Japan.

Before going into details of the reviewed studies, let me briefly outline Norris and Ortega (2000). They analyzed findings from 49 experimental and quasi-experimental studies that investigated the effectiveness of L2 instruction published between 1980 and 1988. They concluded that FonFS and FonF interventions were found to be effective for L2 learners (p.417).

Norris and Ortega (2000) defined the terms FonFS and FonF by summarizing proposals by Long (1991, 1997; Long & Robinson, 1998) as follows:

> Instruction that expects learners to focus on forms in isolation (focus-on-forms or FonFS instruction) assumes that the target L2 forms can and need to be taught one by one in a sequence externally orchestrated according to linguistic complexity. Finally, instruction that seeks to make learners focus on forms integrated in meaning (focus-on-form or FonF instruction) capitalizes on brief, reactive interventions that, in the context of meaningful communication, draw learners' attention to formal properties of a linguistic feature which appears to cause trouble on that occasion, is learnable given the learner's internal developmental state, and is likely to be useful in future communication (Norris and Ortega, 2000, p.420).

The studies analyzed by Norris and Ortega (2000) were in the area of morphology, syntax and pragmatics. It would be possible, however, to apply the same principles to pronunciation teaching since the term "form" seems possible to refer to any aspect of linguistic form, including pronunciation, as suggested by Ellis, Basturkmen and Loewen (2002). It would be called FonFS if instruction employs audiolingual techniques such as minimal pair drills and substitution drills to promote accuracy of certain sounds in isolation, while it would be called FonF if instruction involves communicative activities to convey a message with certain attention to the pronunciation.

I have reviewed 3 studies investigated by Norris and Ortega (2000) in the next section to clarify what FonFS and FonF would be like in classroom teaching.

2.1. Review of Focus on Forms and Focus on Form Intervention Studies

Let us start by outlining 1991 work by Fotos and Ellis, which supposedly employed activities that have been labeled as FonF by Norris and Ortega (2000). For reasons I shall soon discuss, it appears that was not necessarily the case. Fotos and Ellis (1991) contrasted groups that received interactive grammar tasks with groups that received teacher-fronted traditional instruction in learning the dative alteration such as (a) She gave me a book. /She gave a book to me. (b) She pronounced the word for me. /*She pronounced me the word. (c) She asked me a question. /*She asked a question to me. The study also had two control groups that received no treatment regarding the target feature. The interactive groups consisted of a group of Japanese 18 junior college English majors and a group of 18 Japanese university non-English majors. Similarly, the teacher-centered groups consisted of a group of 12 Japanese junior college English

majors and a group of 10 Japanese university non-English majors. Control groups were a group of 20 junior college students and a group of 12 university students.

During the interactive grammar task, learners talked about the grammaticality of such sentences as above in pairs or groups of 4. They then made generalization about the dative alteration by writing out of possible rules that controlled the grammaticality. In the teacher-fronted traditional lesson, a native English speaker teacher wrote correct and incorrect sentences, then asked the students about the grammaticality of each, then provided the answer, and finally wrote out the dative alternation rules. Both mini-lessons lasted about 20 minutes.

The results of an immediate post-test about grammaticality showed no significant differences between the two types of instruction. Both types of instruction resulted in a statistically significant ($p<.$ 05) score improvement, but there was no significant change in the control group nor evidence of any practice effect. A delayed post-test, administered 2 weeks later, showed that a loss of proficiency occurred for the task group, but not for the traditional group.

Several points need to be elucidated before accepting the claim that both interactive tasks as well as traditional instruction facilitate grammatical knowledge. The first point concerns the role of feedback. The delayed-post test suggests that groups receiving traditional teacher-centered instruction "learned" more of the material than the groups that received only interactive feedback. This was likely due to the fact that the learners in the interaction group were left on their own to ascertain the rules without any feedback from the teacher. It is unclear whether feedback played a positive role in the teacher-fronted treatment. If feedback had been given to the interaction group, they may have shown greater improvement. A second point concerns the brief period of instruction. Twenty minutes may have been too short for any positive changes to occur. Third, as the authors noted, the interaction in the task group was rather

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mechanical, especially among the non-English major students, probably because they were simply not used to working in small groups and did not understand the procedure well. This point about the lack of familiarity with the task will be discussed further below.

Although the interaction described by Fotos and Ellis (1991) was not truly communicative and in fact was rather mechanical, it is considered to be as FonF by Norris and Ortega (2000). A closer examination of the interactions, however, clearly reveals that the discussion about the sentences did not involve any negotiation of meaning of the target feature, but merely of the syntax of the dative alternation. Most utterances consisted of asking if the sentence was correct or not ("Correct?"), asking for repetition ("Please again.") or making comprehension checks ("Alright?") (pp.617-618). The participants simply discussed whether one specific verb allowed an indirect object to have a preposition or not. Without providing learners with clues that can lead to a better focus on meaning in order to categorize the syntax or presenting appropriate contexts for the target verbs to be used, I believe that the task cannot be categorized as a FonF activity. Instead, it should be referred to as a Focus on FormS (FonFS) activity, whose primary focus is form.

A similar study by Kubota (1995) that involved dubious labeling will be overviewed. One hundred twenty-six Japanese learners of English at a junior college were taught conversational implicature, which requires listeners to search for possible meaning(s) of a message when the literal meaning is not what the speaker intends to convey (p.36). Kubota (1995) used three types of intervention for three different groups. Two groups ($n = 42$) received teacher-fronted explanation. Another two groups ($n = 42$) participated in a so-called "consciousness-raising" activity. Two control groups ($n = 42$) received no special instruction. The participants in the teacher-fronted explanation groups received an explicit explanation of the

rules governing conversation implicature, then worked on multiple-choice questions concerning conversational implicature, then finally received answers those questions from the teacher. The participants in the consciousness-raising groups attempted to discern the rules of conversational implicature of English in groups of four, and then answered the same multiple-choice questions as the teacher-fronted groups, finally receiving the correct answers from the teacher. The control groups received no treatment related to the task. The participants took a pre-test, an immediate post-test and a delayed post-test (one month later). Two types of measurement instruments were employed. One consisted of 6 multiple-choice test items, called Test A. The other consisted of 10 short response items in which the examinees wrote out the intended meaning of a speaker in a dialog, called Test B. Half of the test items were the ones that were discussed in class, and the rest represented new items. The test items in the pre-test, immediate post-test, and delayed post-tests were identical.

The results of the two post-tests in comparison with the pre-test showed that the participants in both experimental groups could not generalize well what they learned in the lesson and apply it to new items. The three different groups displayed no statistically significant differences in their performance in the items not presented in class. This means that the two non-control groups could not apply what they had learned about implicature to new contexts. In spite of this, the author stated that the explicit teaching of implicature, both through teacher-fronted instruction and consciousness raising activities, was "effective" for learners.

The statement probably stems from the results that the learners in the two experimental groups performed better in the items taught in class on Test A than the control group, but the higher scores may have been due to learning effect. While the control group was on their own

and without knowing correct answers for Test A, the experimental groups had a chance to learn which answers were correct in the lesson.

Again, there were several limitations to the study. First, the short intervention period should be noted. Implicature involves four maxims and ranges in types. Learning such a complex pragmatic concept in one class is obviously difficult. The results on Test B, in which the students had to write intended meaning of a speaker revealed almost no teaching effect since there was no statistically significant difference among the three groups. This seems to mean that applying what they learned to a new context and writing in English was beyond most of the learners' capability. A longer period of instruction might have brought some effect on at least some of the participants.

The second point concerns the task complexity rather than the instructional time frame. The target task was probably too complicated for most of the learners to fully understand. Not enough information is provided in the study to determine the precise proficiency level of the learners in this study. As an EFL teacher in Japan, I would venture to guess that most Japanese college students can grasp the superficial grammatical features of many English sentences, but they usually do not pay much attention to the literal meaning, let alone intended meaning. Presenting typical examples of implicature types may not be enough to help most students actually grasp this concept. Perhaps focusing only one type of implicature and giving many examples that can be found in their lives – rather than attempting cover all that are introduced in books of Grice - would have been more engaging for most Japanese EFL students and facilitate deeper learning.

A third point is that this study did not specify what explanation was given in a teacher-fronted class, or what interaction went on in the consciousness-raising group. The author

only presented four maxims of Grice (1975). This limited presentation of specifics makes it difficult to know whether the consciousness-raising group was in fact engaged in FonF as Norris and Ortega (2000) have asserted.

It seems likely that the experimental and quasi-experimental studies mentioned above did not have groups truly engaged in the negotiation of meaning in order to be regarded as FonF groups. Lyster (1994), on the other hand, describes a genuine FonF activity instruction in his Canadian study. The study was conducted for the total of 12 hours over the course of 5 weeks. The participants were 5 classes of 106 Grade 8 French immersion students, whose L1 was English.

The target was the appropriate use of '*tu*' (informal 'you') and '*vous*' (formal 'you') because the previous research suggested that the ability to use these forms appropriately was a good marker of French proficiency.

The three experimental groups, the total of 66 students received functional-analytic instruction as proposed by Allen (1983), which "focuses on discourse features of language and involves equal reference to language as a medium and language as communication (p.265)." Therefore, the teaching included comparisons and contrasts of informal and formal speech acts, role plays, verb inflection exercises, writing informal/formal letters, reading focusing on the use of '*tu*' and '*vous*', and cooperative learning in which the learners discussed the formality, for example (p.269). The two control groups, the total of 37 students received no treatment as to the target feature.

The effectiveness of the instruction was measured by comparing of pre-tests, immediate post-tests, and delayed post-tests (one month later). The tests included a five-item oral production test (OP), a two-item written production test (WP) and an 18-item multiple-choice

test (MC). The learners in the experimental classes performed better on the OP and WP tests for formal usage, and on the MC for both formal and informal usage. This means that learners in the experimental groups increased their ability to use '*vous*' appropriately and accurately in speaking and writing, as well as an increased awareness of the socio-linguistic differences between '*tu*' and '*vous*.'

Although the target language of the study was not English, or involved Japanese college students, or did not concern pronunciation, several points from this study could – and in my opinion should - be applied to pronunciation instruction in Japanese EFL instruction.

First, the period of instruction was relatively long: 12 hours over 5 weeks. It was not deemed practical to spend the entire 90 minutes of each class on pronunciation instruction due to the curricular constraints of each school. However, I have come to believe that focused mini-lessons over time can help many learners to improve their pronunciation.

