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**Teacher Cognition and Decision-Making
on English as a Foreign Language Pronunciation Teaching**

Katsuya Yokomoto



A dissertation submitted to the University of Bristol in accordance with the requirements
for award of the degree of Doctor of Education in TESOL/Applied Linguistics
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Abstract

This study explored English as a foreign language (EFL) teachers' decision-making in terms of pronunciation teaching in Tokyo. A sequential exploratory mixed method involving two phases was employed: a questionnaire survey and a focus group interview. The purpose of the first phase was to determine how the teachers' educational and professional background, their self-confidence, interests, and beliefs about pronunciation teaching were related to their teaching of pronunciation. In this phase, 102 university-level EFL teachers participated in the survey, results of which were further analyzed with the structural equation modeling to construct teachers' decision-making models in the teaching of pronunciation. In the second phase, 12 teachers selected from the first phase listened to three sets of Japanese learners' recordings and made decisions about their own pronunciation teaching based on their assessment. Four focus groups of three teachers were interviewed regarding their decisions about pronunciation teaching and the rationale for their decisions. The results in the first phase showed that the teachers' self-confidence in their ability to teach pronunciation was a predictor of their decisions about strategies for pronunciation teaching, and that their self-confidence in knowing effective teaching methods and familiarity with key terms in pronunciation pedagogy were the predictors of self-confidence in teaching ability. Their language learning experience with an emphasis on pronunciation, interest in recent research findings in pronunciation pedagogy, and beliefs regarding the needs of teachers' explicit knowledge about pronunciation also influenced their self-confidence about pronunciation teaching. In the second phase, teachers' decisions about what pronunciation features to teach varied. Their rationale for their decisions revealed that teachers' decisions were based on the intelligibility of the learners' English and on the teachability of the pronunciation features. It was also found that their decisions were often based on personal practical knowledge gained through their experience rather than on pedagogical knowledge through education and training. Finally, the teachers made different decisions about pronunciation teaching; hence, it can be concluded that more research-based guidance may help teachers make informed decisions about pronunciation teaching.

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Author's Declaration

I declare that the work in this dissertation was carried out in accordance with the requirements of the University's *Regulations and Code of Practice for Research Degree Programmes* and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.

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Chapter 1

Introduction

1.1 General Introduction of the Teaching of Second Language (L2) Pronunciation

In the field of second language (L2) pronunciation teaching and learning, a growing number of research studies have been conducted in the past several decades in various settings, and these studies include empirical studies that examined the effectiveness of the instruction of second language pronunciation (see Lee et al., 2015; Saito, 2012; Saito & Plonsky, 2019). These works have resulted in mixed findings: some studies have shown significant development in the learners' pronunciation, whereas others have demonstrated no significant improvement. As Saito and Plonsky (2019) noted, these studies incorporated different designs in terms of the target pronunciation features for measurement, measurement method, and type of speech stimuli collected from learners. Researchers had their own rationale for their choice of what pronunciation feature was taught, how they measured the development of the learners' pronunciation, and what tasks were used to elicit the learners' speech. What is important for researchers here is to determine whether instruction facilitates learners' development in their second language pronunciation, and when it does, what instruction facilitates learning most effectively.

Similarly, the same scope applies to second language teachers as well. Second language teachers seek effective ways to help their students to develop their proficiency in their target language. In the process of helping learners to improve their language proficiency, language teachers need to make a number of decisions in their everyday teaching practice, and their decisions vary. First, because most language teachers are, in general, language teachers rather than pronunciation teachers, they must decide whether to teach pronunciation. Their language instruction

must include reading, writing, listening, speaking, vocabulary, and grammar; hence, the addition of emphasis on pronunciation poses a challenge to the rigors of their everyday teaching practice. If they decide to teach pronunciation, they must consider what pronunciation features to prioritize, what teaching materials to use, how to assess their learners' pronunciation, and how much time to set aside for teaching pronunciation. These teachers constantly make such pedagogical decisions as they teach, and to make pedagogically sound decisions, language teachers require reliable guidance.

1.2 History of L2 Pronunciation Teaching

Until the emergence of communicative language teaching in the 1970s, accuracy in various domains of language, including pronunciation, had been the primary emphasis of language teaching. Learners' primary objective was to attain native-like pronunciation in the era of audiolingual methods. Later, the notion of communicative competence (Canale & Swain, 1980) was recognized and began to be widely incorporated in the practice of language teaching. Because accuracy is no longer the main focus of language teaching, pronunciation has gradually been deemphasized in teaching. As a result, many second language learners must rely on mere exposure to the pronunciation of their target language when learning pronunciation (Grant, 2014). The body of research in second language pronunciation has demanded that language teachers should attend to learners' pronunciation, and several experts in L2 pronunciation pedagogy have suggested that language teachers should set realistic and achievable goals for L2 learners to help them satisfy their communicative needs (Derwing & Munro, 2005; Grant, 2014; Levis, 2018; Murphy, 2017; Pennington & Rogerson-Revell, 2019; Rogerson-Revell, 2011). First, although there have been cases of extremely successful learners attaining native-like pronunciation in second language (Bongaerts, 2005), the number of such cases is too small to encourage learners to develop mastery

of native-like pronunciation in their target language. Instead of aiming at achieving accent-free, native-like pronunciation in a second language, many researchers and teachers agree that the learning goals must be achievable and must thereby involve comfortable comprehensibility and intelligibility (Grant, 2014; Levis, 2005; Munro & Derwing, 2015).

Now that it is clear that attaining intelligible pronunciation is the pedagogical goal in pronunciation teaching, language teachers' actions, decisions, and practices in their everyday teaching in terms of pronunciation should be investigated. In fact, several surveys on the practice of teaching English pronunciation have been conducted in several different contexts, including in English as a second (Baker, 2014; Burgess & Spencer, 2000; Foote et al., 2011; Macdonald, 2002) as well foreign (Henderson et al., 2012, Murphy, 2011) language settings. Although the contexts varied, the results of these surveys repeatedly demonstrated that language teachers do not teach pronunciation often. Common reasons for their neglect of pronunciation teaching included (a) lack of training in pedagogical pronunciation, (b) lack of self-confidence in teaching pronunciation primarily due to lack of training, and (c) insufficient class time for teaching pronunciation. In other words, many teachers agree that intelligible speech is a chief objective for learners, but they do not provide direct, targeted help to learners to pronounce English intelligibly.

Another concern is that many teachers have deemphasized the domain of pronunciation in language teaching on the grounds that it is not teachable (Munro & Derwing, 2015) and that pronunciation will be acquired passively through mere interaction and exposure to the target language pronunciation (Grant, 2014; Munro & Derwing, 2015). In an English as a foreign language

(EFL¹) context, the amount of exposure to the English language upon which learners might rely for pronunciation learning is even more limited than those in English as a second language (ESL²) and English as a lingua franca (ELF³) contexts, where English is usually, if not often, already used for daily communication. In fact, in countries such as Japan, typical learners are exposed to the English language only in the classroom, and therefore, there is too little exposure to English outside the classroom for language learning to occur naturally.

1.3 Instructions and Teachers in L2 Pronunciation Teaching

As the next chapter will discuss in detail, an increasing number of empirical studies have shown that pronunciation is teachable and that it is clear that explicit teaching of pronunciation is more effective and efficient than mere exposure to the target language for learning to pronounce intelligibly. In fact, a growing body of research has provided practical implications for effective teaching in the teaching of pronunciation (see Lee et al., 2015; Saito, 2012; Saito & Plonsky, 2019). Employment of various effective teaching strategies that meet the learners' needs seem to facilitate their learning of second language pronunciation, with many studies demonstrating that there are effective ways to teach pronunciation that make significant differences in learners' pronunciation (e.g. Derwing & Munro, 2005; Levis & Pickering, 2004; Pickering, 2006; Saito & Lyster, 2012). There has therefore been a gap between what the research findings suggest language teachers should do in teaching and what they actually do. However, to what extent the findings from research have been disseminated among language teachers is under-researched. The field that attempts to examine

¹ English as a foreign language refers to the English that non-native speakers use or learn in countries and regions where languages other than English are spoken as the first or official language.

² English as a second language refers to the English that non-native speakers use or learn in countries where English is spoken as the first or official language.

³ English as a lingua franca refers to the English that non-native (and native) speakers use as a common language in communication regardless of the geographical locations.

such gaps is teacher cognition research, and although research in this field has contributed to the knowledge about the pronunciation teaching practice, the number of studies on this subject is limited. For example, Baker (2011) explored ESL teachers' knowledge through education in relation to their practice, and the results from the interviews revealed that graduate-level education influenced the teachers' knowledge about pronunciation teaching and the prioritization of pronunciation features in teaching and that teachers may lack self-confidence in teaching some aspects of pronunciation. Later, Baker (2014) found that the teachers who had completed in-depth training in the teaching of pronunciation at the graduate level used more techniques to teach pronunciation in their classrooms than those who had not. She further reported that these teachers tended to use controlled activities more often than guided or free activities partly due to their limited knowledge about how to integrate less controlled activities into their communicative teaching. In her article, Baker (2014) identified the common beliefs that teachers held: (1) "Listening perception is essential for producing comprehensible speech," (2) "Kinesthetic/tactile practice is integral to phonological improvement," and (3) "Pronunciation instruction can be boring" (pp. 150–152). Similarly, Sifakis and Sougari (2010) explored what English teachers in Greece believed about the trends towards the English as an International Language (EIL) and teaching pronunciation. These authors noted that Greek teachers of English tended to hold a norm-bound perspective when teaching pronunciation and used native speakers' English as a model, and they also found that these teachers recognized the importance of prioritizing the ability to communicate effectively in real communicative contexts over accurate pronunciation. The following chapter will discuss teachers' knowledge gained through teacher training as well as their beliefs about pronunciation teaching and learning in greater detail.

1.4 Pronunciation in English Education in Japan

Recognition of learners' needs is of paramount importance. In Asian countries such as Japan, South Korea, and China, where high-stake examination results may determine individuals' career prospects, learners tend to focus on mastering skills and knowledge that directly improve their test scores. In fact, in the context of Japanese universities, Yokomoto (2014) found that university students had not considered pronunciation as an important aspect of learning English when they were in elementary, junior high, and high schools because their primary reason for learning English was to pass exams. However, the students believed that pronunciation teaching should be included in schools at all levels and frequently wished to acquire native-like pronunciation, an objective that their primary and secondary education institutions had failed to include.

Japan has undergone a major education reform in primary and secondary education since 2008, and the country's English education began emphasizing communication with the new curriculum in 2009 (Ministry of Education, Culture, Sports, Science and Technology, 2009). Lack of a speaking component in English education was recognized as a major problem in the previous curriculum, and the new curriculum incorporates different skills for communicative purposes. Pronunciation teaching constitutes part of the speaking and listening components of the curriculum, but in reality, the current English teachers at the primary, secondary, and tertiary levels require more training and experience in teaching English for communicative purposes. The long history of the accuracy-based, grammar-translation approach to teaching English left many teachers unprepared for the education reform.

The vast majority of universities in Japan require their students to complete EFL as a required subject, mostly within their first two years of university education. The language education curricula

vary largely depending on individual schools: some universities offer English for academic purposes (EAP) courses to prepare students to read academic texts, listen to lectures, write academic papers, and present academic contents, whereas others offer general communication-based language programs. The teachers' backgrounds vary as well; many teachers have graduate degrees in language teaching (e.g., TESOL, TESL, or TEFL), and others have degrees in literature, linguistics, or anthropology. Most teachers are therefore knowledgeable about language but not necessarily about the teaching of foreign languages. In addition to their backgrounds, a majority of such teachers are contract teachers with limited terms, either part- or full-time, often up to five years, and part-time teachers are not often eligible for benefits, so they must teach additional hours to make living. However, these busy teachers must also learn about a new curriculum every time they begin teaching at a new university and adapt their teaching to reflect the new school curriculum. Therefore, their decisions about teaching depend partly on schools' curricula, their own background, and their workload.

Long recognized as a neglected area in English language teaching, as mentioned above, exposure to everyday interaction serves as the sole means by which many learners have participated in pronunciation learning (Grant, 2014). However, the amount of exposure to spoken English is too limited to enhance learning in Japan. It can be assumed that, in this particular context, classroom English plays an extremely important role in learners' development in English pronunciation. Japanese university students often expect to learn spoken English at universities for two reasons: they tend to focus on reading and listening aspects of the English language in preparation for their knowledge-based exams for university entrance, and university teachers tend to possess relatively high proficiency level in English. University teachers are usually required to teach English using

English as a medium language; hence, they are usually proficient in oral English, whereas those in secondary schools are often not. Therefore, it seems reasonable that Japanese students expect to learn pronunciation along with spoken English at universities and thus that they expect university EFL teachers to possess a high level of speaking skills.

Although Japanese university students recognize that it might be easier to learn pronunciation at a young age (Yokomoto, 2014), they consider passing the knowledge-based entrance examinations to be a priority until graduation from high school (Kikuchi, 2013); they wish to spend eight years to learn English for the examinations, and after the entrance examinations, they pursue learning English for practical reasons, which include pronunciation learning. The English taught at universities in Japan is usually free from knowledge-based instruction, and students can engage in communicative interactions among students. The lexical and syntactic knowledge that these students had accumulated during preparation for the entrance examinations is finally utilized for communication in university English classrooms. Limited opportunities for communicative interactions in high school English class (Kikuchi & Browne, 2009) inevitably cause another problem here. That is, despite their prior knowledge of English, students encounter communication breakdowns, particularly due to pronunciation issues. It is the responsibility of teachers to decide whether the communication breakdowns are due to mispronunciation or misuse of other aspects of the language (e.g., lexical choice). Even when students communicate well with each other, teachers must determine whether the students' pronunciation is intelligible to non-Japanese listeners. Thus, students' postponement of pronunciation learning until they receive entrance examinations results imposes pronunciation teaching duties on university teachers.

As discussed briefly above, the teacher cognition research in pronunciation teaching shed light

on experienced teachers' rationale for teaching pronunciation, choosing teaching strategies, and incorporating multiple activities and materials for learning (Baker, 2014; Huensch, 2019). An additional serious issue is that a majority of students rely on universities in Japan for learning speaking and pronunciation. However, it is not apparent whether many teachers in Japanese universities make pedagogically sound choices when teaching pronunciation, and many teachers are not necessarily trained to teach (Nagatomo, 2011) but are responsible for many classes, and they therefore have heavy teaching loads. The research on the teaching practice of pronunciation, particularly in Japanese universities, should examine whether language teachers make choices of effective strategies based on their practical and experiential rationales rather than on the reasons informed by the research findings. Thus, the purpose of this study is to investigate (1) the teachers' experience as teachers and learners, (2) their interest in the teaching of pronunciation, (3) their beliefs about the teaching and learning of second language pronunciation, (4) what they do in their teaching practice when teaching pronunciation, (5) what decisions they make when listening to learners' pronunciation, and (6) what their rationales for their instructional decisions are.

1.5 Purposes and Structure of this Research and Overview

To investigate teacher cognition in the teaching of pronunciation in Japanese universities, the present study was designed involving two phases. The main purpose of the first phase was to investigate university-level English teachers' practices when teaching pronunciation in relation to the factors that influence teacher cognition. Because teacher cognition is a complicated concept that comprises a number of related factors (Borg, 2015), the survey necessarily contained a large number of questionnaire items that were designed to determine teachers' professional experience, language learning experience, teacher training and education, self-confidence, interests, and beliefs about the

teaching of pronunciation. The definitions and/or explanations of these factors related to teacher cognition varied among studies; therefore, they will be described through an examination of past studies to meet the purpose of this study. All responses in the survey were descriptively analyzed, and the analyses were conducted to determine whether the teachers integrated pronunciation teaching into their everyday practice, what pronunciation teaching strategies they used, and how often they used those strategies. The ultimate goal of this phase was to develop a decision-making model to identify the factors in teacher cognition that influenced how often these teachers integrated pronunciation in their English teaching.

The second phase was designed to explore individual teachers' teacher cognition, with a focus on the decision-making process of pronunciation teaching. The participants were selected from those who participated in the first phase. In focus groups, the participants listened to the recordings of Japanese university students and assessed the students' pronunciation to determine whether teaching pronunciation would be necessary and what pronunciation that the participants would teach based on their assessment. They also discussed with other participants in their groups their rationales for their decisions about pronunciation teaching. Chapter 5 will analyze the common themes that appeared in the focus group discussions, particularly those regarding the teachers' decision-making process.

In a mixed-method study, as used in this research, the research phases complement each other. The first phase of this study broadly examines pronunciation teaching at the university-level EFL teaching in Japan. The purpose of this phase is to generalize the trends among Japanese universities, but the survey does not offer sufficient details in terms of what teachers actually consider when they decide to teach or not to teach pronunciation. The second phase, instead, provides a more in-depth

description of teacher cognition in the participants' reactions to learners' English language abilities and decisions about pronunciation teaching through focus group interviews. Although this phase does not provide sufficient data sets for generalization, the narrowed scope in this phase will offer a more insightful understanding of the teachers' assessment of the learners' pronunciation and decisions about pronunciation teaching. In this sense, both of these phases in this study play integral roles in the analysis of pronunciation teaching practices in university-level EFL classes in Japan.

Chapter 2 of this dissertation provides a review of key literature in pronunciation pedagogy and teacher cognition as well as descriptions and definitions of key terms that will appear in this study. This chapter also discusses the rationale for the selection of factors of teacher cognition in this study, particularly in the first phase. Chapter 3 explores the research method and its rationale and introduces participants according to elements of their background such as nationality, experience, and education. Chapter 4 reports the results from the first phase; the first part of the chapter features a descriptive analysis of the questionnaire, with a later part presenting a decision-making model based on the questionnaire results through structural equation modeling. Chapter 5 discusses the results from the second phase, with an emphasis on several themes that appeared among the participants in focus group discussions. Finally, Chapter 6 connects the findings from the first and second phases of the study with factors in teacher cognition that influence pronunciation teaching, drawing upon the findings from previous studies. This chapter also features suggestions for future research in pronunciation pedagogy and teacher cognition as well as implications for future teacher education.

Chapter 2

Literature Review

2.1 Introduction

There has been a significant amount of recent growth in the number of research studies in the field of second language pronunciation pedagogy. A review of studies with an experimental and quasi-experimental design demonstrates the rapid development of this field. Saito (2012) carefully screened studies that examined the effects of instruction on second language pronunciation between 1990 and 2012 for his synthesis research, and only 15 studies met the criteria. Using slightly different criteria for screening, Lee et al. (2015) included 82 reports in total: 3 between 1982 and 1989, 7 between 1990 and 1997, 16 between 1998 and 2005, and 59 between 2006 and 2013. Each seven-year period clearly shows that the number of experimental and quasi-experimental studies investigating the effects of pronunciation instructions grew in the last generation. Although the field of second language pronunciation pedagogy has expanded, there has been little academic investigation into teacher cognition (Baker, 2014; Couper, 2016). Researchers have repeatedly advocated for research on teacher cognition in pronunciation pedagogy, but studies that examine what factors in teacher cognition relate to teachers' pedagogical choices in pronunciation teaching remain scant.

This section introduces an overview of research in second language pronunciation pedagogy and describes key concepts and terms that will appear in this study. First, it should be noted that the teaching of second language pronunciation has undergone numerous shifts, which are evident in several aspects of teaching. Pedagogical goals of pronunciation teaching have changed from aiming at high accuracy based on native-like pronunciation to achieving intelligible speech

production, thus allowing some phonological errors that do not impede communication. With these shifts in pedagogical goals, teaching approaches have shifted accordingly. Simple reliance on learners' aural perception and repetitive drills without meaningful contexts formed the bulk of most previous strategies. To meet demands in the field, researchers have endeavored to determine effective pronunciation teaching strategies to provide practical suggestions for effective teaching, and increasingly communicative approaches with authentic communication in meaningful contexts have been introduced, though some mechanical drills nevertheless remain effective. Although teacher cognition remains a narrow area of study, research in this field has continued to investigate teachers' practices based on what they have learned and experienced by the time that they set foot in a classroom. As teacher cognition-related studies have identified, many language teachers have neglected to teach pronunciation, and such pedagogical decisions may stem from several different factors in teacher cognition. Therefore, this chapter offers an overview of the pronunciation pedagogy and pronunciation teaching strategies and provides definitions of key factors in teacher cognition of the teaching of pronunciation. These factors include teachers' beliefs about pronunciation learning and teaching; their interests in pronunciation and teaching pronunciation; education they have undergone in terms of pronunciation pedagogy; teaching experience; language learning experience, including proficiency levels in English for non-native speakers; familiarity with the pedagogical pronunciation; and self-confidence. Although this chapter reviews these factors separately in an attempt to clarify individual terms and themes, these variables seem to be interdependent.

2.2 Pedagogy of Second Language Pronunciation

Similar to how many researchers investigated whether second language learners could attain accent-free, native-like pronunciation (e.g., Flege et al., 1995; Olson & Samuels, 1973; Scovel, 1988), mainstream language teaching until the 1970s involved accuracy-based approaches. One such approach was the audiolingual method, by which learners must rely on complete mimicry of native speakers' norms in terms of not only pronunciation but also grammar and vocabulary (Brown & Lee, 2015). The pedagogical goal in this era was to attain native-like proficiency in every domain of the target language. As the paradigm of language pedagogy shifted, many researchers in second language pedagogy and language teachers came to agree that the ultimate goal of learners is to attain sufficient proficiency to carry out meaningful communication (Murphy, 2014a). The pedagogy of pronunciation was one of the areas on which the paradigm shift had an impact.

Several studies have demonstrated that extremely successful second language learners ultimately attained native speaker pronunciation. For example, Ioup et al. (1994) conducted a case study of exceptionally successful learners of Egyptian Arabic and found that 8 of the 13 judges rated the learners' speech production as nativelike, indistinguishable from native speakers' speech production. Bongaerts et al. (1997) similarly examined whether learners who had begun their learning of English as a foreign language at the age of 12 or later achieved nativelike proficiency in their pronunciation of English. The results showed that some of the learners' pronunciation was rated as well as native speakers' pronunciation. Based on the results, the authors concluded that it is not impossible for late learners to attain native-like proficiency in pronunciation. Although some exceptionally successful learners may exist, as found in these above studies, the number of such successful learners of second language pronunciation is extremely small. Due to the highly limited number of successful learners who can reach proficiency comparable to that of native speakers in

pronunciation, aiming at nativelike pronunciation with no foreign accent is neither realistic nor achievable for the majority of second language learners. Instead, second language teachers as well as learners should aim at comfortable intelligibility and comprehensibility (Grant, 2014; Munro & Derwing, 2015), which is a realistic, achievable goal for learners (Murphy, 2017).

The shift from accuracy-based language teaching to meaning-oriented, communicative language teaching (CLT) has affected many language teachers' practices. The pedagogical goal in CLT is to develop learners' communicative competence (Canale & Swain, 1980) rather than grammatical accuracy in reference to native speakers' language as a norm. In this approach, language teachers do not often provide isolated form-focused instructions on grammar; instead, they teach grammar inductively providing learners with opportunities to "negotiate meaning, expand their language resources, notice how language is used, and take part in meaningful interpersonal exchange" (Richards, 2006, p. 22). Communicative activities are designed and constructed around the aim of obtaining communicative competence by which learners can use and practice the language through meaningful interactions. It should be noted that literature on CLT has predominantly focused on grammar instruction, discouraging decontextualized teaching of language grammar because this approach will not likely facilitate second language learning in real-life contexts. In fact, Canale and Swain's (1980) widely cited and accepted definition of communicative competence consists, although stated "minimally," of "grammatical competence, sociolinguistic competence, and communication strategies" (p. 27).

Although the original definition of communicative competence did not specify competence related to pronunciation, the field of pedagogy of pronunciation underwent a shift from accuracy-based instruction to meaning-based CLT. As discussed earlier, it is extremely difficult to attain

native-like pronunciation in an L2 especially for adult learners, the reasonable and achievable goal in learning L2 pronunciation was needed. In other words, previous accuracy-based pronunciation instruction imposed unrealistic learning goals on learners and teachers, and the overemphasis of accuracy on pronunciation could create the misconception that the inability to sound like a native speaker is a failure in learning. In this sense, the intelligibility-based pronunciation instruction that CLT engendered in the field of pronunciation pedagogy was ethically justified.

With the spread of CLT, researchers in pronunciation pedagogy also emphasized that pronunciation should be taught in contextualized exchange for meaningful communication rather than isolated practice and drilling of linguistic form (Morley, 1991; Murphy, 1991). One of the few publications in the pedagogy of second language pronunciation along with the CLT framework is Celce-Murcia et al. (2010), which provides linguistic explanations about phonetics and phonology in the English language, explains a theoretical background for relevant teaching strategies based on the research findings on the pedagogy of pronunciation, and offers practical suggestions for teaching and examples of hands-on activities. The authors encourage language teachers to teach pronunciation within the CLT framework so that learners can learn pronunciation via contextualized, communicative tasks.