Second, this functional-analytic way of teaching may be suitable for Japanese learners of English, whose language is far different than the target language. In Lyster (1994), the students learned the French pronouns '*tu*' and '*vous*' through an explicit presentation of the comparison and contrasts (analytic teaching). The students were also engaged in writing formal/informal letters in an attempt to use the pronouns effectively (functional teaching). In the former example, the students focused on the linguistic forms, while they focused on the meaning along with the form in the latter example. Therefore I believe that 'functional-analytic' proposed by Allen (1993) could be paraphrased as a combination of FonFS and FonF. In fact, this is in line with suggestions made in Morley (1994) as a dual-focus framework, which would be necessary when pronunciation teaching is considered as an integral part of communication (p.73). The dual focus is explained as follows:

One focus is on micro-level, with attention to the discrete elements of pronunciation that contribute to improved intelligibility and a goal of developing linguistic competence (specifically, phonetic-phonological competence). The other focus is on a macro level, with attention to general elements of communicability in particular settings and a goal of developing discourse competence, sociolinguistic competence, and strategic competence (Morley, 1994, p.73).

With focus on the accuracy of sounds and the meaning of an utterance in a balanced-way, the teaching seems to be effective in pronunciation instruction for ESL/EFL learners.

2.2. Review of Pronunciation Intervention Studies

Even for pronunciation teaching, the combination of FonFS and FonF instruction may be effective as previously mentioned above. However, there have been no experimental and quasi-experimental studies examining the effectiveness of FonFS and FonF in pronunciation teaching for Japanese EFL contexts as seen in the table below. In fact, there are only 11 ESL/EFL pronunciation instruction studies in classrooms or related settings to the best of my knowledge as stated in the previous chapter. The following reviews each of the 11 pieces of research to design my exploratory study. The table below is a summary of the studies I review here.

Table 1

An Outline of the 11 Preceding Pronunciation Intervention Studies

Researchers (Year)	Matthews (1997)	Saito (2007)	Nagamine (2002)	Perlmutter (1989)	MacDonald Yule, and Powers (1994)	Derwing, Munro, and Wiebe (1997)	Derwing, Munro, and Wiebe (1998)	Derwing, and Rossiter (2003)	Couper (2003)	Couper (2006)	Kendrick (1997)
Learners' L1	Japanese	Japanese	Japanese	Different L1s	Mandarin	Different L1s	Different L1s	Different L1s	Different L1s	Different L1	Different L1s
Research Design	2 Es (*n*=56). 1 C (*n*=33)	1 E (*n*=4). 1C (n=2).	1 E (*n*=15). No C	1 E (*n*=24). No C	Three Es (*n*=6 each). 1 C (*n*=5)	1 E (*n*=13). No C	Two Es (*n*=16 in each E). 1 C (*n*=16)	Two Es (*n*=16 in each E). 1C (*n*=16)	1 E (*n*=15). No C	1 E (*n*=21). 1 C (*n*=50)	1 E (*n*=8). No C
Intervention period	Once a wk. over 5 wks. No information about exact amount of time	1 hour, one time.	30-40 mins per wk. over 12 wks. Total 6-8 hours.	2.5 hours a wk. over 11 or 22 wks. Total 27.5-55 hours.	10-30 mins, one time	Twice a wk. over 12 wks. No information about the exact time of instruction.	20 mins per day over 12 wks. Total 20 hours.	20 mins per day over 12 wks. Total 20 hours.	18 hours in-class study plus 2 hour self-study every wk. Over 16 wks.	20-50 mins about three times a wk. over 2.5 wks. Total 6 hours.	3 months No information about exact amount of time
Target	Six consonant contrasts	One vowel sound /æ/	Intonation	Both seg and supra	Vocabulary	Supra mostly	Supra or seg	Supra or seg	Both seg and supra	Seg	Both seg and supra

Note. E=experimental group; C=control group; seg=segmentals, supra=suprasegmentals.

Since the role of the L1 of ESL/EFL learners is one of the most important factors in language acquisition, this section starts from studies for Japanese learners of English and goes on to those for learners of other L1s.

2.2.1. Past Pronunciation Intervention Studies for Japanese learners

Three studies are reviewed here. The first two studies investigated the effectiveness of pronunciation teaching for Japanese learners of English with a focus on segmental features. The other one focused on intonation.

Matthews (1997) focused on English consonant training for Japanese learners of English. A total of 99 students participated in the study. Two experimental groups (group A, $n=27$; group B, $n=39$) received 5 weekly 90-minute lessons solely about the articulation of 5 consonant contrasts, without any perceptual models presented. One control group ($n=33$) received no pronunciation instruction. The target consisted of contrastive consonants that exist in English but not in Japanese, and that exist in both languages. The specific sounds taught and results are outlined in Table 2.

Table 2

Relationship between Improvement Following Training and the L1 Japanese Inventory

	no improvement		improvement
	already acquired	not acquired	
both segments present in L1	[p] [b]		
one segment present in L1	[s] [f]		[b] [v] [s] [θ]
neither segment present in L1		[l] [ɹ]	[θ] [f]

Note. Adapted from "The effect of pronunciation training on the development of second language phonemic categories," by J. Matthews, 1997, *Hokkaigakuen Jinbun Ronshuu 9,* p.138.

The pre- and delayed (one week after the training) post-tests were given to all the groups, where the subjects heard two words, which have the target sounds, and indicated whether the two were the same or different. The analysis of the results showed that only the improvement of the

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perception of the three contrastive consonant pairs - [b] and [v], and [s] and [θ], and [θ] and [f]- was found to be statistically significant. No improvement for two contrastive consonant pairs - [p] and [b], and [s] and [f] was noted probably because these were already acquired by the learners and there was no room for improvement. Matthews (1997) explained limited success to his attempt to sensitize students to the [l] and [ɹ] consonant pairs through the framework of Feature Geometry, which organizes phonological features into a hierarchical structure while reflecting relationships of dependency and constituency among the features (Matthews, 1997; p.139). Since the feature geometry of Japanese lacks one feature – lateral, which distinguishes between [l] and [ɹ] in English, the contrasts were not learned by the subjects in the study.

As seen in the study above, the [l] and [ɹ] contrast is hard to learn for Japanese speakers of English. In fact, it has been one of the most widely taught contrastive pairs for Japanese EFL learners. Bradlow (2008) summarized a series of studies starting with a low-variability training approach, in which participants were trained with one minimal pair produced by a synthetic "talker." Participants then used a high-variability training approach, in which they were trained to distinguish pairs produced by several talkers. These studies have focused on the [l] and [ɹ] contrastive consonant pair and have been replicated and expanded from Japanese speakers who have lived in an English-speaking country, to those who have not. For details, see Lively et al. 1994, and Yamada 1993. Summarizing these experiments, Bradlow indicated "linguistically-functional learning can be achieved under laboratory training conditions even for this unusually difficult case (p.299)." Unlike the experiment that I am pursuing, the studies were in laboratory settings, and only focused on one single segmental contrast, but the findings are promising for Japanese learners of English and English teachers.

Another segmental feature that is problematic to Japanese learners of English is a vowel sound /æ/. Saito (2007) conducted a study to investigate the effectiveness of teaching the vowel to Japanese learners of English through explicit phonetic instruction.

The participants (*n*=6) were graduate students at an American university, who had been in the United States for two and seven months. Two of the participants were in a control group, which received no instruction, while six of them constituted an experimental group, which received pronunciation instruction. The instruction for the experimental group took place over one day for one hour, when the subjects used a computer software (Praat) to compare the spectrograms of the sounds they produced with those produced by native speakers. The participants also learned about the differences between the target and a vowel /a/, which is often found confusing with /æ/ by many Japanese speakers of English. They received phonetic instruction, which was not explained in details in the study, and learned about eight minimal pairs of /æ/ and /a/.

To test the effectiveness of the instruction, the second formant (F2) values of the target sounds were analyzed with Praat. The comparison of those produced at Time 1 (before the instruction), Time 2 (immediately after the instruction), and Time 3 (one week later) showed that the F2 values of the tokens produced by the experimental group at Times 2 and 3 became closer to those produced by native speakers of English, meaning that the learners' vowel /æ/ improved.

This study is again promising like Matthews (1997) in that the explicit pronunciation teaching seemed to be effective for Japanese learners of English. However, the experiment needs careful attention in order to claim that the explicit pronunciation improves Japanese learners' English pronunciation. As Saito admits, the instruction should involve other phonemes that are problematic to the learners. But more importantly, learners need to be able to use

suprasegmentals effectively as some research results suggest that such features as intonation and rhythm appear to be equally or more important than segmentals for effective pronunciation (Celce-Murcia et al., 2010). In fact, the next study focused one of the suprasegmentals, intonation. Let me begin with outlining the design of the study below.

Nagamine (2002) examined the effectiveness of teaching pronunciation to 15 Japanese university students through a hyper-pronunciation training method, advocated by Todaka (1993, 1995). This is designed to help L2 learners to understand the effective use of acoustic energy and to increase their awareness of unique English acoustic features (Nagamine & Todaka, 1996). The respondents participated in a 12-week course, 30 to 40 minutes per week, the total of 6 to 8 hour instruction.

The pre- and post-tests, in which the participants read a 166 word diagnostic passage, were judged by in two ways. One was through an acoustic analysis of the F0 (fundamental frequency), and the other was through the composite judgment of 4 native speakers. The acoustic analysis focused on difference in the F0 range and employed a F0 counter for part of the diagnostic passage. The average F0 range and F0 counter of the post-test became closer to native speaker norms.

However, judgment results by 4 native-speakers, (one Irish, one British, and two Americans) showed the inconsistent results. The judges listened to pairs of the same sentences produced before and after the 12-week intervention, and made forced-choices to indicate which was more comprehensible. The following table shows the results.

Table 3

Percentage Score of Preference for T2 (vs.T1)

Participant	FP1	FP2	FP3	FP4	FP5	FP6	FP7	FP8	FP9	FP10	FP11	MP1	MP2
T2(%)	83.3	75	83.3	50	83.3	41.7	58.3	66.7	25	33.3	41.7	16.7	16.7

Note. FP=Female Participant; MP=Male Participant. Adapted from "An experimental study on the teachability and learnability of English intonational aspect: acoustic analysis on F 0 and native-speaker judgment task," by T. Nagamine, 2002, *Journal of Language and L inguistics*, *1,* p.372.

As Table 3 makes clear, the judgment results showed that 6 participants' speeches in the post-test were improved, while 6 others' were found to be worse and one did not exhibit any change. Since many other factors other than the intonation influence pronunciation, as the author discussed, this result is not surprising. One possible cause for this weak improvement may have to do with the content of the lessons.

Nagamine's sample lesson (p.18) indicates that the participants started with vocal and abdominal breath training and went on to something he calls "hyper-training". Then the instructor introduced the target intonation pattern, and the students worked in pairs to become more aware of the role of intonation. The lesson ended with an exercise in which the participants modified their exaggerated intonation into natural patterns. It seems that the pronunciation course included some communicative exercises (p.6), but it is not so clear if these were truly communicative. Instead, it seems that the students were only talking about intonation patterns and practiced intonation in pairs. Communicative activities might have resulted in better native speaker judgments.