With the efforts of researchers and teachers in language teaching, CLT has been expanded worldwide, and many language teachers in ESL as well as EFL contexts now implement CLT. The expansion of CLT is not limited to its geographical expansion; in fact, the scope of CLT has been expanded, and this expansion has led some teachers to misinterpret CLT, believing that CLT does not involve the teaching of the linguistic form of the target language at all, that they do not have to teach grammar for accuracy development, and that the chief priority should encompass appropriate

and fluent use of the target language (Li, 1998; Thompson, 1996). A possible basis for this misconception about CLT is the lack of sufficient pre- and in-service training for language teachers; those who are not trained to implement CLT may have neglected the teaching of linguistic form because they assume that learners' communicative competence can develop through authentic, meaningful interactions without conscious or explicit attention to the linguistic form of the language. As CLT practitioners advocate, the primary goal in language instruction is to help learners to achieve effective communication rather than acquire accuracy in their language production. Further, many insufficiently trained teachers assume that students will pick up linguistic forms without direct instruction. In reality, however, many learners have long "struggled to achieve intelligible speech" in terms of pronunciation (Grant, 2014, p. 3).

Similar findings were reported in the teaching of a linguistic form of languages: pronunciation. The emergence of CLT seems to have spurred the neglect of pronunciation teaching in language teaching (Derwing, 2010), and the shift from the strict emphasis on accurate oral productions in the past to an approach that encourages meaningful interactions with fluency appears to have confused language teachers. Prior to the emergence of CLT, teachers had been able to provide pronunciation models, which typically reflected native speakers' speech production. The goal for learners in pronunciation learning was to produce the pronunciation identical to the models that the teachers provided. Also, teachers often used minimal pairs to teach with emphasis on differentiating two similar-sounding segmentals to foster accurate production of these sounds. In this teacher-centered, accuracy-based approach, teachers were able to identify pronunciation errors relatively easily because all the target pronunciation features were in the words and sentences that they used in class. However, in ESL contexts, many language teachers struggled and failed to find

effective ways to teach pronunciation within the CLT framework. In the increasingly student-centered CLT environment, communication among learners is the first priority, and for this reason, teachers tend to refrain from addressing pronunciation errors based on whether the learners produce native-like pronunciation. Instead, teachers have become more flexible and tolerant about learners' pronunciation with non-native characteristics. In addition, in intelligibility-based pronunciation teaching, assessment is also challenging because students engage in real communication, departing from the set of words and sentences that the teachers had prepared, thus inhibiting the ability of teachers to identify pronunciation issues. In short, though the accuracy-based pronunciation teaching allows teachers to treat all errors (i.e., differences between native speakers and learners' pronunciation) in the learning materials they had provided, teachers have no clear ideas about what pronunciation features should be addressed because the research has not sufficiently identified the pronunciation features that have the greatest impact on intelligibility. This confusion has led many teachers to neglect pronunciation teaching, a trend that numerous studies have reported in many contexts (see Breitzkreutz et al., 2001, and Foote et al., 2011, for Canada; Macdonald, 2002, and Fraser, 2000, for Australia; Burgess & Spencer, 2000, for the UK; Henderson et al., 2012, for Europe; and Murphy, 2011, for Ireland), although an increasing number of teachers teach pronunciation in recent years (Foote et al., 2011).

2.3 Effectiveness of Instruction in Pronunciation Teaching

A growing number of studies have examined the effectiveness of instruction on second language pronunciation, and these studies have had different scopes in terms of target language (e.g., English, Spanish, and French), target pronunciation features (e.g., voice onset time, intonation, and lexical stress), types of stimuli (e.g., read-aloud words, read-aloud sentences, and spontaneous

speech based on pictures), types of settings (e.g., intact classes and laboratories with tutors), types of measurement in research (e.g., scoring by human raters and acoustic analysis) and types of instruction (e.g., explicit knowledge about articulation, high-variability phonetic training⁴, feedback from instructors, and peer and self-evaluation). Overall, the results demonstrate that instruction of various types, including high-variability phonetic training using minimal pairs, explicit phonetic instruction, and immediate feedback to learners, has a profound effect on learners' production of second language pronunciation, at least during controlled speech production tasks (e.g., Iverson et al., 2012; Kissling, 2013; Neri et al., 2008). For more meaning-based communicative tasks, including describing pictures, storytelling based on pictures, the studies have produced mixed results (e.g., Offerman & Olson, 2016; Parlak & Ziegler, 2017).

2.4 Types of Instructions

In intervention studies, several different types of instructions have been examined to determine whether individual instructional treatments have an impact on second language learning. Review of previous studies reveals that the following types of instructions have a positive impact on the learners' development in second language pronunciation: (1) explicit phonetic instructions on places and manners of articulations (Kissling, 2013; Saito, 2011; Sturm, 2013), (2) auditory training (i.e., high-variability phonetic training) (Barriuso & Hayes-Harb, 2018; Bradlow et al., 1997; Hazan et al., 2005; Herd et al., 2013; Iverson et al., 2012; Lambacher et al., 2005; Thomson, 2011), (3) visual representation of pronunciation features (e.g., waveforms and pitch contours) (Hirata, 2004; Offerman & Olson, 2016) and (4) corrective feedback (e.g., visual feedback, recast, and peer and

⁴ High variability phonetic training is a perceptual training method for L2 learners to distinguish L2 sounds produced by multiple speakers in multiple phonetic contexts (Thomson, 2018).

self-evaluation) (Couper, 2006; Martinsen et al., 2017; Neri et al., 2008; Parlak & Ziegler, 2017; Saito & Lyster, 2012).

In terms of explicit phonetic instructions on places and manners of articulations, Saito (2011) examined the effects of explicit instruction on the pronunciation of several English segmentals found to be challenging to learn for Japanese speakers (i.e., “segmental-based instruction”) and found that the instruction helped the participants improve their comprehensibility of targeted segmentals. The explicit instruction in his study included “articulatory organs,” “place of articulation,” and “manner of articulation” (Saito, 2011). As Jenkins (2000) suggested, one of the advantages of using explicit phonetic instructions, particularly on teaching segmentals, is their teachability. In other words, the systematic rules of place and manner of articulation of pronouncing segmentals make it less challenging to explain how to pronounce individual segmentals because they are less context dependent and more generalizable than suprasegmentals, including intonation, rhythm, and other prosodic features, which are often context dependent. This difference has led to an increased number of teachers using this strategy for teaching, and therefore, the higher number of studies that have investigated the effects of the strategy.

Regarding perceptual training, recent findings show that high variability phonetic training seems to benefit learners’ pronunciation at least in controlled speech tasks. Logan et al. (1991) developed high variability phonetic training to identify the impact of this training on improvement in the perceptual ability of learners. In their study, phonemic contrasts (e.g., English /ɪ/ vs. /I/) were created to help learners to distinguish these segmentals from each other. To focus on the target segmentals, the authors developed stimuli from recordings of multiple speakers. Later, Lambacher et al. (2005) examined the effects of high variability perceptual training on production of American

English mid and low vowels (e.g., /æ/, /ɑ/, /ʌ/, /ɔ/, & /ɜ/) and found that this training improved learners' perception and production of these vowels. Overall, regardless of the type of perceptual training, the improved perceptual ability enhanced the production of the learners' target language pronunciation.

Another teaching strategy worth discussion is the use of visual representation of pronunciation features. Visual representation involves computer software, and advanced technology enables language teachers and learners to use these technological tools to facilitate the development of second language pronunciation. However, the visual representations in such software are often difficult to interpret for laypeople; hence, an important criterion for the use of technology in pronunciation teaching is how interpretable the visual representations are to non-phoneticians (Chun, 1998). Visual representations are often used in teaching prosodic features of language because they are relatively easy to interpret for non-phoneticians, particularly for second language learners (Chun et al., 2008). Hardison's (2005) study is one of several works that have demonstrated the effects of visual representations on learners' pronunciation; in her research, all the participants used Kay Elemetrics Real-Time Pitch to compare the pitch contours of their own and native speakers' pronunciation on a screen. The comparison was made in two sections: (1) between the group that used the video segments of the participants' own presentations with the pitch contour displayed on a web-based tool Anvil (Kipp, 2001, as cited in Hardison, 2005) and the group without the tool and (2) between the group that received discourse-level input and the one that received sentence-level input. The results showed the advantage of using videos in addition to the pitch contours, and Hardison argued that the video facilitated the learners' development in understanding discourse prosody in meaningful contexts.

One teaching strategy that is often included in studies on pronunciation teaching is feedback. It is reasonable to claim that feedback is an integral part of teaching pronunciation, but all forms of feedback are not necessarily equally effective. One particular feedback strategy that has been found effective in terms of pronunciation teaching is recasts (Parlak & Ziegler, 2017; Saito & Lyster, 2012). For example, Saito and Lyster (2012) investigated the development of English /ɪ/ among Japanese learners of English. One group received form-focused instruction on English /ɪ/ and recasts as corrective feedback, while the other group received only form-focused instruction. The authors found that the experimental group significantly changed the frequency values of F3⁵, which needed to be 2,400 Hz or lower to be perceived as /ɪ/, in pronouncing English /ɪ/ in both controlled and spontaneous speech tasks, while the controlled group did not change. Another effective form of corrective feedback is prompts. Gooch et al. (2016) compared three groups of Korean learners of English: form-focused instruction only, form-focused instruction and recasts, and form-focused instruction and prompts. The authors found that, although the recasts group showed some improvement in pronouncing /ɪ/ on a controlled speech production test, the prompts group improved on both controlled and spontaneous speech production tests. Through the observation of classroom interactions, which was part of their study, Gooch et al. argued that prompts pushed the learners to modify their pronunciation, which created opportunities for the learners to develop their pronunciation. Finally, one additional form of feedback is visualized feedback on a computer screen; as discussed earlier in this section, this strategy has been found to be effective in teaching prosodic features of pronunciation (Chun, 1998; Chun et al., 2008; Hardison, 2005). However,

⁵ F3 is a high frequency formant around 2,500 Hz, which is found to distinguish /ɪ/ (as low as around 2,200 Hz) from /I/ (as high as around 2,800 Hz) (see Saito & Lyster, 2012 for detail).

visualized feedback on computer screens seems to promote the accurate production of segmentals in the second language (Neri et al., 2008; Offerman & Olson, 2016). Although some forms of feedback cannot be provided in regular classrooms because they require special computer software, corrective feedback regardless of its forms seems to be an important factor that promotes the development of second language pronunciation in class.

Several other strategies to teach pronunciation have been found to be effective in promoting learners' intelligibility. Although the number of recent studies that have investigated the effects of these strategies is still limited, the findings warrant discussion nonetheless. One example of an effective teaching strategy is shadowing (Foote & McDonough, 2017; Martinsen et al., 2017; Mori, 2011). Foote and McDonough (2017) examined the effects of shadowing as a pronunciation practice task using an Apple iPod device. The participants practiced shadowing for at least 10 minutes each time, 4 times a week for 8 weeks, and the authors found that shadowing promoted the learners' ability to imitate a speech model and comprehensibility and fluency in extemporaneous speaking tasks. Based upon these positive results, shadowing appears to be an effective strategy for practicing pronunciation. Another effective strategy for teaching pronunciation is beat gestures (Gluhareva & Prieto, 2017), which involves up and down hand movements associated with prominence in speech production; these movements are thought to be effective in reinforcing the knowledge of prominence. Gluhareva and Prieto (2017) conducted a quasi-experimental study with two groups receiving speaking training: one using video materials with beat gestures and the other using the same video materials without such gestures. The beat gestures indicated the semantic emphasis. Both groups were given prompts with varying difficulties determined based on the initial data collection before the training. Participants in the beat gesture group were found to perform the

speaking tasks on difficult prompts with significantly less accentedness in the post test. This study demonstrated the potential of beat gestures as an effective strategy to teach prosodic characteristics of a second language.

Several different methods have been incorporated successfully in teaching pronunciation. However, it is also important to note that most of the studies reviewed above do not rely on a single strategy to teach pronunciation; the treatments of these studies involve two or more strategies to teach, such as explicit phonetic instruction, perceptual training, feedback (Kissling, 2013), and a combination of shadowing and developing self-monitoring skills (Couper, 2006). There is a possibility that the teaching strategies found to be effective in these studies may not be as effective when employed alone without combining with another strategy. Therefore, combining multiple strategies to teach pronunciation may have a more positive effect than relying on a single strategy on the development of second language pronunciation.

2.5 Teacher Cognition

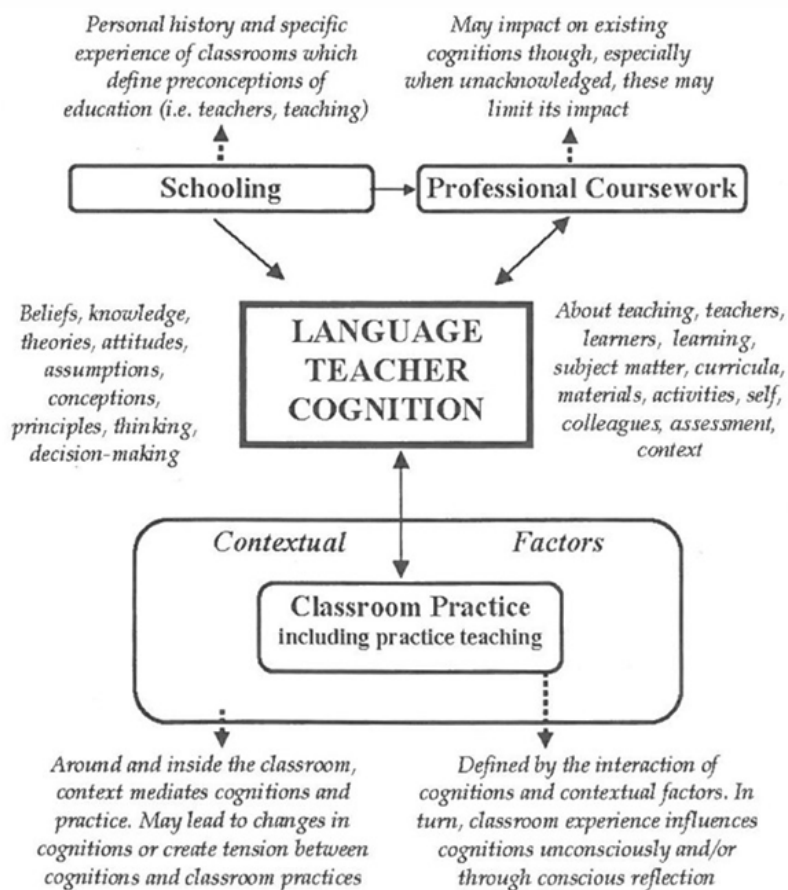
Although many studies have shown that several teaching strategies have positive effects on second language pronunciation, knowing what research findings can inform about teaching is merely part of teacher cognition. There has been investigation of this type of cognition in many contexts, and in terms of language teacher cognition, Simon Borg is one of the leading scholars in this field. In his comprehensive review of language teacher cognition research, Borg (2015) characterized teacher cognition as “an often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic – that is defined and refined on the basis of educational and professional experiences through teachers’ lives” (p. 40). Further, Borg offered a framework for teacher cognition research, a number of possible methods to explore language teacher

cognition in research, and an often-cited diagram that illustrates a number of relevant factors ranging from personal history to contextual factors (see Figure 2.1).

The areas explored in teacher cognition research vary, but many researchers in this field are interested in the relationship between teachers' beliefs and their teaching practices. Based on the research findings, teachers' beliefs are related to the pedagogical choices that they make in class (Borg, 2015; Canh, 2014). Further, teacher education strongly influences teachers' beliefs (Borg, 2011) and also seems to have direct impacts on teachers' content knowledge. In particular, pre-service teachers develop their metalinguistic knowledge for language teachers in the language-based courses in teaching English to speakers of other languages (TESOL) programs, such as linguistics, discourse analysis, and phonology, and pedagogical knowledge in methodology courses (Richards, 2008). In terms of pronunciation, as Derwing and Munro (2005) explained, explicit instructions, including places and manners of articulation, have been found to be effective because these instructions facilitate learners' metalinguistic knowledge about pronunciation. In this sense, pronunciation teachers' metalinguistic knowledge gained through TESOL programs plays an important role in teaching (Murphy, 2017). However, in the pedagogy of second language pronunciation, the common reason for the neglect in the teaching of pronunciation has been identified as lack of training (Foote et al., 2011; Macdonald, 2002), and many TESOL programs do not offer courses in pedagogical pronunciation (Murphy, 1997). In terms of teacher cognition in pronunciation teaching, only a few studies have explored how teachers' beliefs, interests, experience, and knowledge shape their teaching (Baker, 2014) and how teachers develop their knowledge in pronunciation teaching (Baker, 2010). Thus, teacher cognition remains under-researched in the pedagogy of second language pronunciation.

Figure 2.1

Diagram Illustrating Language Teacher Cognition (Borg, 2015)



Previous teacher cognition research on pronunciation pedagogy has been limited both in terms of the number of studies as well as the scope of the research. There are many aspects of teacher cognition that merit further investigation, one of which is teachers' instructional decisions in pronunciation teaching. The basis for these decisions can involve numerous factors: whether they teach pronunciation, what pronunciation feature they teach, how they teach it, and why they make that decision.

2.6 Factors in Teacher Cognition in Pronunciation Teaching

Previous research on pronunciation teacher cognition has shown that several factors influence teachers' teaching practice, particularly their decisions about teaching strategies (Baker, 2010; 2014; Pennington & Rogerson-Revell, 2019). Teachers' educational background, especially on the teaching training specific to pronunciation teaching, seems to play an important role in their decisions about selecting teaching strategies (Baker, 2014). Murphy (1997) offered an overview of phonology courses and pedagogical pronunciation courses offered in master's degree programs in the US and found that some of the programs offered courses in phonology with no training in pedagogy whereas others focused on teaching methodology in pronunciation pedagogy. Baker and Murphy (2011) found that teachers who had been informed of the importance of discourse prosody in promoting learners' intelligibility prioritized diverse features of pronunciation in teaching. Therefore, educational background in pedagogical pronunciation has an impact on teachers' decisions about pronunciation teaching.

In addition to teaching experience, teachers' experience as language learners influences how they teach language. Some experienced teachers may have learned a foreign/second language successfully through audiolingual methods. By drawing upon their successful experience of learning a language, they may implement the methods through which they had learned the language or may at least emphasize pronunciation. Conversely, some teachers may have learned foreign/second language pronunciation merely through natural exposure to the authentic contexts in which English was used. Without formal teacher training in pronunciation teaching, these teachers may resort to heavy reliance on the "repeat after me" strategy. Language teachers have a tendency to teach a

language in the way that they were taught a language (Borg, 2003; Freeman, 2002), and teachers' language learning experience plays a marked role in their decision-making when teaching.

Also, previous research findings reveal that the lack of self-confidence in teaching pronunciation causes the neglect of pronunciation teaching (Foote, et al., 2011; Macdonald, 2002; Murphy, 2014b). However, self-confidence can vary. First, teachers' self-confidence about their knowledge of the pronunciation of English seems to serve as the foundation of the other types of self-confidence. Particularly for teachers who are non-native speakers, language proficiency is paramount in the development of their self-confidence, and high English proficiency is considered to be required knowledge (Rogerson-Revell, 2011). Learning about the phonetic and phonological characteristics of the English language helps teachers gain self-confidence about their knowledge of English pronunciation. Another type of self-confidence concerns teachers' ability to assess learners' pronunciation; relying on their subjective impressions of learners' pronunciation does not offer sufficient information about the learners' pronunciation for effective teaching. Teachers may instead require formal training to determine what pronunciation-related errors influence learners' overall intelligibility.

Another factor that influences teachers' pedagogical decisions is their beliefs about learning and teaching pronunciation, which are developed through various experiences in teaching and are inseparable from their teaching experience, learning experience, and educational background. Pajares (1992, as cited in Borg, 2015) provides a framework for assumptions that can be made about beliefs when researchers design a study about educational beliefs; these assumptions include the beliefs' influence on perception and interpretation of knowledge as well as the strong connection between beliefs and knowledge. As Borg (2015) noted, although research has not yet offered

conclusive findings in terms of the influence of teacher beliefs on learners' development in their target language, teachers' beliefs are an integral part of teacher cognition, particularly in the decision-making process.

Finally, teachers' interest in pronunciation, pronunciation learning, and pronunciation pedagogy constitute an important factor with an impact on teacher cognition. Although little research has investigated the relationship between teachers' interests and teacher cognition, interest can be a fundamental motivational factor that encourages teachers to develop the knowledge about the subject matter that they teach. In the teaching of English pronunciation, teachers must be interested in English pronunciation to develop their phonological knowledge about the English language. To gain practical content knowledge about pedagogical pronunciation, they must be interested in the pedagogy of pronunciation, which requires theoretical knowledge about SLA in phonological development and methodological knowledge about teaching.

This chapter will, in later sections, discuss the factors briefly introduced above and explain how these factors will be defined and treated in this study to justify the inclusion of these factors in the scope of this study. These factors will be described separately, but they are intertwined and altogether constitute teacher cognition, which significantly influences teachers' decision-making in terms of pronunciation teaching.

2.7 Instructional Decisions in Language Teaching

One of the domains in the research on teacher cognition is instructional decisions. In language teaching, instructional decisions fundamentally refer to what language teachers do in the classroom in response to learners' needs. The process of instructional decision-making is as complex as the notion of teacher cognition and relies on the interplay among dozens of influential factors

(Borg, 2015). Studies of instructional decision-making date to the 1980s, at which time decision-making was sometimes identified as the making of “informed” choices in teaching (Stevick, 1982, p. 2). Then, instructional decision-making was recognized and drew the attention of researchers as part of the complex issues in teacher cognition (Shulman, 1986). In fact, in Borg’s (2015) diagram, “decision-making” is noted as part of the definition of language teacher cognition: “Beliefs, knowledge, theories, attitudes, assumptions, conceptions, principles, thinking, decision-making about teaching, teachers, learners, learning, subject matter, curricula, materials, activities, self, colleagues, assessment, context” (p. 333).

As Borg’s (2015) definition suggests, language teachers make instructional decisions about a number of things including, but not limited to, target linguistic forms, teaching strategies, and teaching materials. One of the most comprehensive works in relation to language teachers’ instructional decision-making process is Woods (1991, 1996, as cited in Borg, 2015), which provides a substantial insight into the processes in which teachers make decisions by categorizing the processes into two areas: external and internal factors. External, also called situational, factors include those related to the number of students, knowledge about the students’ prior learning, material availability, and individual dynamics in class. In contrast, internal factors are the logical and temporal relationships among the decisions; for example, when teachers learn that their students use an interlanguage that incorporates elements of English, the teachers may choose to skip some of the activities in a textbook that they consider redundant. Again, research on instructional decisions offers insights into teacher cognition, but in terms of the teaching of pronunciation, this area remains under-researched and requires further exploration.

Of note here is the focus and purpose of research. As discussed above, language teachers

must make decisions in various manners (Borg, 2003); therefore, when conducting a study on detailed interpretation of instructional decisions, the study must control some of the factors to allow researchers to narrow their observations and analyses to a manageable scope. On the one hand, as Borg (2015) encouraged, classroom observation provides a wide range of information about teachers' instructional decisions when they face real students in real contexts. On the other hand, the information gained from classroom observation involves too many aspects of teacher cognition. To explore narrower aspects of the instructional decisions, controlling some of the factors may prove necessary.

2.8 Beliefs About Pronunciation Teaching

In teacher cognition research, beliefs have played a major role because they form the basis of what teachers do in their practice (Basturkmen, 2012; Breen et al., 2001; Farrell & Bennis, 2013). In terms of teacher cognition in language teaching, beliefs are not particularly stable and may change over time because teachers develop their beliefs based on their education and experience. For example, MacDonald et al. (2001) showed that, when pre-service teachers learned theories in second language acquisition in their undergraduate or graduate courses, their learning led to changes in their beliefs, assumptions, and knowledge about language learning. Therefore, learning experience at least partially has an impact on teachers' belief systems, which may further influence their teaching practices (MacDonald et al., 2001). The belief system is not completely independent from other aspects of teacher cognition; in particular, from the complex systems perspective in recent teacher cognition research, it is recommended that language teacher cognition be observed with respect to "the interrelationships among beliefs, knowledge and practice" (Burns et al., 2015, p. 593). The "collective variables," which likely possess unstable properties due to the reciprocal

impacts of an element to another in the system, have been examined in the recent teacher cognition research from the complex systems perspective (Larsen-Freeman & Cameron, 2008, p. 242, as cited in Burns et al., 2015). Teachers' beliefs constitute one major element of teacher cognition that may shift based on teachers' education, knowledge, and experiences. Thus, the fluid nature of teachers' beliefs should be taken into consideration.

Little research has examined teachers' beliefs in relation to other elements of teacher cognition. Baker (2011) conducted a two-phase qualitative study that examined the teaching practices of ESL teachers through interviews and journal entries. In terms of teacher beliefs about prioritizing discourse prosody over segmentals, the participants revealed that their graduate-level coursework and their professors in pedagogical pronunciation courses had influenced what they taught as well as what strategies they used for teaching these pronunciation features. Baker's study examined teachers' stated beliefs about teaching discourse prosody of English. On the one hand, such a research focus is important particularly when investigating the influence of research emphasizing prosodic features; on the other hand, it is equally vital to examine teachers' beliefs about pronunciation teaching and learning in general when discussing how their beliefs influence their decisions on to what extent they teach pronunciation, what pronunciation features they teach, and what strategies they use for teaching these features.