Being aware of the differences in use of organs like the mouth and the throat is important, but so is understanding the differences in the resonance and intonation counters of English and Japanese. However, unless students perceive a communicative need to get their message across, the knowledge is likely to remain an inert artifact that is not applied. Therefore, I believe that

truly communicative practice, in which learners talk about their own ideas with classmates, combined with explicit pronunciation teaching, as suggested in FonF, would be beneficial for enhancing comprehensibility (discussed more later in this chapter).

Matthew (1997), Saito (2007) and Nagamine (2002) had participants from a single language group of learners, making it possible to focus on features problematic to the group. As the result, the study provides teachers for the language group, Japanese in this case, with information about which consonantal pairs could be learned by teaching the articulation of the sounds (Matthew), about whether the targeted vowel /æ/ could be improved through instruction (Saito), and about whether teaching intonation could improve native speakers' judgment. However, since inability to distinguish both segmental and suprasegmentals features can have a negative impact on the oral communication (Celce-Murcia et al., 2010), teaching either segmentals or suprasegmentals is unrealistic. A balanced approach to teaching pronunciation is preferred now (Celce-Murcia et al., 2010). Thus, empirical research on teaching both of segmentals and suprasegmentals would be beneficial for ESL/EFL teachers.

The next section reviews past studies with non-Japanese learners of English - learners of different L1s or Mandarin speakers of English, some of which dealt with both of suprasegmentals and segmentals, some of which compared segmental teaching with suprasegmental teaching.

2.2.2. Past Pronunciation Intervention Studies for Non-Japanese Speakers of English

Perlmutter (1989) examined the effects of overall pronunciation training in which both segmentals and suprasegmentals were included. She examined the intelligibility of the utterances of 24 international newly arrived graduate students at an American university before and after

intervention. The subjects were from 8 different countries, presumably with different L1s. The training lasted 11 or 22 weeks depending on the student enrollment, and was conducted either in small groups (2-3 people) or larger groups (5-6) for 2.5 hours per week. The pre-test and post-tests consisted of an extemporaneous monolog in which examinees read a passage silently for 1 minute and then summarized its contents. The passages for the pre-test and post-tests differed. The speeches were evaluated by 21 American undergraduate students whose L1 was English. The judges rated "over-all intelligibility" (p.517) of the speeches on a 5-point Likert scale. They also identified the topic of the monologue. The numbers of perceived correct, incorrect, and approximate identifications for each learner were calculated later. The results suggest that the speeches improved significantly after the training both in terms of overall-intelligibility and the speech content.

Although the statistics suggest that the pronunciation instruction worked for this group, regrettably the author did not specify how instructor taught pronunciation. Many key details regarding this study were simply not elucidated. The assessment procedures were not specific enough to replicate the study due to the lack of the definition of "over-all intelligibility" and the calculation procedures of the topic identification. In addition, the length of instruction varied largely, from 11 weeks to 22 weeks. Not enough information was provided to ascertain whether the longer instruction improved the intelligibility or not.

Similar to Perlmutter (1989), MacDonald, Yule and Powers (1994) seems to have involved teaching of both segmental and suprasegmental features, with Mandarin speakers as participants. It compared three types of pronunciation - traditional drills, self-study with tape recordings, and interactive activities (*n=6* in each condition*).* They also had a control group (*n=5*) that received no explicit instruction.

The pre- and immediate and delayed post-tests (2 days later) were to deliver a mini-lecture on the metric system, considering the participants were teaching assistant candidates at undergraduate courses. The materials for the lecture were provided to the participants. The packet included instruction, and a list of key words and phrases that had to be included in the lecture. In the traditional drilling group, which was limited to 10 minutes, a teacher modeled the key words and phrases and several sentences used that would be used in the mini-lecture. The teacher was allowed to provide feedback. The self-study group listened to a practice tape and repeated the same items treated in the drill group for 30 minutes, which was obviously much longer than the other groups. Participants in the interactive group gave a 10-minute mini-lecture to an examiner, who asked clarification questions. In the control group, participants were asked to spend 10 minutes preparing for the second recording of the lecture by looking over their notes.

The lecture recordings were evaluated by a pool of 120 English-speaking undergraduates. They made forced-choice, rank-order accentedness judgments to a pair of recordings in order to show which utterance was better. The results suggest that only the learners in the self-study group showed tangible improvement in their lecture skills. Other participants tended to improve to some extent, but the results were marginal.

The lack of significant improvement may have been because of several design flaws. One concerns the inconsistent instructional time frame: the self-study group had 20 minutes longer than the other groups, which spent only 10 minutes to learn words and phrases for a lecture. This may have been too brief. Moreover, it seems that none of the groups involved explicit pronunciation instruction. Explicit and systematic pronunciation instruction together with a focus on meaning may have improved the participants' intelligibility. Due to the lack of details about the intervention for each group, it appears difficult to apply the study for a real classroom

pronunciation instruction. The next study to be reviewed below was an intervention with focus on suprasegmentals, unlike the two preceding studies.

Derwing, Munro and Wiebe (1997) examined the effectiveness of a 12-week pronunciation course for immigrants who had been in an English-speaking environment for an average of 10 years. Some of the participants – who were native Mandarin, Vietnamese, Cantonese, Farsi, French, Spanish and Ukrainian speakers – were reportedly frustrated with their accents. No objective data was presented as to the participants' English proficiency, though three had 560+ TOEFL scores. Two instructors gave the pronunciation course. The course began with an explicit explanation of the various factors influencing accentedness and then a needs analysis was conducted. The course did not focus on segmental features, but rather on body language, voice quality, volume, rate, and discourse markers, in addition to stress, intonation and rhythm (p.220). The learning included group work for peer-assessment as well as teacher-developed activities.

The pre- and immediate post-tests were to read 40 true and false sentences and to narrate a picture story, which was not analyzed in the study. The two pre- and post-tests were identical. The study examined intelligibility, comprehensibility and accentedness. As for intelligibility, one sentence from the pre-test, and another sentence from the post-test were transcribed in standard orthography. As for the other two aspects, comprehensibility (ease of understanding) and accentedness (how different from NS norms), two identical sentences of each speaker were selected from the pre-test and the post-test, and rated on a 9-point Likert scale. Judges were thirty-seven undergraduate linguistics major students who were monolingual speakers of English.

The results showed that intelligibility of the utterances of the post-test improved more than those of the pre-test, and true statements produced after the instruction were more comprehensible and less accented than before the instruction. However, false statements did not show any statistically significant improvement. The study seems promising for pronunciation instruction even to somewhat fossilized non-native speakers of English. Specifically, the focus on meaning appears to be beneficial, but not enough detail is presented to get a clearer idea of what sort of instruction occurred. It cannot be ascertained whether the teaching involved a focus on meaning either.

While the preceding study by Derwing et al. (1997) only looked at suprasegmental teaching, the same authors produced another study in 1998 that compared segmental teaching with suprasegmental teaching. This study is noteworthy because little empirical evidence has been presented to advocate suprasegmental focus although many support the idea. Forty-eight non-English native speakers of different L1s enrolled in an ESL program in the USA participated in this study. One group- named as the "Segmental Group" (*n*=16) – focused on vowels and consonants. The other group – named as the "Global Group" (*n*=16) – focused on prosodic features. A third control group (*n*=16) received no special pronunciation treatment.

The instruction was conducted about 20 minutes per day over the course of 12 weeks. The effectiveness of the instruction was measured before and immediately after the end of the instruction course; the participants read sentences –no information given as to how many sentences- with high-frequency lexical items, in Experiment I. In Experiment II, they narrated a picture story.

Forty-eight Canadian English native speakers judged the speeches in Experiment I for comprehensibility and accentedness on a 9-point Likert scale. The first 45 seconds of the

narratives in Experiment II were judged by 6 native English ESL teachers, for comprehensibility and accentedness on a 9-point scale, as well as fluency, which was influenced by the speech rate and pause length. This was also measured on a 9-point Likert scale. The results of Experiment I (sentences) showed both experimental groups improved in terms of comprehensibility and accentedness. The control group improved in terms of accentedness alone. This may have been thanks to the ESL courses they regularly attended. A closer look at the results indicated that Segmental Group was found to be significantly less accented than Global Group. This was likely a research artifact because the average length of residence in Canada was greater for members in that group than those in the Global Group.

Experiment II showed that the Segmental Group did not improve much according to any of the measures. By contrast, the Global Group improved according to two measures: comprehensibility and fluency. With such more positive findings with Global Group than Segmental, it seems that focusing on prosodic features is supported in teaching pronunciation, although the authors did not advocate losing a segmental focus in pronunciation teaching altogether.

All in all, this study empirically suggested some directions for effective pronunciation instruction. However, this study suffered from the lack of precision as we saw with the aforementioned studies. Readers are told that the instructors in Segmental Group focused on production and identification of individual sounds, minimal pair drills, while those in Global Group worked on stress, intonation, rhythm, and speech rate (p.399) – but the sort of fine-tuned information, what sort of instruction actually occurring for example, was missing. It seems that one of the techniques the teacher used was to count the number of syllables and stresses, to tap out the beats to focus on rhythm. This technique is described in the textbooks, *Jazz Chants*

(1986) and *Sounds Great* (1994). The activities may be worth doing, but they are somewhat mechanical and focus metalinguistic knowledge and practicing techniques. Activities that would make students practice their learned pronunciation skills for better communication may have resulted in more improvement.

Part of the data obtained in the study was later analyzed in Derwing and Rossiter (2003) in order to determine what factors had influenced comprehensibility and fluency ratings by native speakers. Six native speakers checked the speeches for errors and classified them as comprehensibility errors, bothersome errors, and salient errors. Among several finding, what seems most related to my study is that the Segmental learners did not show improvement in comprehensibility at Time 2 although they made fewer phonological errors than before. Derwing and Rossiter suggested that the learners might have paid too much attention to segmentals, resulting that they could not demonstrate improvement in other aspects. The authors concluded that more emphasis should be placed on suprasegmentals in teaching pronunciation. However, the distinction between the two – teaching segmentals versus teaching suprasegmentals – may be unproductive because any given group of language learners has problems with certain segmentals and suprasegmentals (Celce-Murcia et al., 2010). A balanced approach would make learners more comprehensible. The last three studies below dealt with both segmentals and suprasegmentals.

Couper (2003) examined the value of an explicit pronunciation teaching for learners of English in New Zealand. Fifteen students enrolled in a 16-week English course participated in the study. Their L1s were Chinese (10), Japanese (1), Korean (1), Farsi (1), Arabic (1) and Serbian (1). The learners received pronunciation instruction in 3 or 4 sessions per week (18 hours of in-class study in total). They were also engaged in two-hour self-study every week. The focus

of the course alternated between segmentals and suprasegmentals. In each session, the learners listened to the target of the lesson and repeated it. Then they recorded themselves in a language laboratory and monitored their production. They received explicit instruction about the place and manner of the articulation from the instructor. There was no control group in this study.

As a pre-test, the respondents read 5 short statements, called Part 1, and talked about themselves for 2 minutes, called Part 2. As a post-test, they read 10 short statements, five of which were the same as the pre-test, and repeated Part 2 as well.

Comparing the number of errors with consonants, vowels, word stress, addition or drop of sounds and linking in Parts 1 and 2 showed that there was a clear increase in accuracy between the pre- and the post-tests. The average number of errors dropped from 14.1 to 5.2 in Part 1, while that went from 11.2 to 6.3 in Part 2.

The good results were encouraging for teachers of adult learners of English. The average age of the participants was 32, which is often considered to be rather old for language learning. This intervention was successful probably because the instruction promoted self-monitoring. The learners recorded their speech, listened to them and compared them with the models. They also received individual feedback from the instructor. Couper (2003) made it clear that nurturing monitoring skills is one of the most important foci in teaching pronunciation.

The same author conducted a study to examine the short and long-term effects of pronunciation instruction. Couper (2006) had 21 learners of English in New Zealand, whose native languages were Chinese (14), Korean (1) and other non-Asian languages. They were all immigrants to NZ, ranging in age from 20 to 57. They consisted of an experimental group, while 50 learners with similar background to the experimental made up of a control group.

There were 12 sessions of 20-50 minutes each over two weeks and a half. Unlike Couper (2003), instruction focused on epenthesis and absence of final consonants, based on the analysis of the speeches produced by the participants. It seems that the author chose these features because they not only affect the segmental level but also the suprasegmental level. However, the teaching schedule shows that the learners seemed to work on segmentals only.

The effectiveness of the instruction was measured before the first lesson (Time 1), immediately after the last lesson (Time 2), and 12 weeks later (Time 3). The tests were a General Diagnostic Test, which consisted of reading a list of 12 sentences and talking about oneself for 1-2 minutes, a Specific Test, which was a list of 40 phrases and short sentences with the focus of epenthesis and absence final consonants, and a Listening Discrimination Test, which was administered for the experimental group at Time 2, but not extensively analyzed as a reliable tool for assessment in this study. The General Diagnostic Test and the Specific Test were given to the experimental group at Times 1, 2 and 3 while the control group took them only at Time 1 and 3.

In order to observe the possible changes, the author counted the number of errors with the participants' speaking and converted to a percentage error rate. The average error rate for the experimental group on the Specific Test dropped from 19.9% (Time 1) to 5.5% (Time 2), and rose slightly to 7.5 % at Time 3, while the control group did not seem to achieve any gains. This was also true with the results of the General Diagnostic Test. Paired t-tests also showed that the differences were statistically significant.

This focused pronunciation teaching seemed to cause positive changes with the participants' speeches. Without empirical evidence, however, that epenthesis and absence of final consonants – the focus of the study – were actually highly related to comprehensibility, it may not be possible to conclude that this approach was effective. Focusing on certain aspects

would be necessary in a limited time frame of teaching, but learners may not be able to communicate better without communicative activities where they can use learned pronunciation skills to express themselves.

Finally, let us consider a study by Kendrick (1997), which involved instruction in a communicative framework, although there was some weakness in the study design. Kendrick examined 8 high school students, whose nationalities were Japanese, Russian, Korean, Taiwanese and Thai. These students received immersion instruction in a limited range of subjects in an English boarding school. The author claimed that the pronunciation teaching benefited most of the students' segmental and suprasegmental accents based on elicited speeches during the course. Regrettably, this study cannot be considered systematic and reliable because of several flaws such as absence of a control group, any pre-tests, and detailed statistical information about the results or even precise information about total intervention time. However, the teaching seemed to be such an instruction I am seeking, which is to deal with both mechanical and communicative aspects of pronunciation. Kendrick (1997) incorporated explicit pronunciation basics including teaching how to make English sounds and how to read and understand phonetic symbols. It also provided opportunities to use English in dramas and role-plays where learners were encouraged to use a variety of intonation, rhythm and voice quality. The learners also assessed their pronunciation regularly and received feedback from the instructor. Without clearly knowing the sounds that they still have difficulty pronouncing, significant improvement would have been unlikely.

Along with 3 non-pronunciation experimental/quasi-experimental studies, eleven preceding pronunciation intervention studies have been reviewed in order to design my exploratory research project for Japanese learners of English. Looking over the past research made clearer

what aspects need careful attention in designing a pronunciation intervention study, which is discussed below.

2.3. Reflections on the Past Pronunciation Intervention Studies

One of the variables need to be considered is an approach. Most of the reviewed studies focused on producing certain sounds or sound patterns, without sufficient communicative activities to use the skills to express themselves, hence it was almost impossible to determine whether and how meaning-focused activities were given to the learners. As Naiman (1992) suggests, pronunciation is closely linked to meaning at the discourse level and must be presented to students in that way and practiced accordingly (p. 163). If learners are mainly engaged in "reinforcement" activities as proposed in Audiolingualism, which focuses on accuracy, there will not come expected practical results (Richards & Rogers, 2001). However, it does not mean that controlled activities to promote accurate pronunciation should be abandoned, as they are included in a communicative framework for teaching English pronunciation (Celce-Murcia et al., 2010). Moving analytical to communicative practice seems preferable. It would be necessary to provide learners with opportunities to practice communicatively, along with accuracy-focused controlled activities. In other words, combining FonFS –accuracy-focused, and FonF –meaning focused with attention to the sounds as well, would be beneficial in pronunciation teaching for ESL/EFL learners.

What is related closely to the approach is assessment. Since current consensus regarding the goal of pronunciation acquisition by ESL/EFL learners is not to be able to speak like native speakers, but to make themselves understood better (Celce-Murcia et al., 2010; Avery & Ehrlich,

1992; Morley, 1991; Lane, 2010), accent eradication is not the goal of pronunciation teaching for ESL/EFL learners.

Derwing et al. (1997) assessed intelligibility, comprehensibility and accentedness. According to the study, intelligibility was an extent to which a listener could transcribe an utterance of the speaker, comprehensibility was a listener's perception of how difficult it was to understand the speaker, and accentedness was a listener's perception of how different the speaker's accent was from native speakers in general. As mentioned above, the goal of pronunciation instruction is to make learners' speech easier to understand. Therefore, comprehensibility is one dimension that should be included in my study.

Accentedness may not have to be considered in evaluating learners' pronunciation when the goal is to make themselves understood better. In fact, achieving native like pronunciation is unrealistic (Levis, 2005, p.370). In the world where the majority of English users are not native speakers, the native speaker norm may not be the goal that learners should always pursue (Jenkins, 2000, p.11). Accentedness will be assessed in my study, however, in order to explore whether even heavily accented speech can be highly comprehensible as previously claimed (Derwing et al., 1998, p.396).

Intelligibility will not be included because the pre- and post-tests in my study will employ a diagnostic passage reading. Free speeches will not be used because they are predicted to suffer from many errors of grammar and vocabulary considering the proficiency level of the participants, resulting that the assessment will be influenced by those errors.

Deciding what to teach is important, too. As I explained above in the review of Derwing and Rossiter (2003), teaching either segmentals or suprasegmentals is unrealistic because a speech would be unintelligible without a threshold level of accuracy in both areas. My

instruction will prioritize features problematic to Japanese learners of English, both segmentals and suprasegmentals.

The length of an instruction is another aspect that has to be decided. Although many of the studies reported that their instruction was effective in general, the intervention period was varied extensively. In four of the 11 reviewed studies, it ranged from 10 minutes to 8 hours, while five studies had $18 - 55$ hours for the instruction. The other three did not specify the exact time spent for their instruction. Thus, reviewing the preceding studies does not make it possible to make a definite decision how long is enough for learners to acquire skills for better comprehensibility and perception. It will probably never be possible to know how long is enough, because there are countless differences among learners' background and abilities, learning environment and so forth. Therefore, considering that this study is seeking to be incorporated into part of real English classroom teaching in Japan, where many freshmen and sophomores take two 90-minute English classes per week in one semester –about three months, my study will have a 50-minute lesson twice a week over the course of 12 weeks, with the total instruction time of 20 hours.

As we saw in this chapter, the designs and variables of the studies reviewed here are so varied, in terms of approach, assessment and target for example, that it is difficult to determine what types of pronunciation instruction would be effective. Reviewing the preceding research, however, enabled me to make educated decisions for my pronunciation intervention study design, which is to be discussed in Chapter 3.

Chapter 3 METHOD

The following describes in detail how the study was conducted, including the participants, treatment, data collection and assessment. The experimental group, which spent 20 hours of instruction, consisted of 10 Japanese college students, while the control group, which received no pronunciation instruction, involved 10 Japanese college students. The experimental group learned both segmentals and suprasegmentals, with FonFS as well as FonF activities. Both the experimental and the control groups recorded a passage reading before and after the instruction for assessment. Ten native speakers of English rated the speeches in terms of comprehensibility[1] and accentedness[2]. I will describe further details about the study design later, but first let us go over the research questions and hypotheses of my study.

3.1. Research Questions and Hypotheses

Research Questions

This study explores the following research questions:

1. Will the respondents improve their comprehensibility after receiving FonFS and FonF

    pronunciation instruction?

2. Will the respondents improve their accentedness after receiving FonFS and FonF

    pronunciation instruction?

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[1] Comprehensibility was a listener's perception of how difficult it was to understand the speaker (adapted from Derwing et al. (1997)).

[2] Accentedness was a listener's perception of how different the speaker's accent was from native speakers in general (adapted from Derwing et al. (1997)).

Hypotheses

Hypothesis 1: There will be a statistically significant ($p<.05$) improvement in the pre- and post-tests in terms of comprehensibility after receiving FonFS and FonF pronunciation instruction.

The fact that many of the Japanese learners of English in general have not had a chance to learn about communicative aspects of English pronunciation means that there must be some room for their pronunciation improvement through formal learning. Although they may be too old to apply their learned knowledge through the instruction to real use, I still assume that their pronunciation will become better after instruction, in which they practice segmentals and suprasegmentals in controlled activities with focus on the accuracy (focus on forms) and practice them in a meaningful communication while paying attention to the pronunciation (focus on form).

Hypothesis 2: There will be a statistically significant ($p<.05$) improvement in the pre- and post-tests in terms of accentedness after receiving FonFS and FonF pronunciation instruction.

Again, the students' accentedness at a pre-test should be something that they learned by themselves, not through formal instruction and I assume that once they know how to make English sounds, provided with clear explanation and practice, they should be able to speak with less foreign accent than before. However, I doubt their improvement in accentedness will be as robust as in comprehensibility because there are so many sounds learners have to master to be

able to sound like native speakers, and because the L1 transfer cannot be totally prevented by formal teaching.