Sifakis and Sougari (2005) also revealed that teachers' beliefs and attitudes toward pronunciation influenced their teaching practices. Based on the self-reported survey results in their study, teachers who believed that native-like pronunciation was important tended to prefer accuracy-based pronunciation teaching. Also, such teachers were found to seek opportunities to improve their own pronunciation. Sifakis and Sougari further found that teachers in primary level education

tended to emphasize accuracy in pronunciation more than those in upper secondary school because the former group believed that younger children could develop their pronunciation more easily than older children could. This study defines teachers' beliefs in pronunciation learning and teaching as follows and explores these beliefs by means of self-reported data, as found in previous studies: collective concepts of what teachers believe in terms of pedagogical goals and teaching strategies based on their education, knowledge, and experience.

2.9 Interest in Pronunciation and Pronunciation Teaching

Among the elements that comprise the complex systems of teacher cognition, interest is particularly responsible for what teachers learn about the teaching of pronunciation. Teacher cognition research has been widely conducted amongst various subject matters, including science (Barnett & Hodson, 2001; Bryan & Atwater, 2002) and mathematics (Carney et al., 2014; Stipek et al., 2001). In the teaching of these subjects, lack of interest seems to have negative impacts on teaching (Goulding et al., 2002). In language teaching, teachers' interest may encompass several different aspects of the language, including grammar, discourse, vocabulary, writing, speaking, and pronunciation. In addition, in the context of EFL teaching in Japan, a number of teachers have a literature background with a special emphasis on some era in the history of literature, but although these teachers are highly proficient in the English language, some of them have had no education or training directly related to language pedagogy. In such cases, these teachers may not necessarily be interested in all aspects of the English language, and thus, in terms of pedagogical pronunciation, teachers' interests in pronunciation, including phonetics and phonology, pronunciation learning, and pronunciation teaching, may influence other variables of teacher cognition.

Teacher cognition research in language teaching has probably not investigated the interests

of teachers as much as other domains in this context because of the expectation that teachers be interested in the subjects that they teach. As discussed above, a language inevitably contains several different domains. Some English teachers may be fascinated by learning about and teaching, for example, different meanings of a lexical item, but might be reluctant to learn about and teach the pragmatics of the language in particular contexts (i.e., appropriate registers). Freeman (2002), in a review of the studies related to teachers' development of their expertise throughout their careers in relation to their prior knowledge and experience that form the present thinking and practice, explained that "at different stages in their careers, teachers have different professional interests and concerns" (p. 7).

Teachers' interests can be a crucial determiner of whether teachers pursue the development of their expertise in language pedagogy. Interest can be an integral factor, particularly when individuals begin to consider teaching as a career; for example, those who have no interest in the English language itself or in English teaching tend not to enroll in courses related to English language teaching. In addition, interest in pronunciation can be a broad term that consists of several domains, such as interest in linguistic knowledge about pronunciation, including phonetics and phonology, and pronunciation in SLA, that is, how people learn and acquire second language pronunciation. For English teachers, the most important area of their interests should be pedagogical pronunciation, which requires the previous two domains of interest. When teachers seek further development of their expertise, several arenas are offered: pursuing a higher degree, attending professional workshops and seminars, and reading related resources. In fact, one participant in Baker's (2011) study revealed her disinterest in reading articles related to pronunciation pedagogy and her lack of training in phonology and pronunciation pedagogy. Although it is not apparent

whether this participant's lack of training led to no interest in reading about pronunciation pedagogy or her disinterest in pronunciation pedagogy resulted in no training in pronunciation pedagogy, her lack of interest appeared to influence her decision to teach only segmentals. Therefore, interest may have a strong, if covert, impact on pedagogical choices.

2.10 Experience in Teaching

Discussion of teacher cognition must include examination of the relationship between the duration of teachers' careers and the pedagogical skills that teachers develop. Language teachers gain knowledge about instruction through direct work with students in classroom settings. Several studies have investigated the differences between novice and experienced teachers to determine what skills they can gain through their experiences. For example, Gatbonton (2008) compared the pedagogical thought units and pedagogical knowledge categories between experienced and novice teachers and found that experienced teachers tended to ensure that their students were learning, while their novice counterparts revealed their tendencies to respond only to students' behaviors and reactions. Similarly, as they accumulate teaching experience, teachers seem to develop their identity as teachers, their ability to teach, and their expertise in teaching. As teachers gain experience, the "learning-in-practice experience" helps them develop their identities as teachers (Kanno & Stuart, 2011, p. 245). Novice teachers are often preoccupied with pondering what they should do in class based on the curriculum requirements. In contrast, experienced teachers are capable of observing the learners' performance to determine what they should teach based on learners' needs. These identities, as teachers who facilitate their students' learning, seems to play an important role in classroom practice and appears to be associated with the teachers' beliefs and capabilities to adapt to teaching contexts. Novice teachers should focus on ensuring their own preparedness and self-

efficacy through the first year of their teaching experience (Faez & Valeo, 2012), and with the help of their mentors and other resources to support their teaching, they enhance their teaching efficacy via student engagement and improving their self-esteem (Shin, 2012). Teaching experience, therefore, seems to have an impact on what teachers do in the classroom; more experienced language teachers learn to ensure the students' learning (Baker, 2011; Gatbonton, 2008) and to expand their repertoire in teaching (Baker, 2011).

However, in terms of pronunciation teaching, the findings are mixed. Baker's (2011) study on teachers' focus on segmentals or suprasegmentals found that less experienced teachers address fewer varieties of pronunciation features, whereas more experienced teachers teach various features, including segmentals and suprasegmentals. In other words, experienced teachers seem to possess a wider repertoire in pronunciation features to teach as well as strategies to teach them. However, although the scope of the studies did not encompass direct examination of the difference between novice and experienced teachers, even experienced teachers may focus on different pronunciation features and employ various teaching techniques. For example, Foote et al. (2016) investigated how experienced teachers incorporate pronunciation components in communicative language teaching. The findings revealed that one of the teachers tended to focus on phonemes, another taught pronunciation using entire words, and the other focused on both equally. In addition, Baker (2014) identified pronunciation teaching techniques through her classroom observation of five experienced teachers who all tended to employ controlled techniques (e.g., mechanical drills and listening discrimination using minimal pairs), but with three of the participants using a wider repertoire of teaching techniques. Baker discussed that the main reason for the three teachers' use of more techniques was that they had undergone in-depth training in pedagogical pronunciation, and this

knowledge led to their use of more techniques in teaching. In pronunciation teaching, teaching experience per se may not offer sufficient expertise (i.e., pedagogical content knowledge) that teachers can employ in teaching practice.

2.11 Experience in Language Learning

When discussing teacher cognition, teachers' own experiences with language learning should also be taken into consideration. As Kubanyiova and Feryok (2015) described, teacher cognition consists of a number of factors including "teachers' diverse personal and language learning histories" in addition to teacher training and other contextual factors (p. 435). Johnson (1999) also suggested that teachers' language learning experience forms the basis of what they believe about language learning.

Altan (2006) investigated the beliefs about language learning among foreign language-major students who were likely to become language teachers, and the results showed that the participants responded similarly to some questionnaire items in Horwitz's (1983) Beliefs About Language Learning Inventory (BALLI). Altan suggested that some of the items were directly related to future foreign language teaching practice: for example, learning vocabulary and grammatical rules is the most important part of language learning. Wong (2010) also investigated changes in beliefs about language learning among pre-service English teachers who enrolled in an undergraduate Teachers of English as a Second Language (TESL) program. She administered BALLI twice, with a 14-month interval, to examine the change in beliefs about language learning. Some of the findings in Wong's study, at least those from the first administration of BALLI, were similar to those of Altan's study, particularly in that the participants believed that learning new words and grammatical rules is the most important part of language learning. Although their beliefs

slightly changed and were more divided in the second administration of BALLI, the beliefs that developed through the pre-service teachers' own language learning experiences were powerful and remained stable over time.

Most of the studies related to teachers' own language learning experience concern beliefs about language learning. To date, little has been found about how language learning experience shapes language teachers' actual teaching practice. As Altan (2006) suggested, teachers' language learning experience has influence on their beliefs about language learning and, therefore, on their teaching practice to some extent because they are considered to be experts in language. In fact, many graduate degree programs in TESOL and related fields require their prospective students to provide proof of language proficiency in one or more languages that are not their mother tongue. One possible reason for this requirement is that understanding language learning is an integral component of language teacher development. In this sense, teachers' own language learning experience should be taken into consideration in teacher cognition research, including this study.

2.12 Teacher Training in Pedagogical Pronunciation

Although several teacher cognition studies in pronunciation pedagogy have found that lack of teacher training is one of the major contributors to the common neglect of pronunciation teaching among English language teachers (Foote et al., 2011; Macdonald, 2002), little research has been conducted to examine how education in pronunciation pedagogy affects teachers' teaching practice. Murphy (1997) investigated graduate-level TESOL programs in the US and found that most of the programs offered phonology and phonetics courses in their MA programs. He also found that only several of the MA TESOL programs he investigated included courses focusing on pedagogical pronunciation. Finally, most of the phonology, phonetics, and pedagogical pronunciation courses

were offered as elective courses rather than required courses. He concluded that a number of teachers who hold a master's degree in TESOL are not necessarily trained to teach pronunciation.

Baker (2011) investigated ESL teachers' classroom practice in terms of teaching discourse prosody in relation to their beliefs about teaching pronunciation. One of the participants did not emphasize discourse prosody in her teaching, probably because she had not received training in pronunciation teaching. Baker discussed that this participant's lack of training caused her disinterest in pronunciation pedagogy, an issue that further led to her overemphasis on segmentals, especially consonants, when she taught pronunciation in her class.

Given the small number of studies that have examined the relationship between teacher training in pronunciation pedagogy and pronunciation teaching practice, it is still impossible to generalize how training in pronunciation teaching influences pronunciation teaching practice. However, teaching training seems to have considerable impacts on teachers' beliefs about language teaching and learning and, therefore, teaching practice. For example, Borg (2011) investigated to what extent in-service teacher education influences teachers' beliefs about language teaching and learning, and the study found that the 8-week-long teacher training for in-service teachers could strengthen and extend the teachers' beliefs and could help them "learn how to put their beliefs into practice" (p. 378). Debreli (2012) also examined the impact of pre-service teacher training programs on beliefs about language teaching and learning of prospective teachers. The results revealed that prospective teachers' previous beliefs about language learning, teaching, and applicability of teaching strategies, which they gained through their own experience, lectures, and classroom discussions, were developed and modified through observation of real classroom teaching and teaching practice. Both pre- and in-service teacher education bears a significant influence on

teachers' beliefs and possibly on subsequent teaching practice in language teaching in general. Because there has been scant research on the link between pronunciation teaching and teacher training, the relationship between teacher training on pronunciation pedagogy and pronunciation teaching practice should be examined further for better understanding of how teacher education influences teaching practice in pronunciation teaching.

2.13 Self-Confidence About Pronunciation Teaching

Teachers' self-confidence is one primary factor that determines teachers' practices. In terms of English language teaching, an area often associated with self-confidence is non-native English-speaking teachers' own language proficiency (Moussu & Llurda, 2008; Sakui, 2004). As Nakata (2010) argued, many EFL teachers are not sufficiently proficient in the English language to meet the expected proficiency level. For non-native speakers, many consider high proficiency in the language that they teach to be one of the most important requirements for language teachers. This is not an exception in the teaching of pronunciation; as Rogerson-Revell (2011) suggested, teachers must have a high level of receptive competence in identifying varieties of English as well as productive competence to provide appropriate models for students. In fact, many EFL teachers in Sifakis and Sougari's study (2005) believed that they had near-native accents and strove for opportunities to practice so that they sound like native speakers. For those with less proficiency, lack of self-confidence seems to stem from the gap between their current and their expected proficiency levels and leads to reluctance to use English in class (Sakui, 2004).

In a similar vein, lack of self-confidence in knowledge and teaching pronunciation mainly due to lack of training has been found to engender reluctance among teachers to teach pronunciation (Foote et al., 2011; Macdonald, 2002). Teachers' self-confidence in knowledge about pronunciation

teaching and in their ability to teach pronunciation seems to be related to whether teachers decide to teach pronunciation as well as the teaching strategies that they employ in classroom teaching.

Several studies call for more teacher training in pedagogical pronunciation with the hope of helping pre- and in-service teachers to gain knowledge and self-confidence in teaching pronunciation (Baker & Murphy, 2011; Foote et al., 2011; Henderson et al., 2012; Macdonald, 2002; Murphy, 2011).

However, other than lack of training in pronunciation teaching, the factors that may have caused these teachers' lack of self-confidence in teaching or that promoted their self-confidence in their ability to teach pronunciation should provide useful information for future teacher training.

2.14 Present Study

To date, a growing body of research has informed a large amount of theoretical and practical information about the teaching of pronunciation (Lee et al., 2015; Saito, 2012; Thomson & Derwing, 2015). As discussed above, knowledge about teachers' decision-making processes in pronunciation teaching is still under-researched. Previous studies seem to show that many factors interdependently relate to teachers' decisions on pronunciation teaching: beliefs about learning and teaching pronunciation (Baker, 2011; Burns et al., 2015), interest in pronunciation teaching and learning (Baker, 2011; Freeman, 2002), experience in teaching pronunciation (Baker, 2011; Gatbonton, 2008), experience in learning pronunciation (Altan, 2006; Kubanyiova & Feryok, 2015), education and teacher training in pronunciation teaching (Baker & Murphy, 2011; Murphy, 1997), and self-confidence about their knowledge and ability to teach pronunciation (Foote et al., 2011; Macdonald, 2002). In response to the call for more knowledge about teachers' decision-making processes in pronunciation teaching, this dissertation explores these potential factors to examine the inter-relation among them.

2.15 Research Questions

The purpose of this study is to explore EFL teachers' cognition in relation to their pronunciation teaching as well as their decisions about pronunciation teaching based on their assessment of interlanguage pronunciation. The first phase of this study will explore teacher cognition among EFL teachers at Japanese universities to determine what university-level teachers in Tokyo do in their everyday practice in their own universities with their students in terms of pronunciation teaching and what possible factors determine their decisions about pronunciation teaching. Some of the universities in Tokyo have many bilingual students who are fluent both in English and Japanese, whereas other universities have only a few such students. This phase cannot analyze the teachers separately from their teaching contexts, including their universities and students, and thus, the purpose of this phase is to capture a general picture of what those teachers do. In this phase, the first research question will be addressed quantitatively. The second phase, in contrast, will qualitatively address how teachers assess interlanguage pronunciation and how they make decisions about pronunciation teaching based on their assessment, that is, whether the teachers would make similar decisions about their pronunciation teaching when the contexts (i.e., students and universities) are controlled. The purpose of this phase is to understand the teachers' decision-making process in depth instead of the general picture in the first phase. The second and third questions below will be examined qualitatively in the second phase, and both research questions are related to decision-making about pronunciation teaching. The first research question is for general understanding of teachers' decisions about what pronunciation to teach and deciding how to teach it in their own contexts, whereas the second and third research questions are for detailed descriptions of the decisions and the decision-making process with the contexts controlled. All three questions complement each other to offer a better understanding

of the teachers' decision-making about pronunciation teaching.

1. How do EFL teachers' beliefs, interests, self-confidence, experience, and knowledge related to pronunciation pedagogy influence their decisions about pronunciation teaching?
2. What pronunciation features do EFL teachers decide to teach based on their assessment of interlanguage pronunciation?
3. What are EFL teachers' rationales for their decisions about pronunciation teaching based on their assessment of interlanguage pronunciation?

Chapter 3

Research Method

3.1 Mixed-Methods Design

There are several possible methodological options for research available for researchers, who must make sound decisions about their research methods depending on the purpose and the practicality of the study. A mixed-methods design was chosen to maximize the quality of the present study, that is, to satisfy the need for generalizable findings as well as to provide an in-depth understanding of teachers' decision-making in pronunciation pedagogy. The following section will address the details about the methodological choices of this study and their rationale.

The author adopted the mixed-methods explanatory sequential design (Cresswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009). In the first phase, a survey was conducted to understand the demographic situations in universities in Tokyo. The purpose of the first phase was to investigate who the teachers at universities in Tokyo were, what their educational and professional background was, what they taught, how often they taught pronunciation in their English class, what strategies to teach pronunciation they adopted, how strongly they were interested in pronunciation teaching, and what their beliefs about pronunciation teaching and learning were. In the second phase, several respondents were selected from those in the first phase to participate in focus group discussions. The purpose of the second phase was to analyze how individual teachers would evaluate the recorded pronunciation of university students and how they would make instructional decisions based on the assessment results.

3.2 First Phase

A survey was developed online using the University of Bristol's Bristol Online Survey to obtain quantitative data. The questionnaire was designed to build a demographic representation of English as a foreign language (EFL) pronunciation teaching in the universities in Tokyo, and the questionnaire included 5 constructs containing 26 major questions, with follow-up questions for each, and these constructs examined the following: first, to what extent pronunciation teaching was included in the current practice of EFL teaching at universities in Tokyo; second, the EFL teachers' professional background in relation to teaching English as a second language (ESL) and EFL and training in teaching ESL, EFL, and pronunciation; third, the teachers' second/foreign language learning experiences, including those related to pronunciation learning; fourth, the types of education and the lengths of education that the participants had undergone in terms of phonetics, phonology, and pedagogy of pronunciation; and finally, interests in and beliefs about pronunciation per se, the teaching of pronunciation, and pronunciation learning. The respondents were to select the number indicating to what extent they agreed or disagreed with each statement, and the types of questions varied depending on the purpose of the question; there were items employing yes/no questions, multiple-choice questions with a drop-down list of possible answers, 5-point Likert scales, and open-ended free writing questions. It was expected that the participants would take 20–45 minutes to complete the entire questionnaire based on the pilot session (see Chapter 3 for details of the pilot survey).

The constructs included in the questionnaire were determined based on Borg's (2003) work on teacher cognition research. According to his model, teachers' experience and formal professional training about teaching may influence teacher cognition, which includes "beliefs, knowledge, theories, attitudes, assumptions, metaphors, conceptions, [and] perspectives about teaching,

teachers, learning, students, subject matters, curricula, materials, instructional activities, [and] self' (p. 47). The teacher cognition formed by these various factors, in addition to contextual factors, defines what teachers do in the classroom. However, Borg's work concerned grammar, writing, and reading; teacher cognition studies related to pronunciation pedagogy were also reviewed to determine the constructs of the survey as follows:

- **self-confidence related to pronunciation teaching:** Self-confidence in teaching pronunciation and educational backgrounds seems to affect teachers' decisions about pronunciation teaching. Foote et al.'s (2011) survey, although it was in an ESL context where the majority of the teachers were native speakers, found that lack of self-confidence and/or teacher training was the common reason for the neglect of pronunciation teaching. This should apply at least in the context of this study.
- **teachers' familiarity with key terms used in pronunciation pedagogy:** As Baker and Murphy (2011) suggested, familiarity with technical terms used in publications in pronunciation pedagogy was a reasonable indicator of teachers' knowledge about pronunciation teaching. However, their conclusion was based on qualitative data; the researcher had to develop questionnaire items for this dissertation.
- **literacy in phonetic alphabet:** Grant (2014) noted that literacy in phonetic symbols can be an asset to effective pronunciation teaching.
- **teachers' language learning experience:** Language learning experience as a learner also seems to have an impact on teacher cognition (Bailey et al., 1996, as cited in Borg, 2003) although the previous study was conducted qualitatively without operationalized questionnaire items.

- **teacher training:** As Borg's (2015) conceptualization indicated, both pre-service and in-service teacher training is considered to influence teacher cognition. There has not been an established means to quantify the amount of teacher training for pronunciation teaching; the item in this study assessed the total hours of training that the participants had undergone.
- **interest in pronunciation teaching and learning:** The empirical data from the pilot study for this project showed that teachers are not necessarily interested in pronunciation learning and teaching, and this finding resonates what Fraser (2006) explained as "varying levels of interest in pronunciation" among teachers (p. 90). Little research in pronunciation teaching has measured the levels of interest; therefore, the questionnaire items for this dissertation needed to be developed.
- **teachers' beliefs:** Teachers' beliefs have been studied extensively, but little has been researched about pronunciation teaching. Horwitz's (1983) BALLI (mentioned in Chapter 2) was used widely in terms of language teaching but was not ideal for the context in which many non-native speakers teach pronunciation.

None of the questionnaire items were adopted from previous studies because the context of this study differs in several aspects: pronunciation teaching rather than other aspects of the language commonly studied, Japanese universities that many students with little experience with pronunciation learning attend, a mixture of native and non-native speaker teachers, and extremely limited exposure to authentic interaction with non-Japanese speakers outside the classroom. To meet the unique context of this study, question items were developed following the guidelines that Dörnyei and Taguchi (2010) and Gillham (2008) proposed. The items were written and organized based on Dörnyei and Taguchi's suggestions in terms of the overall organization and clarity of each

item. At the beginning of the questionnaire, the purpose and significance of the questionnaire were clearly stated so that the prospective participants not only could make an informed decision about whether they would participate in the survey but also seriously and honestly respond to the questionnaire items (Gillham, 2008). Also, in this section, the organization of the questionnaire was described so that the prospective participants could expect both what would be asked and how long it would take to complete the questionnaire. Through the qualitative pilot study before the administration of the main survey, discussion with the participants helped to revise the items, and all the issues regarding the survey's contents, especially the constructs related to interest and self-confidence, and language clarity have been resolved.

It is also important to note that Tokyo was selected among the cities in Japan for three reasons. First, Tokyo has over 100 universities within its metropolitan area, which proved convenient for the researcher to collect sufficient data from university teachers for the first phase. Given the large sample size that could be collected from a single geographical area, Tokyo was an ideal location. Second, the universities in Tokyo typically attract students from many different areas in Japan, while universities in other areas tend to attract students mostly from their neighboring areas. How individual primary and secondary schools and teachers responded to the educational reform in Japan seemed to differ according to contextual factors, including geographical regions and available facilities, and the regional differences could not be ignored (Ohara & Buchanan, 2018). Because teachers often teach differently depending on who their students are, this mixture of students from many areas in Japan would be better representative of Japanese students nationwide rather than from a particular region. The third reason was the convenience for the second phase: the researcher was able to visit the university to conduct focus group interviews relatively easily.

3.2.1 Piloting the Instrument

Prior to finalizing the instrument, a pilot study was administered to ensure the quality of the online questionnaire that was used in the main study. Implementing this pilot allowed the researcher to clarify the instructions in the questionnaire, to avoid ambiguous question items, and therefore to enhance the reliability and validity of results (Dörnyei & Taguchi, 2010).

3.2.2 Participants in the Pilot Study

The participants in the pilot questionnaire were similar to the prospective participants in the main study in terms of age, experience, nationality, and educational experience (see Table 3.1). Also, all five participants in the pilot were EFL teachers at the university where the researcher taught at the time of the pilot study. The participants were teaching in the same teaching context as the prospective participants' context in the main study.

Table 3.1

Participants in the Pilot Study

| Name (Pseudonym) | Nationality | Gender | Age | Experience |
|---------------------|-------------|--------|-----|------------|
| Taichi | Japanese | Male | 28 | 3 years |
| Runa | Japanese | Female | 38 | 9 years |
| Mika | Japanese | Female | 38 | 9 years |
| Lukas | American | Male | 29 | 4 years |
| Ted | British | Male | 27 | 3 years |

3.2.3 Procedures of the Pilot

To determine whether any ambiguous instructions and items were included in the questionnaire, a think-aloud protocol method (Bowles, 2010) was implemented in the pilot study. The participants responded to the online questionnaire individually in the presence of the researcher.

As they responded to each question item, they were asked to verbalize what they were thinking. The entire think-aloud session was video-recorded, and the researcher also took careful notes on any problems that arose during the questionnaire process. The problems included the verbalized concerns of the participants, silent pauses, and questions that the participants asked the researcher. After a 10-minute rest, a semi-structured interview was held individually. A stimulated recall method with the recorded video and notes was used to help the participants to recall what they were thinking (Gass & Mackey, 2009). In the interviews, the question items that required revision were identified and the items were edited with the assistance of the participants.

3.2.4 Revisions Based on the Pilot Results

The results showed that most of the instructions and questionnaire items did not cause misunderstanding and problems in terms of clarity. However, several questionnaire items were considered to be rather confusing or misleading. The respondents and the researcher discussed the possible revisions of the items that might have led to misunderstanding, and by the time all five participants were interviewed, all the revisions had been made based on their prior suggestions (see Appendix A for the version distributed to prospective participants).

3.2.5 Data Collection

To maximize the number of respondents to the questionnaire, the link to the online survey was expanded through a snowball sampling technique. First, the author contacted the current and past colleagues directly via email that featured a link to the survey and further requested them to spread the request to their current and past colleagues. The author also posted the request and link to the online questionnaire on his personal social networking service (i.e., Facebook) page. Finally, when the author attended regional conference meetings in Tokyo, he asked to send a request through

the mailing lists of each conference. The email message with the link to the online questionnaire was distributed to the prospective participants through mailing lists of the regional conferences in Tokyo. The respondents were also encouraged to circulate the message to their colleagues teaching at universities in Tokyo. The invitation message outlined the information about the purpose and design of the project, the anonymity and well-being of the participants, and the participants' right to withdraw from the project at any time, as in the ethical form (see Appendix A). Also, it was specified that the researcher was seeking the participation of teachers who teach at universities in Tokyo. All the respondents met this criterion, and more details about the participants will be given in the following section as well as in Chapter 4.