3.2. Participants

The participants in this study consisted of 20 first-year undergraduate economics majors at a mid-ranking university in Tokyo, Japan. Their TOEIC® (Test of English for International Communication) scores ranged from 385 to 620, with a mean score of 431.9. The demographic characteristics of this sample are summarized in Table 4.

Table 4

A Demographic Profile of the Student Participants in the Study

	Experimental Group		Control Group	
Gender	Male	Female	Male	Female
	4	6	5	5
L1	Japanese		Japanese	
TOEIC score	463.5		403.2	

The experimental group consisted of 10 students who voluntarily participated in the study. They learned both segmental and suprasegmental aspects of pronunciation through explicit explanation followed by audiolingual type of activities (FonFS) as well as communicative ones (FonF). They also attended the researcher's weekly 90-minute English course like the control group students, who learned English mainly through listening and speaking activities without receiving explicit pronunciation instruction. Ten students of the control group were randomly chosen as the research subjects in order to make the number of the

experimental and the control groups the same. It was not possible to recruit more subjects in the experimental group for a more reliable statistical analysis, because the lessons may have seemed too frequent to many students.

3.3. Treatment

Pronunciation Instruction Time

The students in the experimental group received 50-minute pronunciation lessons regularly over the course of 12 weeks, twice a week, starting in October 2010 and ending in late January 2011, in addition to the regular English course from the teacher/researcher. The total pronunciation instruction time was 20 hours (see Chapter 2 for the rationale). The students in the control group attended the regular English course but received no explicit pronunciation lessons. The more detailed pronunciation schedule is in Appendix A.

Items Dealt with in the Lessons

The instruction in this study dealt with both segmentals and suprasegmentals. It was impossible, however, to cover every single consonant and vowel during the pronunciation course in addition to intonation and stress that differ from Japanese considering the limited instruction time. Moreover, the purpose of the pronunciation instruction is to help students communicate, not to sound like native speakers. Therefore, the lessons dealt with a certain range of sounds that are considered to be problematic for Japanese learners of English. I followed Avery and Ehrlich (2008, pp. 134-138), which suggests certain sounds that Japanese speakers need to focus on. The list includes contrasts of certain consonant pairs, vowel pairs as well as stress, rhythm and

intonation patterns. The consonantal contrasts taught were those between /s/ and /ʃ/, /t/ and /tʃ/, /b/ and /v/, /l/ and /r/, and the word initial /w/ and /y/. As for vowels, the contrasts between tense and lax vowels such as /iy/ and /ɪ/, /ey/ and /ɛ/, /uw/ and /ʊ/ merited focus. Since Japanese is an open syllable language in which syllables often end with vowels, consonant clusters and word-final consonants are problematic too. In addition, Japanese is a syllable-timed language, which means the number of syllable decides the amount of time required to pronounce a sentence unlike English, a stress-timed language. This characteristic of Japanese causes headaches for learners of English in terms of stress and rhythm. Intonation is also difficult, but important to learn because certain intonation patterns convey certain messages in English that would be communicated through grammatical markers in Japanese. For instance, a contrast between old and new information is shown by a particle 'wa' for new information and 'ga' for old one in Japanese.

Approach and Materials

As I mentioned earlier in this chapter and Chapter 2, pronunciation teaching for ESL/EFL learners can be hypothesized to be effective when it incorporates communicative activities (FonF) followed by explicit instruction of the target pronunciation and controlled practice (FonFS). Baker and Goldstein's P*ronunciation Pairs* (2008) was therefore used as a textbook for my pronunciation course. It includes dialogs and games in which the focus of the activities is to communicate. Another reason was that the book seemed suitable for the participants, who passed a critical period, and were intellectually mature. The textbook gives specified information as to the articulation of a target sound and key points to produce intended sound patterns, which were useful for the study participants because they could not depend on

their L1 intuitions. Furthermore, the teachers' manual specifies what kinds of errors tend to occur among certain language groups and provides additional lists of problematic sounds that learners can practice further. Self-practice audio should also be beneficial for students to review outside of class, which was not encouraged to do in this study.

Typical Lesson Content

In all units, the students were engaged in a learning sequence from a featured segmental sound practice to a suprasegmental practice. The featured segmental sound frequently appeared in the suprasegmental practice so that students could practice the sound over and over again. Refer to the structure of a typical pronunciation lesson, which is summarized in Appendix B.

3.4. Data Collection and Assessment

Data Collection

To measure the improvement in the participants' pronunciation, the diagnostic passage in Appendix C was recorded before and after the instruction. An overview of the dialog is summarized in Table 5 below.

Table 5

An Overview of the Diagnostic Passage Used in the Study

Format	A 19-line dialog	
Counts	Words	218
	Sentences	37
Averages	Sentences per Paragraph	1.9
	Words per Sentence	5.9
Readability	Flesch Reading Ease	86.3
	Flesch-Kincaid Grade Level	2.6

The participants individually recorded their dialog reading into an IC-recorder at a quiet classroom as pre- and post-tests as Figure 1 shows.

1) Pre-test –dialog recording (all participants)

2) Lessons (12 weeks)

90-minute weekly lessons (all participants) AND

50-minute semi-weekly pronunciation lessons (experimental group only)

3) Post-test –dialog recording (all participants)

Figure 1. The procedure used in the study.

I told the students in both groups that they needed to read the text clearly to show how well they could read the text aloud. After the recording, the dialog text was collected from all the students and not practiced during the course of the instruction in either of the groups.

Assessment

The speeches were rated by 4-6 American college students in terms of two aspects, comprehensibility and accentedness according to a 5 point-Likert scale (see Chapter 2 for the rationale for the two criteria). The raters were volunteers and received about $5 stationary when completing their work. I recruited volunteers from two first-year Japanese classes at CSU with permission from Research Integrity & Compliance Review Office and the instructor of the Japanese classes. At the beginning of the classes, I briefly outlined the study and told them that the rating session had nothing to do with their grades of their Japanese courses, but it would be interesting to listen to Japanese students' English.

Due to time conflict of volunteers, two rating sessions were held, one on September 14, 2011, (Session 1), and the other on September 15, (Session 2), at a quiet classroom on campus. Four raters participated in Session 1, and 6 raters in Session 2. Each session consisted of a 5-minute explanation about the study, a 10-minute training session and a 35-minute assessment session. First, I explained the purpose and the outline of the study following the guideline set by CSU Research Integrity & Compliance Review Office. There were no questions or concerns raised from the volunteers. Next, I overviewed the notions of comprehensibility and accentedness according to Dewing and Munro's 1997 research. Comprehensibility was a listener's perception of how difficult it was to understand the speaker, and accentedness was a listener's perception of how different the speaker's accent was from native speakers in general. As for comprehensibility, I asked the raters to indicate that of each utterance on a 5-point scale (in which 1=extremely easy to understand and 5= extremely difficult to understand). As for

accentedness, I asked raters to assess the degree of accentedness on a second 5-point scale (1= very little accent, 5 = very strong accent).

I also told them that they should try to use the scales widely, not skewed too harsh or lenient. I played 4 sample speeches with a portable CD player to the group of raters. After each of the sample listening, I asked every rater about their rating of comprehensibility and accentedness, about specific sounds or sound patterns that helped them rate so that the group could share other's rating. The raters freely expressed their opinions and discussed their ideas with each other as well. The samples ranged from a speech produced by a native speaker (Sample #1), one very hard to understand because of blurred pronunciation, incorrect segmentals and very monotone rhythms (Sample #2), and ones I had considered to be in the middle of the two (Sample #3 & #4). Without my explanation, the listeners agreed that Sample #1 was fairly comprehensible and little accented, while they found Sample #2 little comprehensible and heavily accented, and #3 and #4 in between.

Twenty-three speeches were evaluated by 4 raters during Session 1, and 23 were evaluated by 6 raters during Session 2. Of the 23 speeches at Session 1 and Session 2, 6 speeches were identical, meaning that the 6 of the speeches were evaluated by all of the raters. In total, forty different speeches produced by 20 Japanese students at Time 1 and 2 were assessed. The raters had no idea whether they were listening to a speech from the experimental group or the control group or from the pre-test or the post-test. At the end of each session, I collected the signed informed consent forms from each rater and we talked about the rating session informally. In order to ascertain the inter-rater reliability, the Cronbach' alpha was calculated. For comprehensibility, Session 1 was .872, and Session 2 was .887. For accentedness, Session 1 was

with .799, and Session 2 was .910. The numbers reveal that the raters in both sessions were within acceptable ranges.