3.2.6 Participants

In total, 102 university-level EFL teachers from 37 universities (see Appendix B for details) in Tokyo responded to the survey. Three of these universities were where the researcher has taught English either as a full-time or part-time instructor: Rikkyo University, Sophia University, and Meiji University. All responses were checked manually. For responses that were left unanswered, incomprehensible, or ambiguous, the respondents were contacted for clarification. However, the respondents were not contacted when the item requiring respondents' date of birth remained unanswered because they were most likely not willing to share the information about their age and the item itself was not a crucial factor for further analysis in this study. As a result, all responses except participants' dates of birth were included in the data set.

Among these 102 respondents, there were 60 Japanese teachers and 42 non-Japanese teachers; the latter group comprised 12 American, 4 Australian, 14 British, 3 Canadian, 2 Chinese, 2 Filipino, 2 Korean, 2 New Zealander, and 3 South African teachers. Fifty-three of the participants

were female, and 49 of them were male. Eighty-eight of them provided information about their date of birth, and the average age of the 88 respondents was 43.6 years (27–89 years). The lengths of teaching experience, including in both ESL and EFL settings, varied from 1 to 38 years ($M = 15.4$ years). Their teaching experience at the university level in both ESL and EFL contexts was 11.1 years on average (1–35 years), their experience with Japanese learners averaged 14.5 years (1–38 years), and their experience at Japanese universities was 10.7 years on average (1–35 years). More details about the participants will be reported in Chapter 4.

3.2.7 Data Analyses

In the first phase of this study, to answer the first research question, descriptive statistics were used to examine the frequencies of individual items related to the teachers' educational and professional backgrounds with respect to pronunciation teaching. The items included the types and lengths of education in pronunciation teaching, the types and lengths of experience in teaching English and pronunciation, and the experience in second/foreign language learning. In addition, the frequencies of individual items were examined to show whether the teachers taught pronunciation in their everyday English lessons and how often they taught pronunciation. The particular teaching strategies they use in their language instruction as well as the frequencies and mean scores of individual statements about their interests in pronunciation teaching were examined. Finally, the frequencies and mean scores were analyzed to determine the teachers' beliefs about pronunciation teaching and learning.

3.3 Decision-Making Models for Teaching Strategies

The questionnaire data were used to construct decision-making models using the structural equation model. The relatively small number of respondents did not allow all the variables in the

data to be included in the analysis. Based on the findings in the previous studies, seven variables were initially selected from the data. Following Toyoda's (2007) general procedures to develop models, the first model was developed with these seven variables as predictors and one outcome variable. The model was analyzed, and based on the result, one of the variables was eliminated, and the overall model structure was revised. After revision, seven hypothesized models for teachers' decision-making for seven different teaching strategies were constructed and examined using a series of path analyses (see Section 4.2 for detail on the procedures). These models were examined for the comparative fitness index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR), as Takeuchi and Mizumoto (2014) recommended. These results will answer part of the first research question.

3.4. Second Phase

After the selection of the participants in the second phase following the procedures described in 3.4.1, the researcher contacted the university where the focus group interviews would be conducted and secured a quiet room. The prospective participants were then contacted, at which time they were informed of the purpose of the study, the research design, the data collection procedures, and the possible risks. On the day of the focus group interviews, the participants were seated at a table facing each other. The researcher distributed the consent form (see Appendix A) and orally explained the research purpose and design, the data collection procedures, anonymity and data protection, and the participants' right to withdraw from the study. When the participants signed the consent form, the researcher explained the procedures of the needs assessment (see the following section for detail) and sat at a distance to start the session. After the needs assessment was completed, the researcher announced that the recording, both audio and video, would begin and

started recording. The IC recorder was in cover to avoid the potential for the device to distract the participants, and the video camcorder was placed at distance so that it could capture the participants' faces and would not be in sight of the participants during the focus group discussion. The placements of the recording devices were determined to prevent the participants from feeling intimidated. When the recording started, the researcher asked the first question, and the rest of the focus group discussion proceeded.

The second phase involved two related sessions that were conducted in the schedule featured in Appendix E. The first was the needs assessment conducted by the participants based on the recorded pronunciation produced by three Japanese university students. Under the assumption that the 3 learners were in a semester-long speaking class of 10 students, they made a rough plan for the speaking class. The recordings included the pronunciation through two different tasks: a reading-aloud task adapted from the diagnostic section of *Well Said* (Grant, 2016) and a picture narrative task based on a series of pictures used as a pronunciation elicitation task in a number of studies (e.g., Derwing et al., 2009). The participants had a set of sheets for the needs assessment (see Appendix D) that contained a list of pronunciation features, the script for the reading-aloud task, and a series of pictures for the picture narrative task, with a large margin for notes on each page. As they listened to the recordings, they were strongly encouraged to write down anything they noticed in terms of the pronunciation, vocabulary, and grammar of the recordings onto the scripts and in the margin on the provided sheets. The interviewer gave this instruction both in writing on the assessment sheet as well as orally at the beginning of the session. At the end of the session, the participants were asked about their decisions on what pronunciation features to teach.

Following the needs assessment session, with the instructional decisions completed, the participants took a 5-minute refreshment break and discussed in groups of three the pronunciation features to teach and their rationale for their instructional decisions. The moderator (the author) conducted each focus group interview, which lasted 32–55 minutes. In the focus group interview, the main question was about the participants' decisions on the teaching of pronunciation, and what pronunciation features will be included in the semester-long speaking class at a Japanese university. They were further asked about their rationale for their decisions based on the pronunciation issues found in the recordings, their knowledge about the pedagogical pronunciation, their professional experience regarding the teaching of pronunciation, or any other accounts. The predetermined questions to ask during the focus group interviews were as follows:

1. Based on your needs assessment of the pronunciation of the three learners, what pronunciation features would you teach in a 15-week speaking course?
2. What other aspects of the language would you teach in this course?
3. What is your rationale for your decisions about teaching pronunciation and other aspects of the language?

Because the group dynamics differed among groups, different follow-up questions were asked depending on the groups' discussion to elicit more details, and some questions were asked to ensure that discussion remained on the relevant topic. The main questions asked in the focus group interviews had been tested with five individual participants who had participated in the pilot questionnaire for the first phase. The questions were made general and open-ended intentionally in nature so that the participants would not be influenced by the researcher's questions themselves. The focus group interviews were both audio-recorded with an IC recorder and video-recorded with a

digital camcorder for the entirety of the interview sessions. The participants were informed that the audio recordings would be mainly used and video recordings would be used when the speakers would not be identifiable from the audio. They were also informed that the anonymity and confidentiality of the data would be protected to ensure that their identities would be safeguarded in data storage and future publication including this dissertation. During the session, the moderator took careful notes on the themes and details that seemed to offer valuable data for further analysis. All three interview questions will address the second and third research questions.

3.4.1 Recruitment and Setting

To elicit valuable data through the focus group interview, the participants were selected based on a few criteria. First, at least one participant who was a native speaker of English and Japanese was in each focus group because their familiarity with the Japanese-accented pronunciation in the recordings was expected to influence their needs assessment (Winke & Gass, 2013) and therefore their instructional decisions. Second, due to the fact that the needs assessment task was not particularly easy, even for experienced teachers, only experienced teachers with 5 years or more of teaching English experience were recruited for this phase. Third, a safe, comfortable setting was ideal for the focus group interview because this setting would offer valuable exchange among the participants (Kamberelis & Dimitriadis, 2013). To achieve a safe, friendly setting for the interview, each focus group consisted of colleagues in the same department of their university. Fourth, the number of interviewees was set at three so that the group would offer more focused details than a larger group could generate (Hatch, 2002). Because the needs assessment was an intense task that sufficiently focused the discussion, groups of no more than three participants were considered appropriate for this study.

To select the participants from those who participated in the first phase, the researcher first identified six universities where three or more participants taught. To control the contextual factors for this project, the participants teaching at the same university formed each of the focus groups. However, only three of these universities satisfied the criteria for selection of the participants described above: at least one native speaker and a Japanese teacher and 5 years or longer teaching experience in each group. When scheduling the focus group interviews, the teaching contracts of some of the prospective participants in the second phase were terminated, and they no longer taught at the same university. This eliminated one of the three universities that had satisfied all the selection criteria. Finally, the researcher was able to schedule focus group interviews with 4 groups of 3 teachers, and all 12 participants were teachers at two different universities where the researcher had taught and was teaching.

To protect anonymity, the names of the universities should be kept confidential; however, the researcher conducted two focus group interviews at one of the universities where he started to teach at the time of the administration of the interviews; the other two interviews were administered at the university where he had recently resigned. Although these two universities happened to be selected to meet the participant selection criteria, the conditions for the focus group interviews were nevertheless ideal: the participants were available to meet in the quiet rooms reserved for focus group interviews at the participants' university campuses. The researcher had worked with six of the 12 participants for more than a year and with another four for about 2 – 3 months, and these relationships created a non-threatening environment for eliciting rich data.

3.4.2 Participants

In total, 12 participants were recruited from those who participated in the first phase. As mentioned above, they were all experienced teachers each with over 8 years' teaching experience. Each group consisted of colleagues from the same university department. Basic information, including the name (pseudonym), nationality, and gender of each participant appears in Table 3.2.

Table 3.2

Participants in Focus Group Interviews

| Group | Name (pseudonym) | Nationality | Gender | Years of experience |
|---------|------------------|-------------|--------|---------------------|
| Group 1 | Simon | British | Male | 14 |
| | Peter | Australian | Male | 12 |
| | Yukiko | Japanese | Female | 8 |
| Group 2 | George | British | Male | 18 |
| | Dana | American | Female | 12 |
| | Mie | Japanese | Female | 11 |
| Group 3 | Kate | British | Female | 38 |
| | Tom | British | Male | 11 |
| | Maki | Japanese | Female | 18 |
| Group 4 | John | Australian | Male | 22 |
| | Mayumi | Japanese | Female | 10 |
| | Yuko | Japanese | Female | 18 |

3.4.3 Data Analysis

The audio recordings were transcribed, and the transcripts were examined multiple times for the content thematic analysis using QSR NVivo 11. The first step of the data analysis stage was to decide the coding method to employ in the analysis. The whole content thematic analysis followed Saldaña's (2016) guidelines for data analysis for qualitative data. Before looking at the data in detail, the exploratory method was employed to identify several possible codes for use in later analyses (e.g., teaching segmentals, not teaching segmentals, and concerning intelligibility).

Following the first stage, eclectic coding was administered once with a plain script using the codes developed through the initial stage, and more codes were added. Eclectic coding was conducted again on a plain script using the codes developed up to this stage. The few discrepancies in coding in the second and third attempts, caused by the participants' use of different terms referring to one concept, were revisited closely, and the codes were determined during this stage. In the next stage, a causation coding was employed to identify the causal relationship between the participants' decisions about pronunciation teaching and their rationale for their decisions. In the first attempt, all the utterances related to what pronunciation features to teach were coded. This coding was repeated, and no discrepancies between the first and second attempts were found. After identifying what pronunciation features were mentioned in the script, another attempt to identify the reasons why the participants do or do not teach pronunciation was made. This coding was repeated, and all the discrepancies between the first and second attempts, caused by lack of discourse markers to indicate a causal explanation in scripts, were revisited and fixed. In the third stage, pattern coding was administered to categorize the codes into themes. This coding was administered twice on a plain script, which resulted in no discrepancies. In the final stage, the plain script was coded and categorized into the themes found in the third stage, and the analysis was completed here because there was no discrepancy between the final two coding results.

The results from the first phase of this study, the participants' notes on the needs assessment sheets, and the moderator's notes during the focus group interviews were used for triangulation to avoid the author's subjective interpretation of the qualitative data. The coding procedures were repeated until the themes were firmly categorized through the careful analysis of the transcripts with the triangulation following the procedures described above. The teachers' notes

were mainly consulted, and the video as well as the transcripts were also examined to clarify the unclear elements and supplement the answers for the second research question. This thematic content analysis would offer the participants' beliefs and concerns based on their personal and professional backgrounds, thereby answering the rest of the second research question.

In summary, an exploratory mixed-methods design was employed for this study to take advantage of both quantitative and qualitative studies. The first phase, with a large-scale survey, offered a general understanding of the current situation in pronunciation teaching in the context of Japanese universities. Further, the questionnaire data were sufficiently large to develop decision-making models with factors in teacher cognition as predictors of the teachers' choices of teaching strategies. To develop a more in-depth understanding of how teachers assess and make pedagogical decisions on pronunciation based on interlanguage pronunciation, a qualitative study was needed. In the second phase, teachers listened to learners' interlanguage pronunciation, assessed these learners' pronunciation, and made pedagogical decisions about pronunciation. The focus group interviews in the second phase allowed the teachers to discuss their rationale for their decisions without overt intervention of the interviewer. The mixed-methods study design offered both general understanding of decision-making in L2 pronunciation teaching and insightful understanding of decision-making processes in L2 pronunciation pedagogy.

3.5 Ethical Considerations

Following the guidelines provided by the Graduate School of Education, the researcher arranged a meeting with Professor Akiko Kawasaki, a senior researcher at the university where the researcher worked at the time of the planning this project. The ethical issues that could arise during the research process were discussed based on the list of prompts outlined in the Graduate School of

Education Research Ethics Form, and the decisions about foreseeable ethical issues are written in the form (Appendix A). Dr. Talia Isaacs approved all the decisions made during the meeting, and the form was sent to the Graduate School of Education Ethics Committee. In both phases, the research purpose and design, the data protection, anonymity protection, and the participants' right to withdrawal from the project were explained in written documents. In the second phase, additional verbal explanation was given before the data collection began.

3.6. Timeline of the Project

With this sequential exploratory design, it was inevitable that some of the results in the first phase be the criteria for the selection of the participants in the second phase. The data collection through the online survey was administered from January 2014 to March 2014. At the end of the administration, the number of respondents reached 92. Because the expected number of respondents was 100 or greater for statistical analysis, especially for the structural equation modeling, the questionnaire was extended for an additional 3 months. The responses from the questionnaire were coded, and descriptive statistics were administered to grasp the participants' background and pronunciation teaching until March 2015. Then, based on the descriptive data, the models for the structural equation modeling were developed, revised and analyzed over the following year until March 2016.

In the second phase, selecting three participants teaching at the same university for focus group discussions was an extremely challenging process. In fact, the first focus group discussion was not conducted until June 2017. The last focus group discussion was administered in July 2017. Immediately after the administration of each focus group discussion, the audio recording was transcribed. The analysis of the transcribed data was completed by the end of August 2018.

Chapter 4

Teacher Cognition Leading to Pronunciation Teaching

4.1 Overview of Findings of First Phase

This chapter provides the response to research question 1 (How do EFL teachers' beliefs, interests, self-confidence, experience, and knowledge related to pronunciation pedagogy influence their decisions about pronunciation teaching?), and the first part of this chapter reports the descriptive results of the survey. As many as 16 factors that may influence the teachers' decisions in terms of pronunciation teaching were included in the survey. The purpose of this phase is to determine the relationship between the second item in this section (strategies to teach pronunciation and frequency) and the other 15 items:

- Teachers' educational background
- Strategies to teach pronunciation and frequency
- Teachers' familiarity with terms commonly used in the teaching of pronunciation
- Teachers' self-reported literacy level in the phonetic alphabet
- Teachers' self-confidence about teaching pronunciation to university students
- Teachers' self-reported foreign language proficiency
- Importance of learning pronunciation as learners when teachers learned an L2
- Influence of pronunciation learning experience on teaching
- Lengths of training in pronunciation and pedagogy
- Familiarity with resource books in phonology, phonetics, and teaching pronunciation
- The influence of resource books on pronunciation teaching

- Recommended resource books by teachers
- Reasons for recommending resource books
- Teachers' interest in pronunciation and pronunciation teaching
- Teachers' beliefs about pronunciation teaching, and
- Teachers' beliefs about pronunciation learning.

The descriptive results will be employed in the structural equation modeling to examine the relationships among the individual factors in teacher cognition that may lead to the teachers' use of pronunciation teaching strategies.

4.1.1 Teachers' Educational Background

Table 4.1 summarizes the types of educational backgrounds among the participants in terms of training in phonology and/or phonetics. The participants had received their education in phonetics and/or phonology in linguistics in various contexts. First, 65 participants had been taught linguistics related to pronunciation at the master's level, and 11 had gone through a doctoral level of training. Thirty-eight participants had undergone undergraduate-level training in linguistics related to pronunciation, and 19 had learned linguistics related to pronunciation through certificate programs such as a Certificate in Teaching English to Speakers of Other Languages (CELTA) and Diploma in Teaching English to Speakers of Other Languages (DELTA). Twelve had attended a professional seminar and workshops to learn about phonetics and phonology, and seven had learned phonetics and phonology through in-house faculty development. In total, 10 participants provided written responses (see Table 4.2), but 6 of them were featured in the types of education provided in the questionnaire.

Table 4.1*Types of Education in English Phonetics and Phonology in Linguistics*

| Type of Education/Training | <i>n</i> |
|-------------------------------|----------|
| Undergraduate | 38 |
| Postgraduate Master | 65 |
| Postgraduate Doctor | 11 |
| Certificate Program | 19 |
| Professional Seminar/Workshop | 12 |
| In-House Faculty Development | 7 |
| Other | 12 |
| None of the above | 10 |

Table 4.2*Written Responses for Types of Education in Phonetics and Phonology*

| Written responses | Category |
|---|------------------------|
| Discussion with colleagues | FD |
| Back in my country, as an ESL learner, I have never learned English using the IPA at school. I used the IPA in private studies due to I needed to teach it. I finally learned the IPA in Master's course. | MA |
| I have taught phonology at the graduate level | Teaching |
| Team-teaching | FD |
| From a private tutor | N/A |
| I took one class on English sound system in my master program, but there was no "training." | MA |
| I often copy what my French teacher does. My first English teacher who taught me was a very interesting English lady called [Sandy]. She was my tutor ... She looked like a witch. She was magical and taught us how to recite the whole of <i>Chicken Lickin'</i> when I was 9 years old. I can still recite it. | Learning pronunciation |
| I have certificate, master, and doctor accreditation. However, none of the coursework involved actual pedagogical training; it was all theory. | C, M, D |
| I recall I had received English pronunciation lessons in an English class taught by an Australian native teacher. I especially remember how she corrected my pronunciation of /a/ sound in "tongue." | Learning pronunciation |
| I did some post-graduate-level linguistic study as part of my MA TESOL. | MA |

Two of the written responses were related to learning through colleagues (indicated as “FD” in Table 4.2). These were not a formal faculty development, but in terms of the way they learned linguistic knowledge about phonology and phonetics, considering them as “in-house faculty development” does not cause a problem in the analysis. Three other respondents also stated that they had learned phonology and phonetics in their master’s studies (indicated as “MA”), and another participant wrote that he had learned the theories in linguistics in all certificate, master’s-level, and doctoral-level programs (indicated as “C, M, D”). One of the remaining written responses showed that the participant had a private tutor who had taught her phonetics and phonology (indicated as “N/A”). Another participant had taught a course in phonology at the postgraduate level (indicated as “Teaching”). Finally, the two remaining participants’ written responses were about their pronunciation learning rather than phonology or phonetics as a linguistics subject (indicated as “Learning Pronunciation”).

In terms of educational contexts where the participants underwent their training in pedagogical pronunciation, the number of participants who received their training during their master’s study was the greatest but less than half. The similar numbers of participants learned the teaching of pronunciation through undergraduate programs, certificate programs, and professional seminars and workshops (see Table 4.3). Through undergraduate-level education, 18 participants learned the teaching of pronunciation; 47 received their training at the master’s level; and 6 participants learned this subject at the doctoral level. Twenty participants learned the pedagogy of pronunciation through certificate programs, and 21 attended professional seminars and workshops for pronunciation teaching. Eight participants learned this subject through in-house faculty

development, and 27 reported that they had not learned the teaching of pronunciation in any of the educational contexts provided in the questionnaire.

Table 4.3

Types of Education in Pedagogical Pronunciation

| Type of Education/Training | n |
|-------------------------------|----|
| Undergraduate | 18 |
| Postgraduate Master | 47 |
| Postgraduate Doctor | 6 |
| Certificate Program | 20 |
| Professional Seminar/Workshop | 21 |
| In-House Faculty Development | 8 |
| Other | 8 |
| None of the Above | 27 |

In addition to the choices in the questionnaire, the eight respondents who chose the option “Other” provided written responses (see Table 4.4), three of which can be considered as analogous to faculty development (indicated as “FD”). Although none of these responses clearly stated that the respondents exchanged ideas about pronunciation pedagogy with colleagues in a formal setting, it is apparent that they learned this topic from their colleagues. In this sense, these responses can be categorized as faculty development, a choice included in the questionnaire. Another respondent clearly explained that she attended a professional seminar held by an expert in pronunciation teaching (indicated as “Prof. Sem.”). Another two respondents stated that they had undergone no pedagogical training on pronunciation (indicated as “None”). Finally, the two remaining responses were related to their own learning of English pronunciation (indicated as “Learner”). These two responses were not directly linked to the teaching of pronunciation, but it can be interpreted that as the respondents learned English pronunciation, they learned how to teach pronunciation.

Table 4.4*Other Responses for Types of Education in Pedagogical Pronunciation*

| Written responses | Category |
|--|------------|
| Discussion with colleagues | FD |
| Team-teaching | FD |
| I took one class on English sound system in my master's program, but there was no "training." | None |
| I taught pronunciation at the British Council for 7 years. My director of studies often observed and gave feedback. | FD |
| I have certificate, master, and doctor accreditation. However, none of the coursework involved actual pedagogical training; it was all theory. | None |
| Although I had taken elementary TESL class in my undergrad and graduate school, I don't remember I had any specific pronunciation teaching training. The only seminar I went was Ogawa sensei's pronunciation seminar two years ago... | Prof. Sem. |
| Radio programs on NHK | Learner |
| Private pronunciation training | Learner |

4.1.2 Strategies to Teach Pronunciation and Frequency

In total, seven different strategies to teach pronunciation were included in the questionnaire items and used for analysis. Each item was responded to on a 5-point scale from 1, indicating that the respondents never use the strategy, to 5, meaning that they always use the strategy to teach pronunciation. The results are summarized in Table 4.5. With regard to the explicit explanation of the sound system and place and manner of articulation, most of the participants seldom or never used this strategy (30 responded "never," and 28 answered "seldom"), and 19 used this strategy sometimes. Another 19 respondents often used this strategy, and 6 used it always.

In addition, 27 participants provided 37 written responses in addition to the choices provided in the questionnaire. All the written responses from the participants are provided in Table 4.6. Twenty-one of the 37 responses provided were similar to the choices given in the questionnaire

items, as indicated with the acronyms in Table 4.6. Individual cases were compared with the respective possible corresponding questionnaire items. Because the frequency of use of these 21 cases and that of the similar strategies given in the questionnaire were identical, they were regarded as corresponding items.

Table 4.5

Pronunciation Teaching Strategies and Frequency

| Strategies to teach pronunciation | Mean | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------|------|----|----|----|----|----|
| Explicit explanation (EE) | 2.34 | 30 | 28 | 19 | 19 | 6 |
| Using model sounds (MS) | 3.40 | 15 | 4 | 28 | 25 | 30 |
| Time for drilling exercise (DE) | 2.27 | 40 | 17 | 21 | 16 | 8 |
| Incidental corrective feedback (IF) | 2.72 | 21 | 16 | 33 | 25 | 7 |
| Post task feedback (PT) | 2.66 | 19 | 20 | 37 | 19 | 7 |
| Peer feedback (PF) | 1.46 | 70 | 14 | 13 | 3 | 2 |
| Self-evaluation (SE) | 1.49 | 69 | 16 | 10 | 4 | 3 |

Note: 1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = always

However, the other 16 cases should be treated differently for several reasons. First, three of the written responses focused the choice of target pronunciation features rather than teaching strategy, as indicated by “CHOICE” in Table 4.6. Second, two of the responses indicated that the teachers provided students with opportunities to discover the target pronunciation features (see “DISCOVER” in Table 4.6). Third, another two responses discussed a reading aloud task, but whether teachers provided models or feedback was not clear from the written responses (see “READ”). Fourth, four of the responses seemed to include a combination of two or more of the choices given in the questionnaire and “CHOICE” above. Another three responses focused on the sensory system to introduce the pronunciation features; thus, “SENSE” was used to indicate these

cases. Finally, the other two responses were treated as “OTHER” responses because they were not particularly clear in their description of how the teacher taught pronunciation.

Table 4.6

Written Responses for Strategies to Teach Pronunciation

| Written responses of participants | Acronyms |
|--|----------|
| Mainly drilling with feedback on how well students pronounce phrases | EE |
| In the past I taught the phonetic alphabet but later stopped doing it. | EE |
| Audiovisuals teaching and demonstrating pronunciation (YouTube, my own materials, etc.) | MS |
| Having learners record their own pronunciation and listen to it | SE |
| I usually highlight words that I know will give them trouble or which are frequently confused (e.g. “fourteen” and “forty”) and go over differences and drill these words a bit. | COMBINE |
| Have pairs of students look at a new (written) word and try to guess the pronunciation | DISCOVER |
| Write two phonetic choices on board. Students vote. Answer revealed; e.g., /kloʊz/ or /kloʊzəz/ (clothes) | EE |
| Compare two sound models | MS |
| Focus on phonemes problematic to Japanese speakers | CHOICE |
| Give students a handout of a picture of the inside of the mouth and draw the articulation points for various sounds. Mostly for teaching /l/ and /ɹ/ | EE |
| Providing explicit explanation regarding where to put lexical stress when introducing new vocab items (e.g., bisyllabic words) | EE |
| Individual reading aloud | READ |
| Asking students to read certain words or phrases aloud | READ |
| Providing students with some quiz asking where the stress for a word is | CHOICE |
| Teaching sound system by using phonetic symbols | EE |
| Visual reinforcement | SENSE |
| Tactile reinforcement | SENSE |
| Theater arts | OTHER |
| Fluency | OTHER |
| Have students listen to and practice different Englishes other than American English | MS |
| to enjoy tongue twisters to practice /l-/ɹ/ distinction | DE |
| Using Praat | EE |
| I get the learners to analyze speakers of global Englishes and they have to list the good features of each speaker focusing on intelligibility. | MS |
| I focus on the physical aspects, for example, how you use your whole body to produce the sounds. | SENSE |
| I focus on distinguishing sounds that are difficult for Japanese learners and get them to produce the sounds using images. | COMBINE |
| I get the learners to choose their ideal model of what is intelligible for them. | MS |
| I get the students to record passages or dialogues and they analyze their strengths and weaknesses. | SE |
| “Shadowing.” I read, and students repeat without seeing my passage. | COMBINE |
| Asking students to read a passage and record it, and give feedback | PT |
| Discovery-based approach | DISCOVER |
| Focus on minimal pairs | MS |
| Focus on intonation patterns | EE |
| Focus on syllable count | EE |
| Present differences between similar sounds by using BBC phonetic chart | EE |
| Holistic approach (includes all of the above) based on learners’ age/level | COMBINE |
| Stress and intonation | CHOICE |
| Syllable counting practice in the beginning of the course | EE |

4.1.3 Familiarity with Terms Used in the Teaching of Pronunciation

A 5-point scale was used to determine participants' self-reported knowledge level of the terms that often appear in literature on the teaching of pronunciation. Each point on the scale was provided with a brief descriptor as in Table 4.7 (where the results are summarized). Overall, most of the respondents were familiar with the terms commonly used in the literature on this topic.

The results indicate that the participants' knowledge levels of 4 of the 10 terms ("comprehensibility," "consonants," "phonemes," and "vowels") are high, averaging between 4 ("I have a reasonable knowledge and understanding of this") and 5 ("I am very confident about my knowledge of and use of this") on the scale. "Vowels" showed the highest knowledge level of the 10 terms, with a mean score of 4.68; 98 of the 102 participants reported 4 or 5 to indicate their knowledge level of this term. "Consonants" was the second-best known, with a similar result to that of vowels. The participants showed a high level of self-confidence in their knowledge about the terms "phonemes" and "comprehensibility," with mean scores of 4.26 and 4.10, respectively. Of the 102 participants, 87 chose 4 or 5 for their self-confidence level about the knowledge of "phonemes," and 77 chose 4 or 5 for that of "comprehensibility."

Among the 10 terms, 2 resulted in a relatively low score in terms of the level of knowledge: "suprasegmentals" and "prosody." Responsible for these relatively low mean scores is the large number of respondents who chose 1 ("I have never heard of this") and 2 ("I have heard of this but don't understand what it is all about.") The lowest score was found for "suprasegmentals," with a mean score of 3.19; 26 participants chose 1, and 10 chose 2 for this term. For "prosody," with a mean score of 3.26, 29 participants chose 1 or 2 (17 and 12, respectively). However, it is important to note that, for both "suprasegmentals" and "prosody," approximately half of the participants

reported relatively high levels of self-confidence: for “suprasegmentals,” 51 respondents chose 4 or 5, and for “prosody,” 50 chose 4 or 5.

Table 4.7

Knowledge Level of Common Terms in Pedagogical Pronunciation

| | 1 | 2 | 3 | 4 | 5 | Mean |
|-------------------|----|----|----|----|----|------|
| Intelligibility | 11 | 2 | 17 | 34 | 38 | 3.84 |
| Suprasegmentals | 26 | 10 | 15 | 21 | 30 | 3.19 |
| Syllable-timed | 18 | 8 | 13 | 28 | 35 | 3.53 |
| Consonants | 1 | 0 | 4 | 25 | 72 | 4.64 |
| Phonemes | 3 | 4 | 8 | 35 | 52 | 4.26 |
| Comprehensibility | 2 | 6 | 17 | 32 | 45 | 4.10 |
| Vowels | 0 | 0 | 4 | 25 | 73 | 4.68 |
| Segmentals | 8 | 11 | 20 | 35 | 28 | 3.63 |
| Prosody | 17 | 12 | 23 | 27 | 23 | 3.26 |
| Stress-timed | 11 | 11 | 13 | 30 | 37 | 3.70 |

Note. 1 = I have never heard of this, 2 = I have heard of this, but don't understand what it is all about, 3 = I have heard of this and partly understand what it is about, 4 = I have a reasonable knowledge and understanding of this, 5 = I am very confident about my knowledge of and use of this.

4.1.4 Literacy in the Phonetic Alphabet

The participants responded to three items in terms of their familiarity with the phonetic alphabet (e.g., The International Phonetic Alphabet): reading the phonetic alphabet, writing in the phonetic alphabet, and using the phonetic alphabet when teaching pronunciation. To report their familiarity, they used a 5-point scale in which 5 indicated a very high level of self-confidence and 1 meant a very low level of self-confidence. The overall results showed that the participants were confident about reading the phonetic alphabet, with a mean score of 3.75, but their self-confidence

level in writing in and using the phonetic alphabet in pronunciation teaching was not high, with mean scores of 3.12 and 3.01, respectively. The results are summarized in Table 4.8.

Table 4.8

Self-Confidence in Using the Phonetic Alphabet

| | 1 | 2 | 3 | 4 | 5 | Mean |
|---|----|----|----|----|----|------|
| Reading the phonetic alphabet | 6 | 9 | 27 | 23 | 37 | 3.75 |
| Writing in the phonetic alphabet | 15 | 22 | 23 | 20 | 22 | 3.12 |
| Using the phonetic alphabet in teaching | 17 | 21 | 24 | 24 | 16 | 3.01 |

Note. 1 = very low, 2 = low, 3 = mid, 4 = high, 5 = very high

4.1.5 Self-Confidence About Teaching Pronunciation to University Students

The overall self-confidence about both knowledge and abilities related to pronunciation teaching was greater than 3 on a 5-point scale, and the results are summarized in Table 4.9. Among six items in this category, the highest mean score was 3.57, found in their self-confidence in knowledge about the sound system of the English language. On this item, one in five responded that they were highly confident about their knowledge, and more than one in three answered that they were confident about their knowledge. The second-highest value was 3.48, found in their self-confidence level in the ability to diagnose learners' pronunciation. Although only 15 responded that they were highly confident about their ability to diagnose learners' pronunciation, 40 stated that they were confident about this ability. A close mean score was found in their self-confidence in their knowledge about the learners' needs in pronunciation. The mean score was 3.46, with 34 responding that they were confident in their knowledge about learners' needs and 15 answering that they were highly confident about this knowledge. Their self-confidence levels with respect to their abilities to

explain the sound system of the English language and to teach English pronunciation were 3.33 and 3.39, respectively. Although these mean scores were lower than those of the items described above, 46 and 43 respondents said that they were confident or highly confident about these abilities, and only 24 and 14 considered their self-confidence levels to be low or very low. Finally, the lowest mean score, 3.06, was found in their self-confidence level in knowledge about effective methods to teach pronunciation. Although 21 and 8 responded that they were confident and highly confident about their knowledge about effective methods to teach pronunciation, 50 answered that their self-confidence was mid-level. Fifteen also reported that their self-confidence level was low, and 8 responded that their self-confidence level was very low.

Table 4.9

Self-Confidence About Pronunciation Teaching Knowledge and Ability

| | 1 | 2 | 3 | 4 | 5 | Mean |
|---|---|----|----|----|----|------|
| Knowledge about effective methods to teach pronunciation | 8 | 15 | 50 | 21 | 8 | 3.06 |
| Knowledge about the sound system of the English language | 3 | 15 | 26 | 37 | 21 | 3.57 |
| Knowledge about the learners' needs in pronunciation | 3 | 11 | 39 | 34 | 15 | 3.46 |
| Ability to diagnose learners' pronunciation | 5 | 11 | 31 | 40 | 15 | 3.48 |
| Ability to explain the sound system of the English language | 5 | 19 | 32 | 29 | 17 | 3.33 |
| Ability to teach English pronunciation | 3 | 11 | 44 | 31 | 13 | 3.39 |

Note. 1 = very low, 2 = low, 3 = mid, 4 = high, 5 = very high

4.1.6 Self-Reported Foreign Language Proficiency

Regarding the respondents' proficiency level in their second or foreign language, it was found that many of them had developed a high level of proficiency. The numbers of participants for different proficiency levels are summarized in Table 4.10. Although there were 60 Japanese, 3 Chinese, and 1 Korean participants, all of whom were teaching English at the university level, only 19 reported that they were near-native level in their second or foreign language, and 37 considered themselves to be at an advanced level. Including the 12 who regarded themselves as low-advanced level second or foreign language learners, in total, 68 were in the advanced level or higher. Approximately one in three reported that they were intermediate level in their second or foreign language, with 10, 10, and 11 participants reporting their language skills as high-intermediate, intermediate, and low-intermediate, respectively. Only one respondent considered herself to be a high-beginning level learner of her second language. Two respondents also reported that their proficiency level in their second or foreign language was at an elementary level.

Table 4.10

Self-Reported L2 Proficiency

| Proficiency level | <i>n</i> |
|----------------------|----------|
| 9: Near-native | 19 |
| 8: Advanced | 37 |
| 7: Low-advanced | 12 |
| 6: High-intermediate | 10 |
| 5: Intermediate | 10 |
| 4: Low-intermediate | 11 |
| 3: High-beginning | 1 |
| 2: Elementary | 2 |
| 1: Never learned | 0 |

4.1.7 Importance of Learning Pronunciation as Learners

This item was used to determine how important the respondents considered learning pronunciation in their second or foreign language learning to be. Table 4.11 summarizes the results. The respondents were commonly found to consider pronunciation to be an important part of their second or foreign language learning, with a mean score of 4.04. Among the 102 respondents, 35 considered the learning of pronunciation to be important, and even more respondents (37) stated that pronunciation learning was highly important. Twenty-eight of the participants rated their level of importance of learning pronunciation in second or foreign language learning at middle level, and the number of respondents who answered that the importance of learning pronunciation was low or very low was one for each of these options.

Table 4.11

Importance of Pronunciation in Language Learning Experience

| Level of importance | <i>n</i> |
|---------------------|----------|
| 1: Very low | 1 |
| 2: Low | 1 |
| 3: Mid | 28 |
| 4: High | 35 |
| 5: Very high | 37 |

In addition to how important learning pronunciation was to these teachers as L2 learners, this section of the questionnaire asked how they learned foreign/second language pronunciation (Table 4.12). The most common strategy to learn pronunciation was imitating native speakers' models ($n = 90$). It is important to note that this item referred to imitation of native speakers' models

through in-person interaction rather than through media such as CDs and radio. The second-most common strategy was listening to audio materials ($n = 85$). A separate item was included to gather further information on the participants' imitation of audio materials, which constituted the third-most common strategy ($n = 77$). Closely following the imitation of audio material was reading aloud, which showed that approximately three out of four respondents used this strategy when learning pronunciation ($n = 75$). The participants most frequently used these four strategies to practice pronunciation when they learned a foreign or second language. Although they were not as common as the four strategies above, using phonetic symbols, singing songs in the second or foreign language, and asking teachers to correct pronunciation were found to be widespread strategies for learning pronunciation (reported by 56, 49, and 44 respondents, respectively). About one in three participants used the method of asking friends to correct their pronunciation ($n = 34$), learning the spelling–pronunciation correspondence ($n = 34$), and recording their own pronunciation ($n = 33$) for pronunciation learning. Only 19 of the participants used applications that contained pronunciation practice activities, and 2 participants never learned pronunciation of a foreign or second language. The findings showed that the vast majority of the participants learned pronunciation of a foreign or second language mostly through listening to and imitating the models. It is also important to note that most of the participants used multiple strategies when learning the pronunciation of a foreign or second language; in fact, the participants used an average of 6.1 different strategies for pronunciation learning, with a range of 1–11.

Table 4.12*Pronunciation Learning Strategies in L2 Learning Experience*

| Strategies to learn pronunciation of a foreign/second language | <i>n</i> |
|---|----------|
| 0. I have never learned the pronunciation of any foreign/second language. | 2 |
| 1. Using phonetic alphabet/symbols (e.g., IPA) | 56 |
| 2. Listening to audio materials (e.g., CDs, radio) | 85 |
| 3. Imitating audio materials (e.g., shadowing, overlapping) | 77 |
| 4. Imitating native speakers' talk (e.g., friends, teachers) | 90 |
| 5. Asking one's friend(s) to correct one's pronunciation | 34 |
| 6. Learning the spelling–pronunciation correspondence (e.g., phonics) | 34 |
| 7. Singing songs in the second/foreign language | 49 |
| 8. Reading aloud | 75 |
| 9. Asking teachers to correct one's pronunciation | 44 |
| 10. Recording one's own speech | 33 |
| 11. Using application(s) that include pronunciation practice | 19 |
| 12. Other | 13 |

The 13 participants who chose “other” provided written responses, and these responses were categorized into eight strategies:

- Listening to audio materials,
- Imitating audio materials,
- Recording one's own speech,
- Self-correction,
- Incidental pronunciation learning,
- Learning from teachers,
- Learning phonetic symbols, and
- Developing pronunciation learning strategies.

The first three of these strategies reflect the options in the questionnaire. The response “Watching TV and basically mimicking” entailed listening to and imitating audio materials, and this participant

already chose these two options in the questionnaire. The response “Record own and listen to it and correct it” was regarded as constituting recording one’s own speech and self-correction. Three of the 13 participants wrote “Watching movies” and “Watching TV dramas,” and these responses were considered as encompassing listening to audio materials. All three of these participants had already chosen “Listening to audio materials” in the questionnaire. Another four respondents wrote “Incidental pronunciation learning without explicit attention to pronunciation learning,” “Explicit learning using phonetic symbols,” “Pronunciation lessons,” and “Developing strategies to learn pronunciation.” Six of the 13 participants wrote that they learned pronunciation through interaction with native speakers, so all of these six responses were considered to constitute incidental pronunciation learning. Two of the 13 participants reported that teachers had taught them the pronunciation of the second or foreign language; one reported that she had learned from her private tutors when she lived in the US in her childhood, and the other participant learned French songs from a teacher who was also a phonologist and singer. One of the 13 participants taught herself the IPA because she had not learned it as an ESL learner and needed to teach the alphabet, and she later learned the alphabet formally in a master’s course. Finally, one participant reported that he had developed his own strategies to learn pronunciation: for example, he reminded himself of the vowel lengths of *byouin* (“hospital”) and *biyouin* (“hairdresser”) in Japanese by associating his wish for a short stay in the hospital with the short vowel and the longer amount of time required for women’s haircuts with the long vowel.

4.1.8 Influence of Pronunciation Learning Experience on Teaching

Table 4.13 summarizes the influence of the participants’ pronunciation learning on their pronunciation teaching. A little more than half of the participants ($n = 53$) responded that they

tended to teach English pronunciation in the way that they had learned the pronunciation of their foreign or second language. About one in five reported that they tended to teach English pronunciation in the manner by which their language teachers had taught them ($n = 19$). Approximately one-third of the participants reported that their pronunciation learning had not influenced their teaching of English pronunciation ($n = 32$).

Table 4.13

Influence of Pronunciation Learning Experience on Teaching

| How pronunciation learning experience influence pronunciation teaching | <i>n</i> |
|---|----------|
| 1. I tend to teach English pronunciation in the way I have learned the pronunciation of my foreign/second language. | 53 |
| 2. I tend to teach English pronunciation in the way my language teacher has taught me. | 19 |
| 3. My pronunciation learning has not influenced my teaching. | 32 |
| 4. Other | 24 |

In total, 24 participants provided written responses regarding how their pronunciation learning experience had influenced their English pronunciation teaching. The most common written response, occurring among 10 participants, was the use of explicit knowledge about phonetics, phonology, or language teaching through their education. Six of these 10 participants reported that they did not tend to use the way they learned second or foreign language pronunciation or to teach pronunciation in the way their teachers had taught them; their pronunciation teaching strategy was based on what they learned through teaching training or linguistics. The other 4 of these 10 participants reported that they also tended to use the strategy in which they learned second or foreign language pronunciation ($n = 3$) and that they used the same strategy as their language

teachers ($n = 2$). Of the other 14 participants, 2 participants stated that they implemented techniques that they had found in reference books related to pronunciation teaching. Four participants wrote responses related to intelligibility, and two of them noted that they would treat pronunciation errors when the learners' production was unintelligible. One of the two remaining participants wrote that she had discussed her personal experience of unsuccessful communication due to her unintelligible pronunciation; the last of these 4 participants reported that he tended to think that correct pronunciation in English was not as important as that of Japanese for "cultural reasons" and "the low threshold of intelligibility." Another two participants stated that they tended to base their pronunciation teaching on the differences between Japanese and English. Two additional participants responded that they had provided learners with suggestions and recommendations in terms of pronunciation learning strategies rather than teaching pronunciation in class. Another two participants mentioned that they would not teach pronunciation in the way they learned their second or foreign language pronunciation because one of them thought her learning was not particularly successful and the other thought her experience in pronunciation learning would be effective for self-learning rather than classroom teaching. Another participant reported that he had used several techniques, some of which he had learned from his colleagues or developed in class, to teach pronunciation. Finally, the last of the 24 participants wrote that she would teach pronunciation in the way she learned English pronunciation as her first language, i.e., via phonics, rather than pronunciation of a second or foreign language and stated that she would give learners autonomy to choose their own pronunciation models in addition to her classroom perception and production practice in class.

Table 4.14

Level of Influence of Pronunciation Learning on Teaching

| Descriptor | <i>n</i> |
|---|----------|
| 1 = No influence or very low level of influence | 14 |
| 2 = Low level of influence | 24 |
| 3 = Mid-level of influence | 27 |
| 4 = High level of influence | 20 |
| 5 = Very high level of influence | 17 |

In terms of the level of influence of their pronunciation learning on their pronunciation teaching, there seems to be a moderate level of influence, with an average score of 3.02 on a 5-point scale. The responses on the 5-point scale are summarized in Table 4.14. Fourteen participants reported that they had no influence or a very low level of influence. In other words, the strategies with which they taught English pronunciation were based on factors other than their own experience in second or foreign language pronunciation. Seventeen participants, in contrast, believed that their experience in learning pronunciation of a second or foreign language had a strong impact on their teaching strategies. In total, 64 out of 102 participants chose a mid-level or higher level of influence; hence, most of the participants tended to base their pronunciation teaching on their own experiences of learning the pronunciation of a second or foreign language.

4.1.9 Lengths of Training in Pronunciation and Pedagogy

By the time that this research was collected, some of the participants had received extensive training in phonology, phonetics, and pedagogical pronunciation, whereas others had received no training in any of the pronunciation-related fields. First, the total number of hours of training the participants had received ranged from 0 to 120, and the mean training duration was 17.9 hours. Thirty of the 102 participants reported that they had not received any training in the teaching of

pronunciation, and another 12 participants reported that they had undergone 5 hours or less of training in pedagogical pronunciation.

4.1.10 Literature in Phonology, Phonetics, and Teaching Pronunciation

A small selection of teacher resource books in phonology, phonetics, and pronunciation pedagogy, some of them were more widely read or known than other books among the participants. In total, the questionnaire listed 21 teacher resource books in phonology, phonetics, and pronunciation pedagogy, and the participants responded to the items based on how familiar they were with each of the books on a 5-point scale: 1 = “I have never seen this book before”; 2 = “I recognize this book but have no idea what it is about”; 3 = “I recognize this book and know some part of it”; 4 = “I know much about this book”; 5 = “I know this book very well.” Table 4.15 shows the ratings of the participants who used the numerical scale to measure their familiarity with individual titles. For every one of the titles listed, the majority of participants selected 1 (“I have never seen this book before”). Nevertheless, every one of the books had one or more participants who expressed a high degree of familiarity with the title (i.e., 4 = “I know much about of this book” and 5 = “I know this book very well”).

Table 4.15*Familiarity with Literature in Phonology & Pedagogical Pronunciation*

| Bibliographic information | 1 | 2 | 3 | 4 | 5 |
|--|----|----|----|---|----|
| Avery, P., & Ehrlich, S. C. (1992). <i>Teaching American English pronunciation</i> . Oxford University Press. | 68 | 5 | 7 | 6 | 16 |
| Caldwell, R. (2013). <i>Phonology for listening: Teaching the stream of speech</i> . Speech in Action. | 89 | 10 | 2 | 0 | 1 |
| Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). <i>Teaching pronunciation: A course book and reference guide</i> (2nd ed.). Cambridge University Press. | 63 | 8 | 14 | 7 | 10 |
| Chun, D. M. (2002). <i>Discourse intonation in L2: From theory and research to practice</i> (Vol. 1). John Benjamins Publishing. | 92 | 4 | 4 | 2 | 0 |
| Cruttenden, A. (2009). <i>Gimson's pronunciation of English</i> . (7th ed.). Hodder Arnold Publication. | 87 | 5 | 4 | 3 | 3 |
| Dalton, C., & Seidlhofer, B. (1994). <i>Pronunciation</i> . Oxford University Press. | 81 | 10 | 7 | 2 | 2 |
| Fraser, H. (2001). <i>Teaching pronunciation: A handbook for teachers and trainers</i> . Department of Education Training and Youth Affairs. | 88 | 7 | 4 | 3 | 0 |
| Gilbert, J. (2009). <i>Teaching pronunciation using the prosody pyramid</i> . Cambridge University Press. | 92 | 4 | 3 | 1 | 2 |
| Jenkins, J. (2000). <i>The phonology of English as an international language: New models, new norms, new goals</i> . Oxford University Press. | 72 | 4 | 14 | 7 | 5 |
| Jenkins, J. (2007). <i>English as a lingua franca: Attitude and identity</i> . Oxford University Press. | 58 | 9 | 20 | 9 | 6 |
| Kelly, G. (2000). <i>How to teach pronunciation</i> . Pearson Education. | 84 | 7 | 9 | 1 | 1 |
| Kenworthy, J. (1987). <i>Teaching English pronunciation</i> . Longman. | 84 | 7 | 6 | 3 | 2 |
| Ladefoged, P., & Johnson, K. (2010). <i>A course in phonetics</i> . Cengage Learning. | 85 | 2 | 6 | 1 | 8 |
| Lane, L. (2010). <i>Tips for teaching pronunciation: A practical approach</i> . Pearson. | 95 | 1 | 5 | 0 | 1 |
| Morley, J. (1994). <i>Pronunciation pedagogy and theory: New views, new directions</i> . TESOL. | 89 | 2 | 6 | 2 | 3 |
| Murphy, J. (2013). <i>Teaching pronunciation</i> . TESOL International Association. | 83 | 9 | 6 | 1 | 3 |
| Pennington, M. C. (1996). <i>Phonology in English language teaching: An international approach</i> . Routledge. | 84 | 5 | 8 | 2 | 3 |
| Roach, P. (2009). <i>English phonetics and phonology: A practical course</i> (4th ed.). Cambridge University Press. | 72 | 6 | 7 | 6 | 11 |
| Rogerson-Revell, P. (2011). <i>English phonology and pronunciation teaching</i> . Continuum. | 94 | 1 | 6 | 1 | 0 |
| Underhill, A. (1994). <i>Sound foundations: Learning and teaching pronunciation</i> . Macmillan. | 87 | 4 | 9 | 0 | 2 |
| Walker, R. (2010). <i>Teaching the pronunciation of English as a lingua franca</i> . Oxford University Press. | 92 | 2 | 8 | 0 | 2 |

Note. 1 = I have never seen this book before. 2 = I recognize this book but have no idea what it is about. 3 = I recognize this book and know some part of it. 4 = I know much about this book. 5 = I know this book very well.

A minority of the participants were highly familiar with some of the selected resource books, and the vast majority of participants were not familiar with most of those books. Because a score of 2 (“I recognize this book but have no idea what it is about”) required no knowledge about the book beyond the title, and because a score of 3 (i.e., “I recognize this book and know some part of it”) necessitated at least some knowledge about a book’s contents, a score of 3 or higher implied that the participants had read and were personally familiar with at least some part of a rated book. Among the 21 titles listed in the questionnaire, Jenkins’ *English as a lingua franca: Attitude and identity* received the largest number of respondents who chose 3 or higher: 20 chose 3, 9 chose 4, and 6 chose 5. The second-most widely read reference book was Celce-Murcia et al.’s *Teaching pronunciation: A course book and reference guide*, with 31 scores of 3 or greater in total (14, 7, and 10 participants indicated 3, 4, and 5, respectively). Twenty-nine participants reported familiarity with Avery and Ehrlich’s *Teaching American English pronunciation*; 7, 6, and 16 participants selected 3, 4, and 5, respectively. Another of Jenkins’ titles, *The phonology of English as an international language: New models, new norms, new goals*, was the fourth-most widely known book among the listed books. In total, 26 participants indicated that they had at least some knowledge about this title, with 14, 7, and 5 of respondents choosing 3, 4, and 5, respectively. The fifth-most widely recognized book in the list was Roach’s *English phonetics and phonology: A practical course*. In total, 24 participants indicated that they had at least some knowledge about the book: 11 reported a high level of knowledge about this book, 6 demonstrated a fairly high level of knowledge, and 7 disclosed that they had some knowledge. Fifteen or fewer participants reported some familiarity with each of the remaining books on the list.