Chapter 4 RESULTS

4.1. Testing Assumptions for the Parametric Tests

4.1.1. Normality of the Data Sets

Before running parametric tests, I examined my data to see if they adhere to the assumptions of normality and homogeneity in terms of variance. First, I tested the normality of 8 data groups. This consisted of 4 groups for comprehensibility and an equal number for accentedness. In order to see the normality of the data, I plotted a normal Gaussian curve over the histogram for each data set (Group 1= Control, Group 2 = Experimental). The figures show that many of the data groups do not seem to behave according to normal distribution.
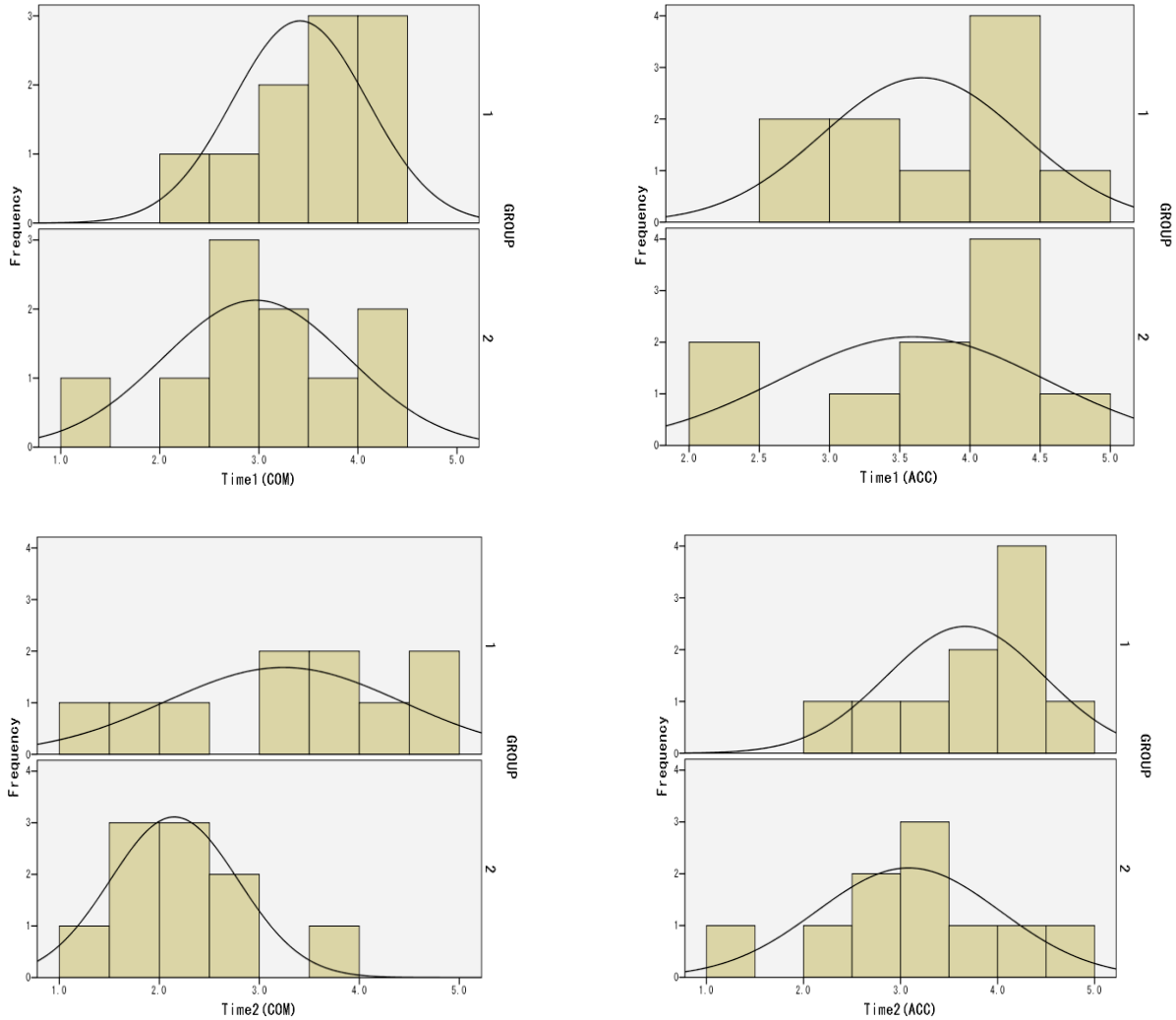
Figure 2. Distributions of data to test the normality. Note. Time 1 = pre-test; Time 2 = post-test; (COM) = comprehensibility rating; (ACC) = accentedness rating

Since this graphic information only provides me with a general idea about the normality, I also calculated the skewness ratio by dividing the skewness level by the standard error of the skewness. None of the data sets had more than 2. According to Larson-Hall (2010, p.78), this suggested that the normality of all the data groups was not violated. In addition, Shapiro-Wilk tests for all the groups demonstrated that the null hypothesis was not rejected, meaning that one cannot say that the data did not come from a normally distributed population.

After all, although the tests and the numbers do not strictly determine that the data was normally distributed, probably because the sample is small, I decide that the data seem to meet the requirement for normality.

4.1.2. Equal Variances of the Data Sets

Another assumption of parametric tests is equal variance among the data. Looking at the standard deviations and the variances of each group suggests they are almost the same, except for those of the comprehension rating of the control group at Time 2. When excluding this data set, the range of the standard deviations is from .64 to .95, and that of the variances is from .41 to .90. But the standard deviation and the variance of the comprehension rating for the control group at Time 2 are 1.18 and 1.4 respectively. This deviance of this group is found clearly when looking at the side-by-side box plots for each group in Figure 3. The length of the box plot of this group is much longer than the other ratings for comprehensibility.

Figure 3. Distributions of comprehensibility ratings for four groups. Note. EXPTIME1 = experimental group at pre-test; CONTIME1 = control group at pre-test; EXPTIME2 = experimental group at post-test; CONTIME2 = control group at post-test

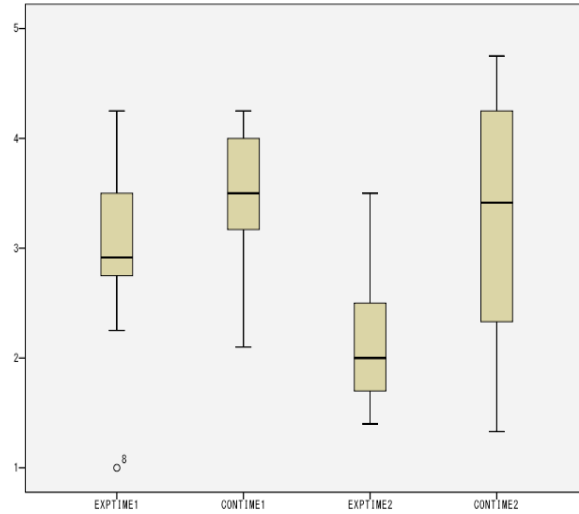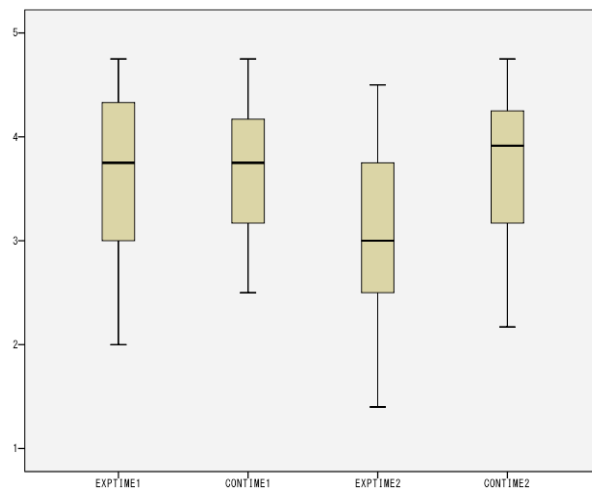*Figure 4*. Distributions of accentedness ratings for four groups. Note. EXPTIME1 = experimental group at pre-test; CONTIME1 = control group at pre-test; EXPTIME2 = experimental group at post-test; CONTIME2 = control group at post-test

For accentedness, the length of boxes looks similar across the four groups in Figure 4.

Since I suspect that transforming the data may not fix a possible problem coming from unequal

variances, I will proceed with the analysis, noting that the data may not meet the requirement for homogeneity of variances.

As Figures 2, 3 and 4 seem to suggest, the data sets of this study do not seem to clearly violate assumptions of normality and homogeneity of variances. Keeping in mind that the data might not satisfy the assumptions perfectly and the power of detecting differences may be weaker, I will analyze my data with caution.

4.2. Comprehensibility Ratings

The descriptive statistics for the comprehensibility ratings were on a 5-point Likert scale in which 1=extremely easy to understand and 5= extremely difficult to understand. Table 6 shows the group means and standard deviations for each of the two groups over time. Moreover, the group means are plotted on the graph in Figure 5, in which Group 1 is the control group and Group 2 is the experimental group.

Table 6

Group Means and Standard Deviations for Comprehensibility

Groups	Pre-test		Post-test	
	M	*SD*	*M*	*SD*
Experimental (*n*=10)	2.97	0.94	2.15	0.64
Control (*n*=10)	3.42	0.68	3.24	1.18
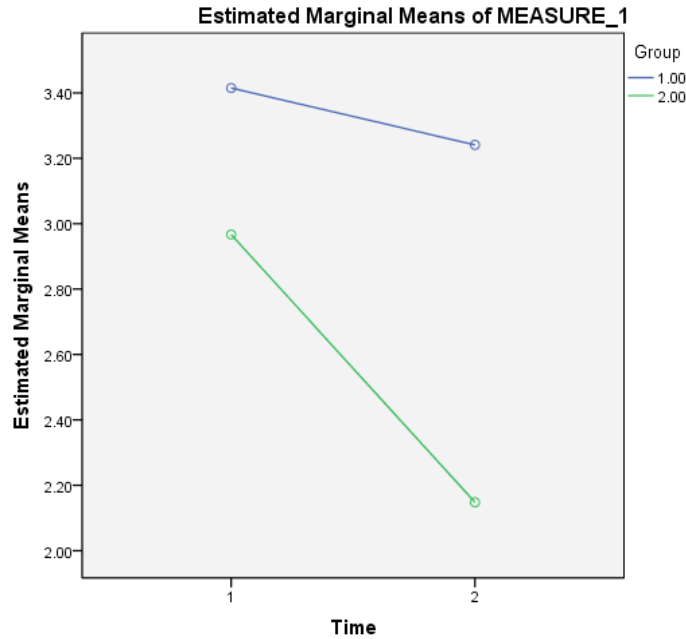
Figure 5. Group means on comprehensibility ratings over time. Note. Group 1= control group; Group 2= experimental group; Time 1 = pre-test; Time 2 = post-test

A 2 × 2 repeated measures ANOVA examining the effects of pronunciation instruction on the participants' comprehensibility of their dialog-reading found a statistical effect for the main effect of Group, F (1,18)=5.078, MSe=1.170, p=.037, partial eta- squared =.220, power=.568) , as well as for time, F(1,18)=6.022, MSe=.408 p=.025, partial eta-squared = .251, power=.641) but not for Time × Group interaction (F (1,18)=2.548, n.s.) as seen in Table 7. Since the mean score of the experimental (M=2.15, SD = 0.64, n=10) is better than that of the control group (M=3.24, SD=1.18, n=10) at Time 2, the ANOVA shows that the experimental group improved more at Time 2 than the control group in terms of comprehensibility.

Table 7

ANOVA (two-way: repeated) Summary Table for Comprehensibility

	Source	*SS*	*df*	*MS*	*F*	*p*	partial eta-squared	observed power
Between groups	Group (experimental /control)	5.942	1	5.942	5.078	.037	.220	.568
	Error	21.060	18	1.170				
Within groups	Time (pre-test /post-test)	2.459	1	2.459	6.022	.025	.251	.641
	Interaction	1.040	1	1.040	2.548	.128	.124	.327
	Error	7.348	18	.408				
	Total	37.849	39					

In order to see whether the two groups had statistically significant differences in terms of comprehensibility at Time 1, I conducted a t-test (see Table 8). The test to compare the pre-test results of the two groups does not reject the null hypothesis that there was no statistically significant difference between the two groups (t (18) = 1.222, *p*=.237) as shown in Table 8. The effect size of Cohen's *d* is .547, which is considered "medium." The control group and the experimental group were probably starting on equal footing as for comprehensibility.

Table 8

Summary Table for t-Test Results of Comprehensibility at Pre-Test

Variable	*M*	*SD*	t-value	p-value	Effect size (Cohen's *d*)
Experimental (*n*=10)	2.97	.94	1.222	.237	0.547
Control (*n*=10)	3.42	.68			

In addition, I examined to see if there was a practice effect from reading the same dialog at Time 1 and Time 2 using a repeated-measures of ANOVA, which tested if there was a statistically significant difference between the pre-test and the post-test of the control group (Table 9). One-way repeated measures of ANOVA for comprehensibility showed no practice effects from reading the same tests for the pre-test and the post-test ($F (1,9) = .4981$, $MSe = .302$, $p=.498$, partial eta-squared=.052, power=.097).