It should be noted that several participants reported that they recognized and had at least some knowledge about multiple resource books listed. In contrast, 21 of the participants did not recognize any of the listed resource books (i.e., 1 on a 5-point scale), and another 10 did not recognize the books or recognized the books' names but were otherwise unfamiliar with them (i.e., 1 or 2 on a 5-point scale). In other words, 30.4 percent of the participants had little to no knowledge about any of the listed reference books on phonology, phonetics, and pronunciation pedagogy. The results demonstrated that the participants, on average, did not recognize 16.97 out of 21 titles and were only vaguely familiar with 1.10 books. The average participant recognized and had some knowledge about 1.52 books, was largely familiar with 0.56 titles, and knew 0.79 books very well.

4.1.11 The Influence of Literature on Pronunciation Teaching

Analysis of participants' familiarity with the teacher resource books and of the degree to which these books affected their pronunciation teaching is critical to investigation of influences on decision-making in teaching pronunciation. The participants indicated the level of influence of each of the titles listed on their pronunciation teaching practices: 1 = no influence or very low level of influence; 2 = low level of influence; 3 = mid-level of influence; 4 = high level of influence; 5 = very high level of influence. The influence of these resource books on the participants is summarized in Table 4.16.

Some of the listed books at least moderately influenced the participants' pronunciation teaching practices. Jenkins' *English as a lingua franca: Attitude and identity* had influenced 19 of the respondents; 15 reported a mid-level of influence, 1 reported a high level of influence, and 3 reported a very high level of influence. The second-most influential resource book was Celce-Murcia et al.'s *Teaching pronunciation: A course book and reference guide*, which influenced 17

participants' pronunciation teaching in total. Eight of these respondents disclosed that this book influenced them moderately, 5 noted a high level of influence, and 4 said that this book had a very high level of influence on their teaching of pronunciation. The resource book that influenced the participants' pronunciation teaching the third most was Avery and Ehrlich's *Teaching American English pronunciation*, with 15 participants reporting that they were influenced by this book at a mid-level or higher (4 at a mid-level, 7 at a high level, and 4 at a very high level). Jenkins' other work (*The phonology of English as an international language: New models, new norms, new goals*) had influenced the participants' pronunciation teaching as well: 10 of the participants said that the book had influenced them at a mid-level, 2 reported that it had a high level of influence, and 1 described a very strong influence from this book on his pronunciation teaching.

4.1.12 Recommended Resource Books by Participants

The participants were asked whether they would recommend any of the teacher resource books to other English teachers, and they were allowed to choose as many publications as they wished. Of the 43 participants who provided at least 1 recommendation, 20 of them recommended only 1 publication, and 23 recommended 2 or more. Two among the latter 23 participants recommended 8 different resource books. In contrast, 59 participants recommended no resource books, and this number included 21 who had not recognized any of the books and another 10 who recognized the books but had no further knowledge about them.

Table 4.16*Influence of Literature on Teaching Pronunciation*

| Bibliographic information | 1 | 2 | 3 | 4 | 5 |
|--|----|----|----|---|---|
| Avery, P., & Ehrlich, S. C. (1992). <i>Teaching American English pronunciation</i> . Oxford University Press. | 78 | 9 | 4 | 7 | 4 |
| Cauldwell, R. (2013). <i>Phonology for listening: Teaching the stream of speech</i> . Speech in Action. | 95 | 6 | 1 | 0 | 0 |
| Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). <i>Teaching pronunciation: A course book and reference guide</i> (2nd ed.). Cambridge University Press. | 78 | 7 | 8 | 5 | 4 |
| Chun, D. M. (2002). <i>Discourse intonation in L2: From theory and research to practice</i> (Vol. 1). John Benjamins Publishing. | 93 | 5 | 3 | 1 | 0 |
| Cruttenden, A. (2009). <i>Gimson's pronunciation of English</i> (7th ed.). Hodder Arnold Publication. | 90 | 6 | 3 | 2 | 1 |
| Dalton, C., & Seidlhofer, B. (1994). <i>Pronunciation</i> . Oxford University Press. | 93 | 4 | 4 | 0 | 1 |
| Fraser, H. (2001). <i>Teaching pronunciation: A handbook for teachers and trainers</i> . AMES NSW: Department of Education Training and Youth Affairs. | 93 | 4 | 3 | 2 | 0 |
| Gilbert, J. (2009). <i>Teaching pronunciation using the prosody pyramid</i> . Cambridge University Press. | 90 | 7 | 3 | 1 | 1 |
| Jenkins, J. (2000). <i>The phonology of English as an international language: New models, new norms, new goals</i> . Oxford University Press. | 79 | 10 | 10 | 2 | 1 |
| Jenkins, J. (2007). <i>English as a lingua franca: Attitude and identity</i> . Oxford University Press. | 70 | 13 | 15 | 1 | 3 |
| Kelly, G. (2000). <i>How to teach pronunciation</i> . Pearson Education. | 91 | 6 | 3 | 1 | 1 |
| Kenworthy, J. (1987). <i>Teaching English pronunciation</i> . Longman. | 89 | 4 | 5 | 1 | 3 |
| Ladefoged, P., & Johnson, K. (2010). <i>A course in phonetics</i> . Cengage learning. | 87 | 5 | 6 | 2 | 2 |
| Lane, L. (2010). <i>Tips for teaching pronunciation: A practical approach</i> . Pearson. | 95 | 3 | 1 | 2 | 1 |
| Morley, J. (1994). <i>Pronunciation pedagogy and theory: New views, new directions</i> . TESOL. | 89 | 5 | 6 | 0 | 2 |
| Murphy, J. (2013). <i>Teaching pronunciation</i> . TESOL International Association. | 90 | 5 | 5 | 1 | 1 |
| Pennington, M. C. (1996). <i>Phonology in English language teaching: An international approach</i> . Routledge. | 90 | 4 | 5 | 3 | 0 |
| Roach, P. (2009). <i>English phonetics and phonology: A practical course</i> (4th ed.). Cambridge University Press. | 79 | 8 | 7 | 4 | 4 |
| Rogerson-Revell, P. (2011). <i>English phonology and pronunciation teaching</i> . Continuum. | 95 | 6 | 1 | 0 | 0 |
| Underhill, A. (1994). <i>Sound foundations: Learning and teaching pronunciation</i> . Macmillan. | 93 | 5 | 1 | 1 | 2 |
| Walker, R. (2010). <i>Teaching the pronunciation of English as a lingua franca</i> . OUP. | 90 | 6 | 4 | 1 | 1 |

Notes: 1 = no influence or very low level of influence. 2 = low level of influence. 3 = mid-level of influence. 4 = high level of influence. 5 = very high level of influence.

The number of participants who recommended each of the resource books is summarized in Table 4.17. The results showed that the most recommended resource book was Avery and Ehrlich's *Teaching American English pronunciation*, which 17 participants recommended. The second most recommended book was Celce-Murcia et al.'s *Teaching pronunciation: A course book and reference guide*, which gained 15 participants' recommendation. Twelve participants recommended Jenkins' *English as a lingua franca: Attitude and identity*, and eight participants recommended in total nine books other than those listed in the questionnaire, the titles of which are summarized in Table 4.18. Four of these unlisted books were teacher resource books similar to those on the list in the questionnaire (indicated as "Teacher resource"), while the other five books were textbooks for learners or classroom use (indicated as "Textbook for learners").

Table 4.17*Teacher Resource Books Recommended by Participants*

| Title of the teacher resource book | <i>n</i> |
|--|----------|
| Avery, P., & Ehrlich, S. C. (1992). <i>Teaching American English pronunciation</i> . Oxford University Press. | 17 |
| Cauldwell, R. (2013). <i>Phonology for listening: Teaching the stream of speech</i> . Speech in Action. | 2 |
| Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). <i>Teaching pronunciation: A course book and reference guide</i> (2nd ed.). Cambridge University Press. | 15 |
| Chun, D. M. (2002). <i>Discourse intonation in L2: From theory and research to practice</i> (Vol. 1). John Benjamins Publishing. | 1 |
| Cruttenden, A. (2009). <i>Gimson's pronunciation of English</i> (7th ed.). Hodder Arnold Publication. | 2 |
| Dalton, C., & Seidlhofer, B. (1994). <i>Pronunciation</i> . Oxford University Press. | 1 |
| Fraser, H. (2001). <i>Teaching pronunciation: A handbook for teachers and trainers</i> . AMES NSW: Department of Education Training and Youth Affairs. | 2 |
| Gilbert, J. (2009). <i>Teaching pronunciation using the prosody pyramid</i> . Cambridge University Press. | 3 |
| Jenkins, J. (2000). <i>The phonology of English as an international language: New models, new norms, new goals</i> . Oxford University Press. | 5 |
| Jenkins, J. (2007). <i>English as a lingua franca: Attitude and identity</i> . Oxford University Press. | 12 |
| Kelly, G. (2000). <i>How to teach pronunciation</i> . Pearson Education. | 2 |
| Kenworthy, J. (1987). <i>Teaching English pronunciation</i> . Longman. | 5 |
| Ladefoged, P., & Johnson, K. (2010). <i>A course in phonetics</i> . Cengage learning. | 4 |
| Lane, L. (2010). <i>Tips for teaching pronunciation: A practical approach</i> . Pearson. | 2 |
| Morley, J. (1994). <i>Pronunciation pedagogy and theory: New views, new directions</i> . TESOL. | 3 |
| Murphy, J. (2013). <i>Teaching pronunciation</i> . TESOL International Association. | 2 |
| Pennington, M. C. (1996). <i>Phonology in English language teaching: An international approach</i> . Routledge. | 3 |
| Roach, P. (2009). <i>English phonetics and phonology: A practical course</i> (4th ed.). Cambridge University Press. | 9 |
| Rogerson-Revell, P. (2011). <i>English phonology and pronunciation teaching</i> . Continuum. | 2 |
| Underhill, A. (1994). <i>Sound foundations: Learning and teaching pronunciation</i> . Macmillan. | 1 |
| Walker, R. (2010). <i>Teaching the pronunciation of English as a lingua franca</i> . OUP. | 1 |

Table 4.18*Other Resource Books Recommended by Participants*

| | |
|---|-----------------------|
| Baker, A. (2006). <i>Ship or sheep?</i> (3rd ed.). Cambridge University Press. | Textbook for learners |
| Dauer, R. (1993). <i>Accurate English</i> . Regents. | Teacher resource |
| Gilbert, J. (2001). <i>Clear Speech from the Start</i> . CUP. | Textbook for learners |
| Gilbert, J. (1993). <i>Clear Speech</i> . CUP. | Textbook for learners |
| Grant, L. (2016). <i>Well said: Pronunciation for clear communication</i> . Cengage Learning. | Textbook for learners |
| Grate, H. G. (1974). <i>English pronunciation exercises for Japanese students</i> . Prentice Hall Regents. | Teacher resource |
| Jones, T. (2016). <i>Pronunciation in the classroom</i> . TESOL. | Teacher resource |
| Prator, C. H., & Robinett, B. W. (1972). <i>Manual of American English pronunciation</i> . Holt, Rinehart and Winston. | Teacher resource |
| Tsuruta, C., & Shibata, S. (2008). <i>Davos kaigi de kiku "sekai ga wakaru eigo"</i> ["English to know the world" listening at Davos Conference]. CosmoPier Publishing. | Textbook for learners |

4.1.13 Reasons for Recommending Resource Books

The participants who recommended one or more resource books were asked to choose their reasons for their recommendation from the list of seven reasons provided in the questionnaire. The reasons provided were as follows:

- It helps teachers learn the English sound system.
- It helps teachers decide what pronunciation features to teach.
- It lists hands-on activities that can be used in class.
- It helps teachers integrate pronunciation teaching into other English classes.
- It helps teachers understand theories in pronunciation teaching.
- It helps teachers write syllabi for pronunciation teaching.

- It guides teachers with diagnosing learners' pronunciation.

The participants were allowed to choose two or more reasons for their recommendation. In case they wished to add other reasons, they were able to provide further written reasons by choosing "other."

Table 4.19 illustrates the number of participants who chose the provided reasons for each of the publications. The most common reason for recommending their choice of resource book was "It helps teachers learn the English sound system," with 52 participants choosing this statement. The second-most common reason was "It helps teachers decide what pronunciation features to teach." Forty-four participants chose this reason for their recommendation of the teacher resource book. The reason that 39 participants selected, "It lists hands-on activities that can be used in class" was the third-most common choice. The reasons related to integrating pronunciation components in other English classes, learning theories in pronunciation teaching, and diagnosing learners' pronunciation appeared in the responses of 23, 22, and 22 participants, respectively. Least common among all seven options was developing syllabi for pronunciation teaching, which only 14 participants chose.

The three most common reasons for the participants' recommendations may indicate that participants consider the following to be of paramount importance: a) learning the sound system of English to teach pronunciation, b) prioritizing some pronunciation features over others, and c) knowing practical activities to use in class. Also, the fourth-most common reason, integration of the pronunciation component in other English-related courses, may indicate the usefulness of learning pronunciation for their teaching contexts when standalone pronunciation courses are unlikely to be offered. Further, the participants may have considered that learning the theories in pronunciation teaching would improve the effectiveness of the teachers' instructional practices and that familiarity with diagnostic assessments of learners' pronunciations would be helpful for teachers. Finally, the

least common reason might suggest that the participants' teaching contexts do not require the regular development of syllabi for pronunciation teaching.

The participants who chose reasons other than the provided reasons in the questionnaire offered the reasons summarized in Table 4.20. Only eight written reasons were provided, and one of the responses was not directly related to the reasons why the respondent recommended the title for other English teachers; the response was "It's the only textbook I have ever used for pronunciation." This statement can be interpreted in two ways: this title may contain sufficient information for pre-service English teachers to prepare to teach pronunciation, or this was the only title that the participant knew that discussed pronunciation pedagogy and, therefore, he recommended it. Because this respondent acknowledged some of the other resource books listed in the questionnaire, the former interpretation is likelier.

Table 4.19

Reasons for Recommending Teacher Resource Books

| | It helps teachers learn the English sound system. | It helps teachers decide what pronunciation features to teach. | It lists hands-on activities that can be used in class. | It helps teachers integrate pronunciation teaching into other English classes. | It helps teachers understand theories in pronunciation teaching. | It helps teachers write syllabi for pronunciation teaching. | It guides teachers with diagnosing learners' pronunciation. | Other |
|--|---|--|---|--|--|---|---|-------|
| Avery, P., & Ehrlich, S. C. (1992). | 11 | 9 | 7 | 5 | 6 | 3 | 7 | 0 |
| Cauldwell, R. (2013). | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Celce-Murcia, M., et al. (2010). | 7 | 8 | 6 | 6 | 5 | 3 | 4 | 2 |
| Chun, D. M. (2002). | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cruttenden, A. (2009). | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dalton, C., & Seidlhofer, B. (1994). | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| Fraser, H. (2001). | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Gilbert, J. (2009). | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| Jenkins, J. (2000). | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| Jenkins, J. (2007). | 3 | 4 | 0 | 1 | 3 | 0 | 0 | 1 |
| Kelly, G. (2000). | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Kenworthy, J. (1987). | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 0 |
| Ladefoged, P., & Johnson, K. (2010). | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Lane, L. (2010). | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Morley, J. (1994). | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 0 |
| Murphy, J. (2013). | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| Pennington, M. C. (1996). | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 1 |
| Roach, P. (2009). | 9 | 4 | 4 | 3 | 4 | 3 | 4 | 1 |
| Rogerson-Revell, P. (2011). | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 0 |
| Underhill, A. (1994). | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walker, R. (2010). | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baker, A. (2006). | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Dauer, R. (1993). | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Grate, H. G. (1974). | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Jones, T. (2016). | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| Prator, C. H., & Robinett, B. W. (1972). | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| Tsuruta, C., & Shibata, S. (2008). | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 52 | 44 | 39 | 23 | 22 | 14 | 22 | 8 |

Table 4.20*Written Reasons for Recommended Resource Books*

| Titles of resource books | Written responses |
|--|---|
| Baker, A. (2006). | “It is easy to use.” |
| Celce-Murcia, M., et al. (2010). | “CDs are also useful.” |
| Jenkins, J. (2000). | “It’s the only textbook I have ever used for pronunciation.” |
| Jenkins, J. (2007). | “It makes you think what features of pronunciation should be taught at school.” |
| Jenkins, J. (2007). | “It makes you think what features of pronunciation should be taught at school.” |
| Pennington, M. C. (1996). | “It teaches teaching pronunciation is for communication. There are many Englishes around the world for students to be aware of. English with Japanese accents is OK as far as communication is flowing. Pronunciation partly forms the learner's identity.” |
| Prator, C. H., & Robinett, B. W. (1972). | “Good clear explanations and diagrams for visual learners.” |
| Roach, P. (2009). | “It has very useful simple charts and diagrams.” |

A single participant provided two of the remaining seven responses, wording the pair identically, for two different resource books written by Jenkins: *The phonology of English as an international language: New models, new norms, new goals* and *English as a lingua franca: Attitude and identity*. The participant’s reason for recommending these two resource books was thus: “It makes you think what features of pronunciation should be taught at school.” This response indicates that it is not necessary to teach all pronunciation features even when aiming at native-level pronunciation and that teachers should prioritize some pronunciation features for effective communication among ELF users. In this sense, this response is similar to another respondent’s rationale for recommending Pennington’s *Phonology in English language teaching: An international approach*: “It teaches teaching pronunciation is for communication. There are many

Englishes around the world for students to be aware of. English with Japanese accents is OK as far as communication is flowing. Pronunciation partly forms the learner's identity.”

Another common theme appearing in the responses in Table 4.20 relates to the usefulness of the resource books. In four of the responses, the participants used expressions such as “useful,” “easy to use,” “simple,” and “clear” to indicate the ease of implementing the resource books’ content in the classroom. One respondent noted, for Celce-Murcia et al.’s *Teaching pronunciation: A course book and reference guide*, the usefulness of the CDs attached to the resource book. The responses for Roach’s *English phonetics and phonology: A practical course* and Prator and Robinett’s *Manual of American English pronunciation for adult foreign students* pointed out the usefulness of the diagrams that these titles included. The response for Baker’s *Ship or sheep?* similarly commented on the user-friendliness of the book. Therefore, it can be said that these teachers recommended these titles for their usefulness and user-friendliness.

4.1.14 Interest in Pronunciation and Pronunciation Teaching

The participants’ interest in the teaching of pronunciation was investigated through nine statements about teachers’ interests in the teaching of pronunciation. The participants chose the number that indicated to what degree they agreed with each of the statements on a 5-point scale, on which 1 meant “strongly disagree” and 5 indicated “strongly agree.” The number of participants who chose each numerical score is summarized in Table 4.21.

The results show that most of the participants were interested in the teaching of pronunciation, with a mean score of 3.63, and would have liked to learn both effective ways to teach pronunciation and theories in the teaching of pronunciation, with mean scores of 3.81 and 3.51, respectively. For those negatively worded items, included to avoid “acquiescence bias,” similar

trends were found (see the items indicated with an asterisk in Table 4.21). Although these results were excluded from further analysis, the relatively small figures on some of the statements suggest that the participants were interested in pronunciation teaching, with a mean score of 2.31 for the statement indicating a lack of interest in pronunciation teaching. In a similar vein, the participants were not reluctant to teach pronunciation, with a mean score of 2.19, and they were not reluctant to attend professional seminars and workshops on pronunciation teaching (mean score of 2.53).

Table 4.21

Teachers' Interest in Pronunciation Teaching

| Statements of interest | 1 | 2 | 3 | 4 | 5 | Mean |
|--|----|----|----|----|----|------|
| I am interested in teaching pronunciation. | 5 | 14 | 16 | 44 | 22 | 3.63 |
| I would like to learn effective ways to teach pronunciation. | 5 | 6 | 13 | 51 | 26 | 3.81 |
| *I am reluctant to attend professional seminars/workshops on pronunciation teaching. | 20 | 35 | 21 | 22 | 3 | 2.53 |
| I try to catch up with recent findings in pronunciation teaching. | 18 | 31 | 14 | 26 | 12 | 2.83 |
| *I am uninterested in pronunciation teaching. | 30 | 38 | 11 | 16 | 6 | 2.31 |
| I would like to learn theories in pronunciation teaching. | 6 | 15 | 15 | 51 | 14 | 3.51 |
| I tend to emphasize pronunciation when teaching English. | 12 | 46 | 13 | 24 | 6 | 2.66 |
| I like finding teaching materials and textbooks for pronunciation teaching. | 13 | 36 | 27 | 19 | 6 | 2.69 |
| *I am reluctant to teach pronunciation when teaching English. | 23 | 52 | 12 | 11 | 3 | 2.19 |

Note. 1 = strongly disagree, 2 = disagree, 3 = don't know, 4 = agree, 5 = strongly agree

*Negatively worded items for avoidance of acquiescence bias

However, the results show that the participants did not necessarily demonstrate a particularly strong interest in some aspects of the teaching of pronunciation. First, nearly half of the

participants were uninterested in remaining up to date on recent findings in the teaching of pronunciation, with 18 choosing “strongly disagree” and 31 choosing “disagree” for the following item: “I try to catch up with recent findings in pronunciation teaching.” The mean score for this statement was 2.83. For the item asking whether the respondents tended to emphasize pronunciation when teaching English, 12 strongly disagreed and 46 disagreed with this statement, with a mean score of 2.66, thus indicating that they did not emphasize pronunciation when teaching. A similar trend was found for another statement: “I like finding teaching materials and textbooks for pronunciation teaching.” The mean score for this statement was 2.66, and 13 strongly disagreed and 36 disagreed with this statement, suggesting that they were not interested in searching for materials to use in the teaching of pronunciation.

4.1.15 Beliefs About Pronunciation Teaching

To investigate beliefs about pronunciation teaching, the participants answered, with a 5-point Likert scale, to what extent they agreed or disagreed with a set of statements about their beliefs about pronunciation teaching. For this analysis, the order of the statements was changed from that in the questionnaire. In Table 4.22, the first four statements (see A to D in Table 4.22) are related to the respondents’ beliefs about teachers’ knowledge of pronunciation and pronunciation teaching. The results suggested that the participants believed that teachers should gain explicit knowledge about phonology and phonetics as well as pronunciation pedagogy. First, 62 participants agreed and 28 strongly agreed that teachers should know the English sound system to teach pronunciation; the mean score for agreement with this statement was 4.09. Similarly, 11 strongly disagreed and 32 disagreed with the statement that teachers could teach pronunciation without explicit knowledge about the English sound system; the mean score was 2.86. Thirty-two respondents strongly

disagreed and 52 disagreed that fluent English speakers know how to teach pronunciation, with a mean score of 1.95, thus suggesting that even highly fluent speakers, including native speakers, should learn how to teach. Finally, 53 agreed and 25 strongly agreed that teachers should learn how to teach English pronunciation. The mean score for this item was 3.94. Thus, in terms of the participants' beliefs concerning teachers' knowledge about pronunciation and pronunciation pedagogy, the participants believed that teachers should gain knowledge about phonology, phonetics, and pronunciation pedagogy to be successful at teaching pronunciation of English.

An additional four items were included to assess participants' beliefs about pronunciation teaching strategies (see items E to H in Table 4.22). In response to item E, 53 respondents agreed and 9 strongly agreed that repeating native speakers' pronunciation is an effective way to teach pronunciation, with a mean score of 3.59. Fifty participants agreed and 19 strongly agreed with item F, namely, that explaining how to produce individual sounds explicitly helps learners learn pronunciation, with a mean score of 3.77. Similarly, in response to item G, 48 participants agreed and 16 strongly agreed that explicit explanation about the sound system helps learners learn pronunciation, with a mean score of 3.67. Finally, for this construct, the negatively worded item H was included for the purposes of error correction. Fifty-nine respondents disagreed and 8 strongly disagreed that teachers should avoid correcting pronunciation errors; they believed that teachers should correct pronunciation errors.