Table 9

ANOVA (one-way: repeated) for Comprehensibility of the Control Group

Source	*SS*	*df*	*MS*	*F*	*p*	partial eta-squared	observed power
Time	.150	1	.150	.498	.498	.052	.097
Subjects	14.092	9	1.566				
Error	2.718	9	.302				
Total	16.96	19					

Considering the results of the two-way repeated ANOVA, the t-test for group differences at Time 1 and the one-way repeated ANOVA for the control group over time, the experimental group showed a statistical improvement over time. To confirm of the results, I also ran a one-way ANOVA for the experimental group, which shows that the difference was statistically significant (F (1,9) = 6.508, MSe = .515, p=.031, partial eta-squared= .420, power=.623), as seen in Table 10.

Table 10

ANOVA (one-way: repeated) for Comprehensibility of the Experimental Group

Source	*SS*	*df*	*MS*	*F*	*p*	partial eta-squared	observed power
Time	3.348	1	3.348	6.508	.031	.420	.623
Subjects	6.968	9	.774				
Error	4.631	9	.515				
Total	14.947	19					

4.3. Accentedness Ratings

Group means and standard deviations for the accentedness rating appear in Table 11, and the means are plotted on the graph in Figure 6.

Table 11

Group Means and Standard Deviations for Accentedness

Groups	Pre-test		Post-test	
	M	*SD*	*M*	*SD*
Experimental (*n*=10)	3.59	.95	3.08	.94
Control (*n*=10)	3.66	.71	3.67	.81
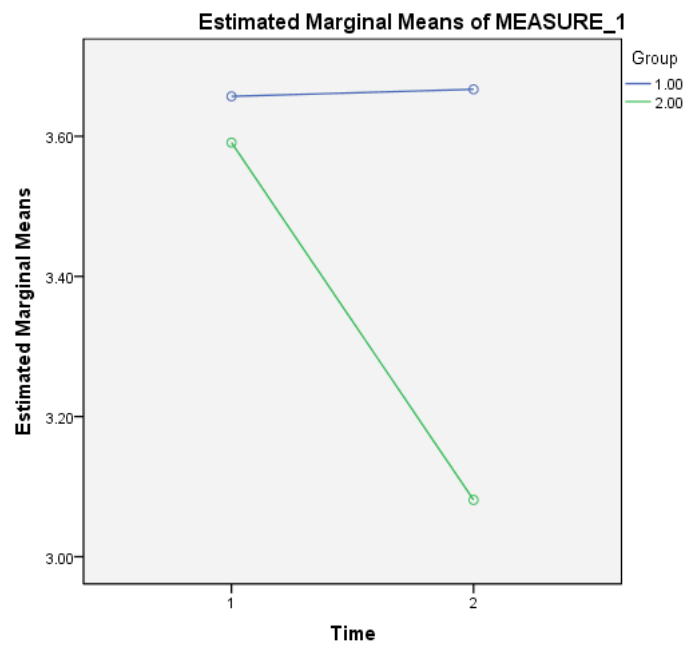
Figure 6. Group means on accentedness ratings over time.

Note. Group 1 =control group; Group 2 = experimental group

The repeated-measures analysis of variance revealed that there were no significant effects for group, F (1,18)=1.298, *MSe*=.814, n.s., for time, $F(1,18)=.938$, *MSe*=.666, n.s. or for Time X Group interaction, F (1,18)=1.014, n.s.. Hence no statistically significant differences between the groups or the time were found.

Table 12

ANOVA (two-way: repeated) Summary Table for Accentedness

	Source	SS	df	MS	F	p	partial eta-squared	observed power
Between groups	Group (experimental /control)	1.056	1	1.056	1.298	.270	.067	.190
	Error	14.650	18	.814				
Within groups	Time (pre-test /post-test)	.625	1	.625	.938	.346	.050	.151
	Interaction	.676	1	.676	1.014	.327	.053	.159
	Error	11.980	18	.666				
	Total	28.987	39					

Not only did the ANOVA above show that the two groups did not change over time, the two groups are considered to have been at the same starting point shown by the t-test results to compare the pre-test results of the two groups (Table 13). The experimental group was no better than the control group statistically at Time 1. Cohen's *d* is 0.08, which is "small."

Table 13

Summary Table for t-Test Results of Accentedness of at Pre-Test

Variable	M	SD	t-value	p-value	Effect size (Cohen's *d*)
Experimental (n=10)	3.59	.95	.176	.862	0.08
Control (n=10)	3.66	.71			

Similar to the comprehensibility rating, the ANOVA repeated-measures in Table 14 shows that the control group did not show statistically significant practice effects from reading the same text twice, ($F (1,9) =.003$, *MSe* =.185, *p*=.960).

Table 14

ANOVA (one-way: repeated) for Accentedness of the Control Group

Source	SS	df	MS	F	p	partial eta-squared	observed power
Time	.001	1	.001	.003	.960	.000	.050
Subjects	8.873	9	.986				
Error	1.662	9	.185				
Total	10.536	19					

The results of the two-way repeated-measures of ANOVA, the t-test to examine the starting point of the two groups and the one-way ANOVA for practice effects show that there was no significant improvement for the experimental group in terms of accentedness. This finding is also supported by a one-way repeated ANOVA for the experimental group in Table 15,

which shows that the group made no statistically significant change over the course (F (1,9) = 1.132, MSe = 1.149, p=.315).

Table 15

ANOVA (one-way: repeated) for Accentedness of the Experimental Group

Source	*SS*	*df*	*MS*	*F*	*p*	partial eta-squared	observed power
Time	1.301	1	1.301	1.132	.315	.112	.159
Subjects	5.777	9	.642				
Error	10.338	9	1.149				
Total	17.416	19					

Chapter 5 DISCUSSION

The main purpose of this research has been to investigate whether FonFS and FonF pronunciation instruction appeared to improve some Japanese college students' English pronunciation.

The results suggested that the comprehensibility of those instructed improved while their accentedness did not. I predicted that both comprehensibility and accentedness would improve mainly because the participants in the experimental group had not received pronunciation instruction before and nearly all had Japanese speech mannerisms. An improvement in comprehensibility of the experimental group was expected to occur especially because the focus of the instruction was not only on segmental/suprasegmental accuracy, but also on the meaning of the utterances. After explicit explanation about the target feature and some audiolingual type accuracy-focused drills (FonFS), the instruction dealt with activities in which learners could use the target in a meaningful situation with certain attention to the pronunciation (FonF). The combination of the accuracy- and the meaning-focused instruction was hypothesized to enhance the comprehensibility of the learner's speeches.

As for the accentedness ratings, neither the experimental group nor the control group showed any statistically significant improvement. The results from this study are congruent with those obtained by Munro and Derwing (1995). They found that the comprehensibility improvement was possible, but accentedness was hard to remove. Their research found that the native speakers perceived speeches to be moderately or heavily accented even when they could transcribe them perfectly (p.90). This suggests that native speakers' accent judgments were

harsher than their comprehensibility judgments. Moreover, it implies that accentedness ratings were not closely congruent with comprehensibility ratings.

Although the current study presents promising results in terms of improving learners' comprehensibility, there are some qualifications to keep in mind. First, the sample population in the study may not represent Japanese university EFL learners in general. The students in the experimental group voluntarily participated in the pronunciation lessons twice a week for 12 weeks. Considering that the students spent extra hours learning pronunciation outside of class and that the participation had nothing to do with their regular grades, it seems possible to say that they were willing to acquire English pronunciation. In other words, they appeared to be relatively more motivated English learners than most Japanese college EFL students. As Agawa et al. (2011) admits, there are many Japanese college students who have little or no motivation to learn English.

In addition, despite government attempts to promote English learning for practical purposes as mentioned in Chapter 1, Sato (2009, pp. 19-20) suggests that most students do not feel a real need for that. Speaking only Japanese does not cause any trouble for most Japanese in Japan. Under such circumstances, it is very hard for most learners to commit to spending extra time to learn a new phonological system. However, I believe that if a teacher gives opportunities for learners to realize the pleasure of learning a foreign language for communication in class, more students would be motivated.

Another way that the respondents in this study seemed to differ from the general population of Japanese college students is in terms of TOEIC® scores. Although this study's participant average TOEIC score (431.9) was almost the same as that of Japanese college students in general (421.0, according to IIBC, 2011), the majority of Institutional Program

TOEIC test takers in Japan, including students at high school, college and graduate school, have scores below 400 (57.15%), according to the 2010 TOEIC Test Data. This suggests that the English level of the subjects in the study was above the Japanese college students' mean. From my teaching experience, those who score below 400 are less likely to be engaged in interactive activities, possibly for lack of enough vocabulary and grammar awareness. Although they can imitate sounds, few can understand the meaning of stress and intonation in one context and apply it to a different context.

At this point, the rationale for the small sample size needs to be explained. As mentioned in Chapter 2, I planned my pronunciation course to involve 20 hours in-class learning over a 12-week period, based on a review of the 11 preceding pronunciation intervention study designs. As the result, a 50-minute pronunciation lesson was planned twice a week. The schedule made it possible to cover almost all the segmental and suprasegmental features often considered problematic to Japanese learners of English. However, that resulted in recruiting only 10 voluntary participants in the experimental group. Although no formal survey was taken, it seemed that the schedule was found to be very tight by many students. The results of statistical analysis would have likely been different if the sample size had been bigger. Moreover, the effectiveness might have been different if the students had learned in a bigger group.

Areas for Future Research

In addition to including larger sample sizes, there are several aspects that future studies should consider. One of these is employing different assessment methods. As Munro (2008, p. 202) points out that multiple approaches should be employed to assess learners' pronunciation.

There are both advantages and disadvantages to using controlled tasks or free tasks. For example, controlled tasks may include words or phrases that some readers cannot read, resulting in an unreliable reflection of their pronunciation, while it obviously has items a researcher expects to assess. On the other hand, an extemporaneous speech may include grammatical errors, which could lower comprehensibility, resulting in an unreliable reflection of the reader's pronunciation. However, this should show the reader's comprehensibility in a simulated real communication. Future studies should include spontaneous speech assessments as well as controlled task evaluations to measure the effectiveness of pronunciation instruction. A delayed-post test should also be conducted in order to see the long-term effects of a given instructional procedure.

Expanding the rater background should be considered as well. This study solely employed native speaker assessments, but in this world of globalization, many Japanese EFL speakers are more likely to encounter non-native speakers with high English proficiency. Investigating how such people assess Japanese learners' English and comparing and contrasting their assessments with those of native speakers' may reveal phonological aspects that need more attention in teaching than others to enhance comprehensibility for better communication with English speakers in general.

Qualitative studies would also enable researchers to investigate features that should have higher priorities than others. For instance, factors influencing comprehensibility could be researched. Considering the limited period of time allocated for pronunciation instruction in classes, this might be the best option.

In addition, future studies should actively consider the effects of monitoring pronunciation in instruction. Allocating a certain amount of time for students to monitor their pronunciation in a course would enable them to continue practicing pronunciation outside the

class. Although it is almost impossible and seldom necessary to attain perfect pronunciation, extended monitoring might promote learners' acquisition of better communication skills.

Notwithstanding the limitations mentioned above, this study addresses some issues of practical importance. One is that teachers of English can improve students' pronunciation. This study suggests that they should not abandon pronunciation teaching. Learners should get chances to feel the dynamics of negotiation of meaning through communicative activities followed by explicit instruction. I believe that a balanced approach to pronunciation improvement is necessary for Japanese learners of English. I hope this research will help change teachers' perceptions toward pronunciation instruction and enhance students' communication skills.

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Appendix A

Pronunciation Instruction Schedule for Experimental Group 2010

	Month	Date	Content	Units in *Pronunciation Pairs*
1	October	21	Pre-test dialog reading 1 /iy/, stressed syllables in words	1
2		23	2 /ɪ/, stress in numbers	2
3		28	3 /e/, falling and rising intonation	3
4	November	4	4 /ey/ , stress in sentences	4
5		6	5 /æ/, the most important word	5
6		11	6 review	6
7		13	7 /ʌ/, strong and weak pronunciations	7
8		18	8 /ə/, 'can' and 'can't'	8
9		20	9 /ər/ , intonation in choice questions	9
10		25	10 /ɑ/, phrase groups	10
11		27	11 using stress and intonation to show contrast 13 /uw/	11, 13
12	December	2	14 /ʊ/, 15 review	14, 15
13		9	16 stress in compound nouns, 17 sentence rhythm and timing	16, 17
14		11	21 tag questions with falling intonation, 22 intonation in lists	21, 22
15		16	23 /b/ stress in compound nouns and phrases	23
16		18	24 /t/ 29 /s/ linking a final consonant cluster	24, 29
17	January	6	31 /ʃ/, linking words with long s, 33 /tʃ/, silent syllables	31, 33
18		8	36 /y/ 37 intonation in long sentences	36, 37
19		13	38 /v/ , weak and strong pronunciations of 'have'	38
20		15	39 /w/, wh-questions with rising intonation	39
21		20	40 intonation in exclamations, 41 stress and intonation to show surprise	40, 41

22		22	44 using intonation to change meaning, 46 weak pronunciation and contraction of 'be'	44, 46
23		27	47 /l/, weak pronunciation and contraction of 'will'	47
24		29	48 /r/, stress in long words Post-test Dialog reading	48

Appendix B

A Sample Lesson (Unit 4)
Targets: /ey/ (segmental) and stress in sentences (suprasegmental)

	FonFS/ FonF[3]	Time	Outline of activities	Objectives[4]	Examples[5]
			In isolation (about 8 minutes)		
Segmental (about 24 minutes)	FonFS	1 min.	A) Take a look at the title of the unit and think what can be problematic for Japanese speakers	Draw students attention and specify what is the main point for the lesson	Japanese students can say the vowel by itself, but when it is in a word, due to the lack of the diphthong in Japanese words, they change and lengthen it to /εε/.
	FonFS	1 min.	B) Play a model sound (when a confusing vowel exists, a contrast is presented)	Expose students to preferable pronunciation	/ey/ is contrasted with /ε/.
	FonFS	3 mins.	C) Ask students how the sound is different or similar to the sound they would produce	Have students recognize how students have pronounced the target sound so far, and what needs to be changed with their pronunciation.	English words such as 'paper' is borrowed into Japanese and pronounced like /pεεpɑɑ/. So even in speaking English, Japanese learners tend to say the word /pεεpɑɑ/. I give more loanword examples, like 'shade' 'lady' 'name' and so on.
	FonFS	2 mins.	D) Explain the diagram of the mouth and lip position and the description of the sound	Instead of simply imitating the sound by letting students guess the production procedures, make it clear what students need to do, which have not been explained to them before.	A picture of the mouth from the side is presented to show the tongue is moved while saying the vowel /ey/, not staying like /εε/. Pictures of the mouth from the front are also to show the different degree of openness of the mouth between the two vowels.
	FonFS	2 mins.	E) Have students make the sound and check their mouth and lips by using a mirror	Without checking, students would just think they are fine, which usually turns out not to be the case.	Students say the vowels /ey/ and /εε/ to make sure of the movement of the tongue and the openness of the mouth by checking with a mirror.

[3] FonFS/FonF means whether the activities include focus on forms or focus on form instruction.
[4] Adapted from Pronunciation Pairs 2nd edition Teacher's Manual pp.10-12
[5] I use Japanese for explanation and welcome questions from students. I also make exaggerate the differences in sound quality, volume, jaw movement, mainly because the differences are usually hard to detect for new learners and partly because I would like to create a conformable environment where students do not hesitate to cross the boundary between Japanese and English.

			In word pairs (about 8 minutes)		
FonFS	4 mins.	A) Listen to several minimal pairs to understand how the target sound in words and how a single sound in a word can change its meaning completely.	Have students realize the importance of one single sound, and give them a chance to connect the sound and the meaning by presenting pictures that show the meaning of the words.	Making a contrast between 'pen' and 'pain' and 4 more pairs While saying the words, attract students' attention to the meaning with gestures such as pointing at a pen and rubbing my shoulder with a painful face, for example.
FonFS	4 mins.	B) Test to see whether students can discriminate minimal pairs in word level and in sentence level. Start with recognition and go on to production of the sounds.	Problematic word pairs or the target sound in sentences can be reviewed and see what hinders students' recognition. Good opportunity for peer and teacher assessment. Students also notice that the target sounds in isolation can be easy, but they are hard in connected speech, which is the point that has to be emphasized to be an important aspect of pronunciation.	1) Minimal pairs discrimination in word level Play one of pairs and have students to circle the word they hear. Five more word pairs follow. pen/pain, wet/wait, test/taste for example. 2) Discrimination in sentence level Listen to a sentence and decide if it is 'Do you have a pen?' or 'Do you have a pain?'. 3) Production of the sounds After the above exercises with 5 more sentences, students say either one of the sentences to their partner and ask him/her to decide which is said. Lastly, with gestures, keeping in mind the meaning of the sentences, students repeat the sentences without looking.
			In a dialog (about 8 minutes)		
FonFS	2 mins.	A) Listen and repeat words with the target sounds that are used in a following dialog.	Prepare students for following activities, as well as let students know so many words contain the target sound	Play the words and make sure of the meaning with simple gestures. If necessary, Japanese translation of the words is provided
FonFS & FonF	6 mins.	B) Listen to a dialog with a high concentration of the target sound(s) after reading a descriptive line and looking at an illustration for setting a context.	The dialog has many phrases that are later used for suprasegmental practice in the same unit. Students' focus is on word level, or specific information depending on the unit, but students can get accustomed to listening to connected speech.	1) Dialog listening for words Without looking at the script, students listen to the dialog for the target sounds. 2) Getting the main idea and specifics by asking questions about the main idea of the dialog. "What is Davis waiting for?" "What is the problem?" "Where is he going" for example. In answering, students use words with the target vowel /ey/. Give feedback not only of the

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					content but the quality of the vowel. Students listen to the dialog once again for the answers.

Suprasegmental (about 26 minutes)	FonFS	5 mins.	A) Explain the targeted suprasegmental feature by reading the information in the textbook and talking about typical problems for Japanese speakers.	Since stress, rhythm and intonation are almost new to the students and have little clues how they should incorporate them into their English speaking, specific steps are presented one by one so that students will gradually be able to switch to English suprasegmentals in speaking. Japanese is used to clarify the points.	After reading through the English explanation, I explain it in Japanese. a. What do stressed words sound like? I exaggerate the volume and length of the stressed words, making them louder and longer. b. What can be stressed words? Since this is the first unit about stress in sentence, a typical distinction is made. Content words are usually stressed while structure words are not. Make sure that students understand what content words and structure words are by giving examples.
	FonFS	6 mins.	B) Listen and repeat the target suprasegmental feature through practice activities, some of which are rather structured such as scrambled sentences, and some are less structured such as surveys, games or role plays.	The production is for monitoring for teachers and students. Encourage students to talk about what can be difficult or how they can successfully produce the target feature.	1) Listen to 8 sentences (e.g. "Today is the eighth of May.") and underline the stressed words. 2) Say them aloud. Since all the sentences have the target vowel /ey/, both the stress and the vowel are reviewed. Students say the sentences to their partners while I am listening to several students to see their progress.
	FonF	15 mins.		Interactive activities are to make students realize that the stress has a practical importance in communication, and to practice stressing words appropriately. The communicative practices are also to prepare students for real communication.	Getting your partner's information! The goal is to fill out a 'personal information' form for a partner and to give his/her introduction to other students. 1) Ask a partner's birthday, hometown, hobbies, family and work and take a memo. (I tell students to emphasize the key words in questions and answers so that the partner can easily understand.)

					ST A: "What is your birthday?" ST B: "It's April eighth. 2) Give a short introduction about the partner to a student in different pairs. (I tell students to underline stressed words and to say them louder and longer.) "My partner, Yoko's birthday is April eighth. She is from Ibaraki. She has two brothers…

Appendix C

A Diagnostic Passage (taken from p.82, *Clear Speech* 3rd edition)

Two University Students Meet

A: Excuse me. Where's the library?

B: It's on the corner of Main Street and Selling Street.

A: Sorry, did you say Selling or Ceiling?

B: Selling. It's directly ahead of you, about 2 blocks.

A: Thanks. I need to buy some books for my classes.

B: Oh, then you need the bookstore. You can't buy books at the library. You can only borrow them there.

A: I guess I confused the words. They're different in my language.

B: I know how it is. I get mixed up with Spanish words that sound like English words, but have different meanings.

A: Are you studying Spanish?

B: Yes, it's going to be my major. What are you studying?

A: I'm studying English now, but my major will be economics.

B: Really? My brother wanted to study economics. He took the entrance exam for that department just last week.

A: Did he succeed?

B: No, quite the opposite. He failed.

A: That's too bad.

B: Oh, it's OK. He would've had to study statistics, and he hated that idea. Anyway, he changed his mind, and now he plans to study music.

A: That's great! Does he want to compose or perform?

B: Both. He wants to compose and perform. He arranges programs for musicians, but he also plays classical guitar.

A: Well, I wish him a lot of luck. And good luck to you, too. It was nice talking.