Table 4.22*Teachers' Beliefs About Pronunciation Teaching*

| | Statements of beliefs about pronunciation teaching | 1 | 2 | 3 | 4 | 5 | Mean |
|---|--|----|----|----|----|----|------|
| A | Teachers should know the English sound system to teach pronunciation. | 2 | 5 | 4 | 62 | 28 | 4.09 |
| B | Teachers can teach pronunciation without explicit knowledge about the English sound system. | 11 | 32 | 26 | 26 | 7 | 2.86 |
| C | Teachers should learn how to teach English pronunciation. | 2 | 6 | 15 | 53 | 25 | 3.93 |
| D | When teachers are fluent English speakers (including native speakers), they know how to teach pronunciation. | 32 | 52 | 11 | 5 | 2 | 1.95 |
| E | Having learners repeat native speakers' pronunciation is an effective way to teach pronunciation. | 2 | 8 | 29 | 53 | 9 | 3.59 |
| F | Explicit explanation about how to produce each sound helps learners learn pronunciation. | 2 | 6 | 24 | 50 | 19 | 3.77 |
| G | Explicit explanation about the English sound system helps learners learn pronunciation. | 1 | 11 | 25 | 48 | 16 | 3.67 |
| H | Teachers should avoid correcting pronunciation errors. | 8 | 59 | 20 | 12 | 3 | 2.44 |
| I | Teachers can help learners improve their pronunciation. | 1 | 1 | 5 | 65 | 26 | 4.14 |
| J | Teachers can help learners learn English pronunciation. | 0 | 0 | 7 | 70 | 24 | 4.18 |
| K | Courses solely focusing on pronunciation should be offered in primary education in Japan. | 15 | 34 | 23 | 20 | 10 | 2.76 |
| L | Courses solely focusing on pronunciation should be offered in secondary education in Japan. | 15 | 33 | 24 | 22 | 8 | 2.75 |
| M | Courses solely focusing on pronunciation should be offered in university education in Japan. | 14 | 32 | 26 | 24 | 6 | 2.76 |
| N | Teachers should spend time in class teaching English pronunciation. | 2 | 12 | 37 | 40 | 10 | 3.44 |
| O | Pronunciation teaching should be integrated into other skill courses. | 0 | 6 | 15 | 50 | 27 | 3.94 |

Note. 1 = strongly disagree, 2 = disagree, 3 = don't know, 4 = agree, 5 = strongly agree

In addition to the teaching strategies, there were two items related to the teachability of pronunciation (see items I and J in Table 4.22). These two items gained the highest and second-highest mean scores overall. For item I, which asked whether teachers could help learners learn English pronunciation, the mean score was 4.18, with 70 participants agreeing and 24 strongly agreeing that teachers could. For item J, the mean score was 4.14, and 65 participants agreed and 26 strongly agreed that teachers could help learners improve their pronunciation. Overall, the participants believed that pronunciation was teachable.

The final five items in Table 4.22 concerned the teaching contexts for pronunciation teaching (see items K to O). Three of these items, K through M, specifically asked about whether standalone pronunciation courses should be offered in different levels of education (primary, secondary, and tertiary) in Japan. The results showed that the participants tended to disagree with the idea of offering courses solely focusing on pronunciation in all three levels, with mean scores of 2.76, 2.75, and 2.76 for the primary, secondary, and tertiary levels, respectively. In contrast, in response to item N, the participants tended to agree that pronunciation teaching should be integrated into other skills courses, with a mean score of 3.94. Fifty participants agreed and 27 strongly agreed with this item. Also, the participants tended to agree with item O, namely, that teachers should spend time in class teaching pronunciation. The mean score for this item was 3.44; 40 participants agreed, and 10 strongly agreed. Overall, the participants believed that pronunciation should be integrated into other skill areas, and instead of offering standalone pronunciation courses for learners, some class time should be spent on pronunciation teaching.

4.1.16 Beliefs About Pronunciation Learning

The participants indicated, using a 5-point Likert scale, to what extent they agreed or disagreed with each of 19 statements related to their beliefs about the learning of pronunciation (see Table 4.23). The order of the statements in the table has been changed from that of the questionnaire for the analysis. The results, including the frequencies of each scale and the mean score for individual statements, are summarized in Table 4.23.

The results of the first 5 items (see A to E in Table 4.23) show that the participants believed that pronunciation plays an important role in achieving effective communication (item A), with a mean score of 3.89, and that having a foreign accent does not interfere with communication (item B), with a mean score of 4.31. It is also important to note that the participants slightly disagreed with accent reduction for effective communication (item C), with a mean score of 2.83. The remaining two statements in this group concerned native speakers' pronunciation as a norm. Item D directly asked whether the participants believed that learners should learn to sound like native speakers. Forty-four disagreed and 37 strongly disagreed with the idea of aiming at native-like pronunciation, with a mean score of 1.92. In contrast, in response to item E, most participants agreed that hearing a large amount of native pronunciation could help the learners improve their pronunciation. Sixty-six of the participants agreed and 11 strongly agreed with this statement (mean score of 3.80). To summarize, some of the participants who believed that learners could communicate with foreign accents also opined that learners should reduce foreign accents for more effective communication. The participants also believed that native-like pronunciation was not the learning goal for learners but agreed nonetheless with the idea of using native speakers' pronunciation for pronunciation learning.

Table 4.23*Teachers' Beliefs About Pronunciation Learning*

| | Statements of beliefs about pronunciation learning | 1 | 2 | 3 | 4 | 5 | Mean |
|---|--|----|----|----|----|----|------|
| A | Learning English pronunciation is needed for effective communication. | 0 | 9 | 12 | 62 | 18 | 3.89 |
| B | Learners of English can communicate even when they have foreign accent. | 0 | 1 | 5 | 56 | 39 | 4.31 |
| C | Learners of English should reduce their foreign accents for effective communication. | 7 | 32 | 37 | 22 | 3 | 2.83 |
| D | Learners should learn to sound like native speakers. | 37 | 44 | 15 | 4 | 2 | 1.92 |
| E | Hearing a large amount of native pronunciation helps learners improve their pronunciation. | 0 | 6 | 19 | 66 | 11 | 3.80 |
| F | Japanese university students should improve their English pronunciation. | 1 | 6 | 19 | 61 | 14 | 3.80 |
| G | Japanese university students' pronunciation is good enough for effective communication. | 7 | 32 | 29 | 30 | 3 | 2.91 |
| H | Japanese university students are interested in pronunciation. | 1 | 12 | 45 | 39 | 4 | 3.34 |
| I | University students in Japan dislike learning English pronunciation. | 4 | 43 | 44 | 11 | 0 | 2.61 |
| J | Learners are likely to have communication breakdown when they speak English with incorrect word stress (e.g., "VANilla" instead of "vaNILLa"). | 1 | 10 | 17 | 60 | 13 | 3.75 |
| K | Speaking English with incorrect sentence stress is likely to interfere with effective communication. (e.g., "I'm going TO THE store ON Friday.") | 1 | 14 | 18 | 59 | 9 | 3.62 |
| L | Learners can communicate effectively even when they speak with incorrect intonation (e.g., saying "Would you like coffee or tea?" with a rising tone at the end of both "coffee" and "tea"). | 3 | 23 | 18 | 57 | 1 | 3.29 |
| M | Mispronouncing the consonants /l/ and /r/ is likely to cause communication breakdown (e.g., "light" vs. "right," "climb" vs. "crime"). | 3 | 22 | 21 | 48 | 7 | 3.34 |
| N | Mispronouncing the consonants "th" in "theme" and "s" in "seam" is likely to cause communication breakdown (e.g., "thin" vs. "sin," "tenth" vs. "tense"). | 3 | 21 | 27 | 42 | 8 | 3.31 |
| O | Mispronouncing the vowels "o" in "cot" and "a" in "cat" causes communication breakdown (e.g., "pod" vs. "pad," "hot" vs. "hat"). | 2 | 22 | 25 | 47 | 5 | 3.31 |
| P | Mispronouncing the vowels "oo" in "pool" and "u" in "pull" is likely to cause communication breakdown (e.g., "fool" vs. "full," "stewed" vs. "stood"). | 2 | 28 | 23 | 41 | 7 | 3.24 |
| Q | Learners at any age can learn English pronunciation to mastery. | 6 | 26 | 29 | 35 | 6 | 3.09 |
| R | After a certain age, learners stop learning English pronunciation. | 18 | 38 | 34 | 11 | 1 | 2.40 |
| S | Learners at any age can improve their English pronunciation. | 1 | 11 | 19 | 50 | 21 | 3.77 |

Note. 1 = strongly disagree, 2 = disagree, 3 = don't know, 4 = agree, 5 = strongly agree

The next four statements (see F to I in Table 4.23) were related to the teaching contexts in which the participants were teaching at the time of the research, and all four of these statements concerned university students in Japan. First, in response to item F, most of the participants expressed that university students in Japan should improve their pronunciation, with a mean score of 3.80.

Although the trend is not as clear as the first, similar results were found for the next statement, item G: the participants tended to disagree that Japanese university students' pronunciation was good enough for effective communication (mean score of 2.91). Regarding Japanese university students' interest in pronunciation learning (item H), the participants tended to believe that the students are interested in pronunciation learning, with a mean score of 3.34. There was one negatively worded statement, item I. Although the result of this item will be excluded from further analysis, it is worth noting that the participants did not believe that the Japanese university students disliked learning pronunciation of the English language, with a mean score of 2.61. Overall, the participants believed that Japanese university students' pronunciation is good enough for effective communication but should be improved further, and they also posited that students are interested in learning English pronunciation in the classroom.

The next construct concerns participants' beliefs about the impacts of different types of pronunciation errors on effective communication (see J to P in Table 4.23). The results in this construct showed that the participants believed that any of the errors in lexical stress, sentence stress, intonation, consonants, and vowels would negatively affect intelligibility. The mean score for item J was 3.75, and 60 agreed and 13 strongly agreed that errors in lexical stress would cause communication breakdown. The second-highest mean score was found for item K, with a mean score of 3.62. Fifty-nine agreed and 9 strongly agreed that incorrect sentence stress was likely to

interfere with effective communication. The lowest mean score in this construct, 3.29, was identified for item L, but still 57 agreed and 1 strongly agreed that errors in intonation caused difficulties in communication. The other four statements in this construct related to consonants and vowels. Here, four minimal pairs, comprising two pairs of consonants, one with high functional load and the other with low functional load, and two pairs of vowels, one with high functional load and the other with low function load, were included. The results showed that the participants tended to believe that any error in distinguishing between these four segmentals would cause difficulties in communication. For /l/ and /r/ (item M), 42 participants agreed and 8 strongly agreed that the mispronunciation of this pair would cause communication breakdown, with a mean score of 3.34. In response to item N, 42 participants agreed and 8 strongly agreed that mispronunciation between /θ/ and /s/ would cause difficulty in communication, with a mean score of 3.31. For item O, 47 agreed and 5 strongly agreed that mispronouncing the vowels /ɑ/ and /æ/ would interfere with communication, with a mean score of 3.31. Finally, in response to item P, 41 participants agreed and 7 strongly agreed that conflation of or confusion between /u/ and /ʊ/ would cause a problem with intelligibility, with a mean score of 3.24.

The final construct in this section pertained to the participants' beliefs about the age of learners and pronunciation learning. There were three statements in this construct: item Q, for whether learners could master English pronunciation regardless of their age; item R, regarding whether learners stop learning pronunciation at a certain age; and item S, about whether learners could improve pronunciation regardless of their age. The results demonstrated that a slightly higher number of participants agreed ($n = 35$) and strongly agreed ($n = 6$) that learners could master English pronunciation than those who disagreed ($n = 26$) and strongly disagreed ($n = 6$), with a

mean score of 3.09. Thirty-eight participants also disagreed and 18 strongly disagreed that learners stop learning pronunciation at a certain age (mean score of 2.44). Finally, 50 agreed and 21 strongly agreed that learners could improve their pronunciation at any age, with a mean score of 3.77. In summary, the participants believed that learners were capable of improving their pronunciation without stopping learning regardless of age but could not agree on whether learners could master pronunciation at any age.

4.2 Decision-Making Models for Teaching Strategies

The survey results reported above are highly informative in terms of the size of samples as well as the number of items. After careful observation of the descriptive results of the survey, several factors seem to be related and altogether might be able to explain the teachers' choice of teaching strategies. The structural equation models (SEMs) can be a useful tool for analysis and demonstration of the influences of a construct and other related factors. As discussed in Chapter 2, teachers' beliefs, interests, experience in teaching and learning, teacher training in pronunciation pedagogy, and self-confidence seem to influence their decisions on pronunciation teaching interdependently. Based on the descriptive results shown earlier in this chapter as well as findings in previous studies, seven variables were chosen for further analysis because they appear to be strongly related to teachers' decisions on the selection of individual strategies to teach pronunciation.

The variable selection for the SEM was based on the Borg's (2015) teacher cognition model, which represents the overall conceptualization of teacher cognition interacting with the education, contexts, and practices of teachers. Following the key elements of this model, the questionnaire in this study included education, contexts, and teaching practices in addition to beliefs, knowledge, self-confidence, and interest to operationalize teacher cognition. However, due to the

limited number of responses ($n = 102$), the SEM cannot analyze all of the variables in the survey. Relevant previous studies in relation to teacher cognition in pronunciation teaching as well as empirical data in the pilot were taken into consideration for the variable selection in the very first model.

- **self-confidence in ability to teach pronunciation** (Conf_PT, i.e., how confident teachers are in their ability to teach pronunciation) and **self-confidence in knowing pronunciation teaching** (Conf_Knowdge_T, i.e., how confident teachers are in knowing effective methods in pronunciation teaching): From previous studies about pronunciation teaching, lack of self-confidence in one's ability to teach pronunciation and lack of knowledge of how to teach pronunciation effectively appear to influence directly a teacher's decision not to teach pronunciation (Baker & Murphy, 2011; Foote, et al., 2011). For the SEM analysis, two types of self-confidence were adopted from the survey: self-confidence in one's knowledge of effective pronunciation teaching and self-confidence in one's ability to teach pronunciation effectively. The former comprises the mean values of the three items that assess the knowledge level of effective methods in pronunciation teaching, the English sound system, and learners' needs in pronunciation (see p. 206), while the latter is rooted in the mean values of the three items related to ability to teach pronunciation: to diagnose learners' pronunciation, to explain the English sound system, and to teach pronunciation (see p. 206).
- **knowledge of terms in pronunciation teaching** (Knowledge, i.e., self-reported familiarity with key terms used in literature in pronunciation pedagogy): In the teaching of pronunciation, the knowledge required for teachers includes phonology, phonetics, and pronunciation pedagogy. Because the subject matter knowledge is considered one of the

constructs in teacher cognition (Freeman, 2002), the knowledge about terms in pronunciation pedagogy was included in the SEM, which utilized the mean scores of the 10 terms included in the survey (see p. 206).

- **emphasis in learning L2 pronunciation** (Emp_L2_Pronunciation, i.e., how important pronunciation was when they learned a language other than their first language):

Questionnaire data suggest that majority of the participants are highly proficient learners of an L2 and exhibit the use of many pronunciation learning strategies. As Breen et al. (2001) discussed, language learning experience is a contributor to the development of teacher cognition and, thus, teachers' decision-making about teaching. Because this study focused on pronunciation teaching instead of on overall proficiency level, emphasis on pronunciation when learning an L2 as a learner was included in the SEM. The response for the item, “[a]s a language learner, how important has it been for you to learn the pronunciation of that foreign/second language?” was used (see p. 208).

- **interest in research findings** (Int_Res, i.e., to what extent teachers are interested in catching up with recent research findings): Empirical evidence through the pilot study supports Fraser's (2006) view that interest plays an important role in decisions about whether teachers learn and read more about pronunciation pedagogy and therefore develop their knowledge about pedagogical pronunciation. However, the direct link between interest and teaching practice has not been examined. To explore the relation between these variables, interest was included in the model. Interest in research findings in pronunciation pedagogy was reflected in the scores for the 5-point Likert scale item “I try to catch up with recent findings in pronunciation teaching” (see p. 217).

- **beliefs in needs of explicit knowledge** (Bel_T_Exp_Kn, i.e., to what extent teachers believe that they need explicit knowledge about pronunciation of the language for their teaching): Beliefs in needs of explicit knowledge can trigger teachers' motivation to learn about pronunciation pedagogy in order to teach pronunciation effectively. As Borg's (2015) model suggested, the influence of beliefs, one of the elements of teacher cognition, has an impact on teaching practice, and this is included in the variables of the SEM. This variable consists of two 5-point Likert scale items in the questionnaire: "Teachers should know the English sound system to teach pronunciation" and "Teachers can teach pronunciation without explicit knowledge about the English sound system" (see p. 218). The values for the latter item were deducted from 6, and the mean values of the two were used for the SEM analysis.
- **length of teacher training in pronunciation** (Ed_Length, i.e., how many hours of education and training in pronunciation teaching that they have undergone): Teacher training is Borg's (2015) model indicates the impact of teacher education (both schooling and professional coursework) in developing teacher cognition. Also, lack of teacher training has been identified as one of major reasons for the neglect of pronunciation teaching in many countries (e.g., Henderson et al., 2012). For this reason, teacher training was included in the SEM, and the quantified item to measure teacher training in the survey was the length of teacher training (see p. 209).

These were used as dependent variables that determine how often the participants reported that they used each of the pronunciation teaching strategies included in the questionnaire:

- **explicit explanation** (EXP, i.e., explaining explicitly how to pronounce segmentals and suprasegmentals to the students),

- **drilling exercising** (DRL, i.e., having students repeat the target pronunciation mechanically),
- **providing pronunciation models** (MDL, i.e., having students listen to the pronunciation models for imitation),
- **giving incidental feedback** (IFB, i.e., offering error feedback incidentally when students make errors in pronunciation),
- **giving post-task feedback** (PTF, i.e., providing error feedback after a communicative task is complete),
- **offering opportunities for peer feedback** (PFB, i.e., providing students with opportunities to evaluate each other's pronunciation), and
- **providing opportunities for self-evaluation** (SEV, i.e., giving opportunities for students to evaluate their own pronunciation).

The first model to be analyzed is shown in Figure E.1 in Appendix E. In this model, all seven of the variables listed above were directly linked to the teaching strategy. However, the fit indices for this model (see Table E.1.1 in Appendix E) show that this model does not fit with the minimum discrepancy (CMIN) of 265.641 ($p = .000$). Also, the unstandardized and standardized regression weight estimates show that self-confidence in ability to teach pronunciation seems to be the only predictor of the use of teaching strategy (see Tables E.1.2 and E.1.3 in Appendix E). Therefore, the direct links from each of the variables listed above were not included, and further models were developed based on what previous studies have found for further analyses.

In terms of the variables in the original model, the length of training in pronunciation teaching was excluded from further analyses because this data set did not show a normal

distribution. The kurtosis value of 6.027 was greater than the critical value of 3.29 (Takeuchi & Mizumoto, 2014). This lack of normal distribution in the data set was not due to a small number of outliers; the highest Mahalanobis distance squared (d -squared) value was the participant number 28 with 30.756, which is smaller than the critical value of the chi-squared (χ^2) of 32.67 for the degree of freedom of 21. The cause of this lack of normal distribution was that 30 of the participants may have not had any training. Thus, the further analyses of the SEM were administered without the length of teacher training in pronunciation pedagogy.

The further models without the teacher training and direct links between the individual variables and teaching strategies were developed based on what previous studies in teacher cognition in general and in pronunciation pedagogy have found. Borg's (2015) model demonstrated the overall concept of teacher cognition without specifying individual links among the variables, and other relevant literature and empirical data were consulted to revise the original model. First, self-confidence in ability to teach pronunciation was directly related to teaching strategy from the original model, with the regression estimate .57. Second, self-confidence in one's ability to teach pronunciation seems to be related to self-confidence in knowledge of pronunciation teaching that was gained through reading relevant literature and through teacher education. As Burri et al. (2017) revealed, pre-service teachers learn about pronunciation pedagogy through teacher education, in which they learn key terms in pronunciation pedagogy and gain self-confidence. Third, self-reported knowledge about terms in pronunciation pedagogy should be related to reading the relevant literature. Interest in learning about research findings increases the amount of reading, which inevitably leads to increased familiarity with the terms. Self-confidence in knowledge about pronunciation pedagogy also derives from learning, at least partly through reading and education.

Fourth, beliefs that teachers need to gain explicit knowledge about pronunciation can be related to teachers' common concern to meet the learners' expectations of explicit learning, as Borg (2015) suggested. Although Borg's argument pertains to grammatical knowledge, it seems reasonable to transfer his concept into pronunciation teaching. The motivation to learn about the pronunciation system seems to be related to consulting literature in pronunciation pedagogy and pronunciation itself. Finally, self-confidence in knowing pronunciation teaching seems to stem from their L2 learning experience. Given the large number of non-native speakers in this study, the successful learning experience in an L2 seems to play at least a part of self-confidence in knowing how to teach pronunciation. As Burri et al. and Murphy (2014) suggested, the successful language learning experience that teachers have undergone should be the source of self-confidence as well as effective teaching.

4.2.1 Decision-Making Model for Use of Explicit Teaching

The first model shows how the following seven variables are interrelated and influence how often teachers employ explicit explanation about how to pronounce segmentals and suprasegmentals in teaching: (1) self-confidence in ability to teach pronunciation, (2) self-confidence in knowing pronunciation teaching, (3) self-reported knowledge of terminology, (4) emphasis in learning L2 pronunciation, (5) interest in research findings, and (6) beliefs in the need for explicit knowledge. To determine whether these factors can meet the preconditions for the SEM, first, the normality of the data was examined. For the normality test, the skewness, the kurtosis, and the Mahalanobis distance were calculated using SPSS AMOS 25. As Table 4.24 shows, all the skewness and kurtosis values, except the lengths of teacher training in pronunciation pedagogy, exceeded 5.00, which is one of the preconditions for structural equation modeling analysis (Takeuchi & Mizumoto, 2014).

Table 4.25 also shows the part of the results of Mahalanobis distance values and indicates that the participant number 20 was the farthest from the centroid, with a Mahalanobis d -squared value of 18.367. Because at the $p = 0.01$ significance level, the critical value of the χ^2 distribution for $df = 14$ (for this analysis, the degree of freedom is 14) is 29.14 (Field, 2009), participant 20 was within the normal range. Therefore, no outlier was found in the data set, and there were in total 102 participants for this analysis, which met the minimum size of samples for structural equation modeling (Takeuchi & Mizumoto, 2014).

Table 4.24

Assessment of Normality of Variables in Model for Different Models

| Variable | min | max | skew | <i>c.r.</i> | kurtosis | <i>c.r.</i> |
|----------------------|-------|--------|--------|-------------|----------|-------------|
| Ed_Length | 0.000 | 120.00 | 1.871 | .239 | 6.207 | .474 |
| Bel_T_Exp_Kn | 1.000 | 5.000 | -1.505 | -6.205 | 3.263 | 6.727 |
| Emp_L2_Pronunciation | 1.000 | 5.000 | -.517 | -2.132 | -.192 | -.396 |
| Int_Res | 1.000 | 5.000 | .135 | .555 | -1.240 | -2.556 |
| Conf_Knowdge_T | 1.000 | 5.000 | -.328 | -1.351 | .145 | .299 |
| Knowledge | 1.600 | 5.000 | -.445 | -1.833 | -.684 | -1.410 |
| Conf_PT | 1.000 | 5.000 | -.217 | -.893 | -.231 | -.477 |
| EXP | 1.000 | 5.000 | .419 | 1.729 | -.962 | -1.983 |
| Multivariate | | | | | .483 | .217 |
| DRL | 1.000 | 5.000 | .484 | 1.995 | -1.040 | -2.143 |
| Multivariate | | | | | .283 | .128 |
| MDL | 1.000 | 5.000 | -.597 | -2.463 | -.694 | -1.430 |
| Multivariate | | | | | 1.822 | .819 |
| IFB | 1.000 | 5.000 | -.104 | -.429 | -.974 | -2.008 |
| Multivariate | | | | | -.216 | -.097 |
| PTF | 1.000 | 5.000 | .032 | .134 | -.766 | -1.579 |
| Multivariate | | | | | 1.169 | .526 |
| PFB | 1.000 | 5.000 | 1.719 | 7.089 | 2.295 | 4.732 |
| Multivariate | | | | | 3.606 | 1.622 |
| SEV | 1.000 | 5.000 | 1.795 | 7.403 | 2.492 | 5.137 |
| Multivariate | | | | | 3.856 | 1.735 |

Table 4.25*Mahalanobis Distance in Model for Use of Explicit Teaching*

| Observation number | Mahalanobis <i>d</i> -squared | <i>p</i> 1 | <i>p</i> 2 |
|--------------------|-------------------------------|------------|------------|
| 20 | 18.367 | .010 | .656 |
| 15 | 17.565 | .014 | .422 |
| 32 | 17.180 | .016 | .231 |
| 72 | 13.522 | .060 | .870 |
| 12 | 13.255 | .066 | .812 |

Note: This shows only the five highest *d*-squared values.

The model for explicit teaching is shown in Figure 4.1, and the model was examined for the minimum discrepancy (CMIN), which is also often referred to as a χ^2 statistic, the comparative fitness index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR), as Takeuchi and Mizumoto (2014) recommended. According to Takeuchi and Mizumoto, the CFI value is usually shown between .00 and 1.00, and a value of .95 or higher can be considered to be an indicator of good fit. TLI is usually shown between .00 and 1.00, but sometimes it exceeds 1.00. In such cases, a value closer to 1.00 is considered to be an acceptable fit. The RMSEA value is shown to be .05 or smaller, and when it is close to .00, which is the exact fit (Byrne, 2016), the model can be considered to be a good fit. Finally, the SRMR value is also shown from .00 to 1.00, and a value of .08 or smaller is considered to be ideal (Takeuchi & Mizumoto, 2014).

As Table 4.26 shows, the fit indices for this model showed that the values were within acceptable levels. The CMIN was returned with a value of 13.704 and a significance level of .782, higher than the .05 level. Thus, the null hypothesis that this model is fit cannot be rejected, and this model can be fit. The CFI value was 1.000, which is higher than .95, the minimum value for a fitted

model. In terms of the TLI value, the closer to 1.000 that the value is, the fitter the model is. In this model, the TLI was 1.024, which was considered acceptable. The RMSEA value for this model was .000, which showed the exact fit. Also, the SRMR value was .0654, which was smaller than .08, the criteria for indicating that this is a fit model. The correlation matrix, with the correlation with the mean value (mean) and standard deviation (SD) for the variables used in the model, is summarized in Table 4.27. In the structural equation modeling, variables in the model do not need to be significantly correlated, but most pairs of variables seemed to be significantly associated. Beliefs in need for explicit knowledge was found to be correlated with none of the variables except interest in research findings, which was found to be significantly correlated with knowledge of terms in pronunciation teaching and self-confidence in ability to teach pronunciation. Emphasis in learning L2 pronunciation was not found to be correlated with interest in research but was significantly correlated with all the other variables. Self-confidence in knowing pronunciation teaching was significantly correlated with knowledge of terms in pronunciation teaching, self-confidence in ability to teach pronunciation, and use of explicit teaching. Knowledge of terms in pronunciation teaching was significantly correlated with self-confidence in ability to teach pronunciation and use of explicit teaching. Finally, self-confidence in ability to teach pronunciation was not found to be correlated with use of explicit teaching. In terms of correlations, there seem to be several non-significant correlations among variables, and overall, this model was a good fit based on the model fit indices.

Table 4.26*Fit Indices for Model for Explicit Teaching*

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|--------------------------|--------|----|------|-------|-------|-------|------|------|-------|
| Use of explicit teaching | 13.704 | 14 | .782 | 1.000 | 1.024 | .000 | .000 | .065 | .0654 |

Table 4.27*Correlation Matrix of Variables in Model for Use of Explicit Teaching*

| | Beliefs in needs of explicit knowledge | Emphasis in learning L2 pronunciation | Interest in research findings | Self-confidence in knowing pronunciation teaching | Knowledge of terms in pronunciation teaching | Self-confidence in ability to teach pronunciation | Use of explicit teaching |
|---|--|---------------------------------------|-------------------------------|---|--|---|--------------------------|
| Belief in need for explicit knowledge | 1 | | | | | | |
| Emphasis in learning L2 pronunciation | .090 | 1 | | | | | |
| Interest in research findings | .292** | .168 | 1 | | | | |
| Self-confidence in knowing pronunciation teaching | .080 | .470** | .160 | 1 | | | |
| Knowledge of terms in pronunciation teaching | .112 | .313** | .284** | .618** | 1 | | |
| Self-confidence in ability to teach pronunciation | .031 | .208* | .344** | .498** | .360** | 1 | |
| Use of explicit teaching | -.001 | .291** | .098 | .444** | .330** | .159 | 1 |
| Mean | 4.0882 | 4.0392 | 2.8431 | 3.3625 | 3.8824 | 3.3922 | 2.4510 |
| Standard Deviation | .83373 | .87791 | 1.31815 | .90008 | .85601 | 0.9462 | 1.24779 |

**Significant at $p < .01$. *Significant at $p < .05$.

In terms of estimates of regression weights for individual paths in the model, all the paths were found to be significant at the level of $p < .05$. As shown in Table 4.28, paths from “emphasis in learning L2 pronunciation” to “self-confidence in knowing pronunciation teaching,” from “self-confidence in knowing pronunciation teaching” to “self-reported knowledge of terms in pronunciation pedagogy,” from “self-confidence in knowing pronunciation teaching” to “self-confidence in ability to teach pronunciation,” and from “self-confidence in ability to teach pronunciation” to “use of explicit teaching” were found to be significant. As Table 4.29 illustrates, the predictabilities of these paths were relatively strong, with the standardized estimates .470, .598, .786, and .526, respectively. The paths from “belief in need for explicit knowledge” to “interest in research findings,” from “interest in research findings” to “self-reported knowledge of terms in pronunciation pedagogy,” and from “self-reported knowledge of terms in pronunciation pedagogy” to “self-confidence in ability to teach pronunciation,” were also found to be significant at the level of $p < .05$ (Table 4.28), although the predictabilities of these paths were not as high as the other four, with the standardized estimates of .292, .194, and .154, respectively (Table 4.29). The variances of errors in the model are summarized in Table 4.30. Overall, although some paths were not as strong as the others, all the paths seemed to be at least acceptable in terms of the regression weights.

From the structural equation model for use of explicit teaching, the results demonstrated that the frequency by which teachers explain how to pronounce segmentals and suprasegmentals explicitly in teaching pronunciation could be predicted by how confident they were in their ability to teach pronunciation. Furthermore, two variables predicted self-confidence in ability to teach pronunciation: knowledge of terms in pronunciation teaching and self-confidence in knowing

pronunciation teaching. The former of these variables was predicted by interest in research findings, while the latter was predicted by emphasis in learning L2 pronunciation. Finally, belief in the need for explicit knowledge was a predictor of interest in research findings. Therefore, it can be concluded that beliefs that teachers must gain explicit knowledge about pronunciation because teaching inspired them to learn about research findings about pronunciation pedagogy, which in turn resulted in familiarity with key terms often used in articles and books in pronunciation pedagogy. The knowledge of the terminology somehow helped the teachers to gain self-confidence in their ability to teach pronunciation. Those who emphasized pronunciation when learning a second or foreign language also tended to be more confident about their knowledge of effective methods in pronunciation teaching, and this self-confidence in knowing pronunciation teaching methods helped the teachers to be confident about their ability to teach pronunciation. Last, confidence in their ability to teach pronunciation could have influenced how often they used explicit explanations about pronunciation when they taught.

In light of the relatively high standardized regression estimates, the teachers' self-confidence in their ability to teach pronunciation effectively and knowledge about effective pronunciation teaching are considered the most important variables in this model. Further, the emphasis on pronunciation when learning an L2 as a learner seems to have played a vital role in determining self-confidence, which directly influenced the decision-making about the use of explicit teaching strategies in pronunciation teaching. Therefore, these three variables are the most influential factors to determine the use of explicit teaching in pronunciation teaching.

Figure 4.1

Decision-Making Model of Use of Explicit Teaching

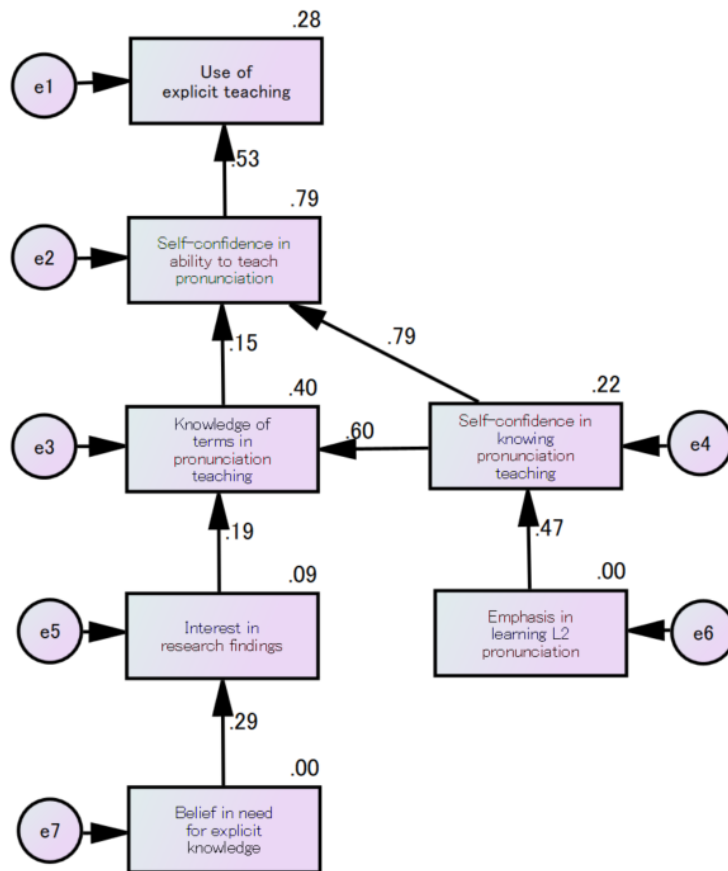


Table 4.28*Unstandardized Regression Weights in Model for Different Teaching Strategies*

| | | | Estimate | S.E. | c.r. | p |
|----------------|---|----------------------|----------|------|--------|------|
| Conf_Knowdge_T | ← | Emp_L2_Pronunciation | .482 | .090 | 5.359 | *** |
| Int_Res | ← | Bel_T_Exp_Kn | .462 | .150 | 3.068 | .002 |
| Knowledge | ← | Conf_Knowdge_T | .559 | .072 | 7.732 | *** |
| Knowledge | ← | Int_Res | .124 | .049 | 2.509 | .012 |
| Conf_PT | ← | Conf_Knowdge_T | .799 | .059 | 13.659 | *** |
| Conf_PT | ← | Knowledge | .168 | .063 | 2.673 | .008 |
| Knowledge | ← | Ed_Length | .001 | .003 | .274 | .784 |
| EXP | ← | Conf_PT | .716 | .115 | 6.221 | *** |
| DRL | ← | Conf_PT | .500 | .137 | 3.653 | *** |
| MDL | ← | Conf_PT | .658 | .131 | 5.031 | *** |
| IFB | ← | Conf_PT | .449 | .124 | 3.608 | *** |
| PTF | ← | Conf_PT | .258 | .124 | 2.084 | .037 |
| PFB | ← | Conf_PT | .028 | .104 | .272 | .786 |
| SEV | ← | Conf_PT | .030 | .111 | .272 | .786 |

Note. *** Significant at the level of $p < .001$.**Table 4.29***Standardized Regression Weights in Model for Different Teaching Strategies*

| | | | Estimate |
|----------------|---|----------------------|----------|
| Conf_Knowdge_T | ← | Emp_L2_Pronunciation | .470 |
| Int_Res | ← | Bel_T_Exp_Kn | .292 |
| Knowledge | ← | Conf_Knowdge_T | .598 |
| Knowledge | ← | Int_Res | .194 |
| Conf_PT | ← | Conf_Knowdge_T | .786 |
| Conf_PT | ← | Knowledge | .154 |
| Knowledge | ← | Ed_Length | .021 |
| EXP | ← | Conf_PT | .526 |
| DRL | ← | Conf_PT | .342 |
| MDL | ← | Conf_PT | .448 |
| IFB | ← | Conf_PT | .338 |
| PTF | ← | Conf_PT | .203 |
| PFB | ← | Conf_PT | .027 |
| SEV | ← | Conf_PT | .027 |

Table 4.30*Variances of Errors in Model for Different Teaching Strategies*

| | Estimate | S.E. | c.r. | p |
|----------|----------|------|-------|-----|
| e7 | .688 | .097 | 7.106 | *** |
| e6 | .763 | .107 | 7.106 | *** |
| e5 | 1.574 | .221 | 7.106 | *** |
| e4 | .625 | .088 | 7.106 | *** |
| e3 | .423 | .060 | 7.106 | *** |
| e2 | .178 | .025 | 7.106 | *** |
| e1 (EXP) | 1.112 | .156 | 7.106 | *** |
| e1 (DRL) | 1.573 | .221 | 7.106 | *** |
| e1 (MDL) | 1.436 | .202 | 7.106 | *** |
| e1 (IFB) | 1.297 | .182 | 7.106 | *** |
| e1 (PTF) | 1.286 | .181 | 7.106 | *** |
| e1 (PFB) | .913 | .128 | 7.106 | *** |
| e1 (SEV) | 1.026 | .144 | 7.106 | *** |

Note. *** Significant at the level of $p < .001$.

4.2.2 Decision-Making Model for Use of Mechanical Drill Exercise

In terms of the use of mechanical drills for pronunciation teaching, the model was found to be as fit as that of the use of explicit teaching. As shown in Figure 4.2, all the variables used in the model were the same as those in the model for the use of explicit teaching. In other words, the analysis was administered to test whether the same model could predict how often the teachers used mechanical drills in pronunciation teaching. Because one of the variables was replaced, the Mahalanobis distance was tested to ensure that there were no outliers. Table 4.31 shows the five participants from the highest Mahalanobis d -squared values, and participant number 20 had the farthest from the centroid, with the Mahalanobis d -squared value of 18.308. The degree of freedom of this model was 14, which required the critical value of the χ^2 distribution of 29.14 at the significance level of $p < .01$ (Field, 2009). Based on this d -squared value, no outliers were found in

the data. Regarding the Pearson correlations, as Table 4.32 shows, most of the variables indicated statistically significant correlations. Due to the fact that only using drilling exercises was the variable replaced from the model of use of the explicit model, the correlations with this variable will be described here. The correlations between use of drilling exercise and two variables were found to be statistically significant: emphasis in learning L2 pronunciation at the level of $p < .05$ and self-confidence in knowing pronunciation teaching at the level of $p < .01$. The p -values were .248 and .294, respectively. The correlations between use of drilling exercise and the other four variables were not statistically significant at the level of $p < .05$.

Table 4.31

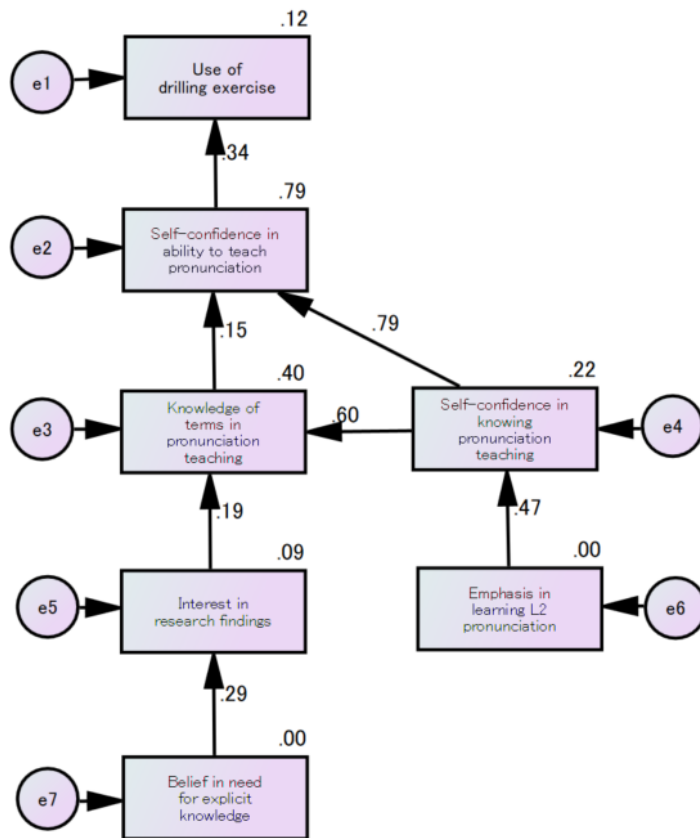
Mahalanobis Distance in Model for Use of Drilling Exercise

| Observation number | Mahalanobis d -squared | $p1$ | $p2$ |
|--------------------|--------------------------|------|------|
| 20 | 18.308 | .011 | .665 |
| 15 | 17.653 | .014 | .406 |
| 32 | 17.051 | .017 | .253 |
| 79 | 14.442 | .044 | .659 |
| 65 | 13.997 | .051 | .604 |

Note: This shows only the five highest d -squared values.

Figure 4.2

Decision-Making Model for Use of Drilling Exercise



The fit indices for the decision-making model for the use of drilling exercise showed that the overall model is a good fit, with a CMIN value of 13.107 and $df = 14$, and the significance level is .518, which was $p > .05$ (Table 4.33). Thus, the null hypothesis that this model is a correct representation of what these variables predict cannot be rejected. The CFI value was 1.000, and TLI was 1.005—acceptably close enough to 1.000, although it exceeded this value. The RMSEA value

of .000 showed that this model was an exact fit, and the SRMR was .0710, less than the ideal value for a fit model of .08. Overall, these fit indices for the decision-making model for the use of mechanical drills in pronunciation teaching were considered to be a good fit.

Table 4.32

Correlation Matrix of Variables in Model for Use of Drilling Exercise

| | Beliefs in needs of explicit knowledge | Emphasis in learning L2 pronunciation | Interest in research findings | Self-confidence in knowing pronunciation teaching | Knowledge of terms in pronunciation teaching | Self-confidence in ability to teach pronunciation | Use of drilling exercise |
|---|--|---------------------------------------|-------------------------------|---|--|---|--------------------------|
| Beliefs in needs of explicit knowledge | 1 | | | | | | |
| Emphasis in learning L2 pronunciation | .090 | 1 | | | | | |
| Interest in research findings | .292** | .168 | 1 | | | | |
| Self-confidence in knowing pronunciation teaching | .080 | .470** | .160 | 1 | | | |
| Knowledge of terms in pronunciation teaching | .112 | .313** | .284** | .618** | 1 | | |
| Self-confidence in ability to teach pronunciation | .031 | .208* | .344** | .498** | .360** | 1 | |
| Use of drilling exercise | .085 | .248* | 0.095 | .294** | .121 | .172* | 1 |
| Mean | 4.0882 | 4.0392 | 2.8431 | 3.3625 | 3.8824 | 3.3922 | 2.3725 |
| Standard Deviation | 0.83373 | 0.87791 | 1.31815 | 0.90008 | 0.85601 | 0.94562 | 1.34180 |

**Significant at $p < .01$. *Significant at $p < .05$.

Table 4.33*Fit Indices for Model for Use of Drilling Exercise*

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|--------------------------|--------|----|------|-------|-------|-------|------|------|-------|
| Use of drilling exercise | 13.107 | 14 | .518 | 1.000 | 1.005 | .000 | .000 | 0.91 | .0710 |

The replaced variable from the model for the use of explicit teaching was “use of drilling exercise,” and the path that contains this variable was the one from “self-confidence in ability to teach pronunciation” to “use of drilling exercise.” Unstandardized regression weights estimates of all the paths in the model for the use of mechanical exercise are summarized in Table 4.28. The replaced path showed an estimate of .500 with a standard error of .137, and this was found to be significant at the level of $p < .001$. The standardized regression weights estimate for this path was .342, and the variance of e1 for the replaced variable (“use of drilling exercise”) was 1.573 with a standard error of .221, which was found to be significant at the level of $p < .001$.

Based on the standardized regression weights, the direct causal relation between “use of mechanical drill exercise in pronunciation teaching” and “self-confidence in ability to teach pronunciation effectively” was not as strong as the model for “use of explicit teaching.” Nevertheless, in this model, “self-confidence in knowing effective pronunciation teaching” is well predicted by “emphasis on pronunciation in L2 learning experience” and can predict “self-confidence in ability to teach pronunciation.” In short, in this model, “emphasis on pronunciation in learning an L2 as a learner” and “self-confidence in knowing pronunciation teaching” are the two most important variables that eventually contribute to predicting “use of drill exercises” in teaching.

4.2.3 Decision-Making Model for Providing Pronunciation Models

The decision-making model for providing pronunciation models was nearly identical to the previous two models, with the only difference in the variable of providing pronunciation models in teaching pronunciation (MDL). The normality and outliers were tested, and as shown in Table 4.24, the skewness and kurtosis values for this variable were in the normal distribution range. In addition, the Mahalanobis distance was calculated for testing outliers. Table 4.34 summarizes the five participants with the farthest distance from the centroid, with participant number 15 having the highest Mahalanobis d -squared value of 19.142. Because the degree of freedom for this model was 14, this d -squared value was less than the χ^2 distribution of 29.14, the critical value at the significance level at $p < .01$ (Field, 2009). The results of these tests indicated that the variables in the model were normally distributed, and no outliers were found in the data set.

Table 4.34

Mahalanobis Distance in Model for Providing Pronunciation Models

| Observation number | Mahalanobis d -squared | $p1$ | $p2$ |
|--------------------|--------------------------|------|------|
| 15 | 19.142 | .008 | .548 |
| 20 | 18.326 | .011 | .294 |
| 32 | 16.946 | .018 | .272 |
| 81 | 15.943 | .026 | .266 |
| 34 | 15.765 | .027 | .148 |

Note: This shows only the five highest d -squared values.

Table 4.35*Correlation Matrix of Variables in Model for Providing Pronunciation Models*

| | Beliefs in needs of explicit knowledge | Emphasis in learning L2 pronunciation | Interest in research findings | Self-confidence in knowing pronunciation teaching | Knowledge of terms in pronunciation teaching | Self-confidence in ability to teach pronunciation | Use of drilling exercise |
|---|--|---------------------------------------|-------------------------------|---|--|---|--------------------------|
| Beliefs in needs of explicit knowledge | 1 | | | | | | |
| Emphasis in learning L2 pronunciation | 0.090 | 1 | | | | | |
| Interest in research findings | .292** | 0.168* | 1 | | | | |
| Self-confidence in knowing pronunciation teaching | 0.080 | .470** | 0.160 | 1 | | | |
| Knowledge of terms in pronunciation teaching | 0.112 | .313** | .284** | .618** | 1 | | |
| Self-confidence in ability to teach pronunciation | 0.031 | .208* | 0.344** | .498** | .360** | 1 | |
| Use of pronunciation model | -0.084 | .351** | 0.045 | .325** | 0.162 | .162 | 1 |
| Mean | 4.0882 | 4.0392 | 2.8431 | 3.3625 | 3.8824 | 3.3922 | 3.5000 |
| Standard Deviation | 0.83373 | 0.87791 | 1.31815 | 0.90008 | 0.85601 | 0.94562 | 1.34790 |

**Significant at $p < .01$. *Significant at $p < .05$.

Figure 4.3

Decision-Making Model of Providing Pronunciation Models

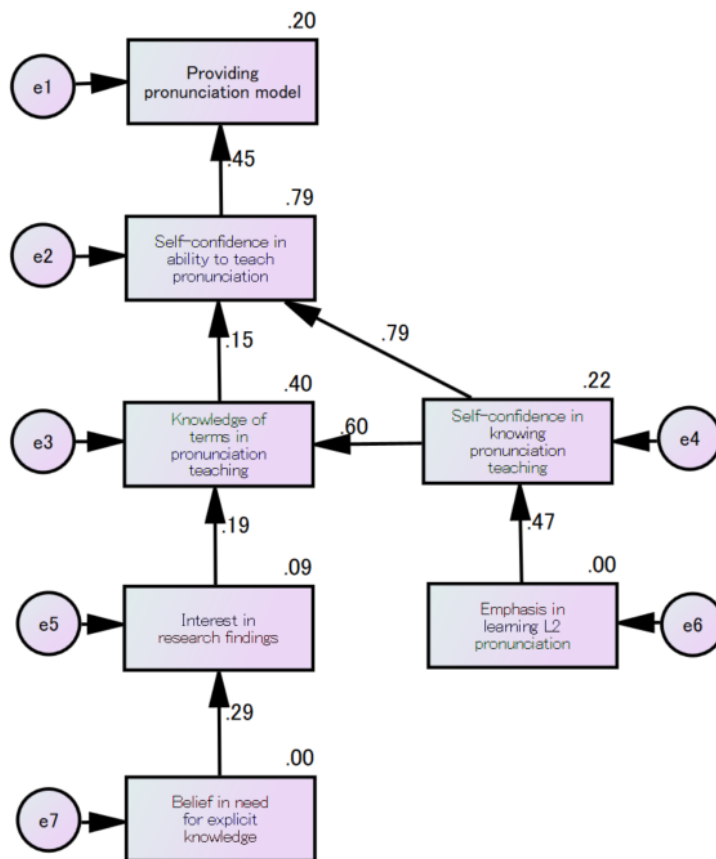


Table 4.36

Fit Indices for Model of Providing Pronunciation Models

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|--------------------------|--------|----|------|------|------|-------|------|------|-------|
| Use of drilling exercise | 18.979 | 14 | .166 | .981 | .972 | .059 | .000 | .121 | .0760 |

The decision-making model for providing pronunciation models is shown in Figure 4.3, and it was found to be a reasonable fit (see Table 4.36). The CMIN value was 18.979, with $df = 14$. The probability was .166, which was not significant, meaning that the null hypothesis that this model was the true representation of what the variables show cannot be rejected. The CFI value was .981, which exceeds the critical value of .95. The TLI value was .972, which was close enough to 1.000. The RMSEA value was .059, which was slightly greater than the critical value of .05 but small enough to be “indicative of good fit” (Byrne, 2016). Finally, the SRMR was .760, which was less than the critical value of .08. Overall, the model of providing pronunciation models in teaching pronunciation was found to be a reasonable fit.

In terms of important variables in this model, the standardized regression weights show that “self-confidence in ability to teach pronunciation” is a relatively strong predictor of the frequency of “use of pronunciation model” in pronunciation. The other two variables found to be important in the models of “use of explicit teaching” and “mechanical drill exercise” are also important variables that led to the teachers’ decision about “use of pronunciation models in pronunciation teaching.”

4.2.4 Decision-Making Model for Use of Incidental Feedback

The variables in the model for the use of incidental feedback were first tested for normality. As Table 4.24 shows, none of the skewness and kurtosis values exceeded 5.00; hence, all the variables were normally distributed. As for the individual participants, the Mahalanobis distance was calculated, and the Mahalanobis d -squared value of the participant who was the farthest from the centroid was 18.414 (see Table 4.37). At a degree of freedom of 14, the critical χ^2 is 29.14 (Field, 2009); thus, there were no outliers in the data used for this model. As Table 4.38 illustrates, correlations among several variables were not statistically significant. There were seven Pearson

correlation values that contained use of incidental feedback. Among them, two of the Pearson correlations were found to be statistically significant at the level of $p < .01$. These were between use of incidental feedback and the following two variables: emphasis in learning L2 pronunciation ($r = .266$) and self-confidence in knowing pronunciation teaching ($r = .255$). Although non-significant correlations among some of the variables do not affect the analysis using the structural equation modeling, it should be reported that the other four correlations were not statistically significant. These correlations were between the use of incidental feedback and the following four variables: “beliefs in needs of explicit knowledge” ($r = -.023$), “interest in research findings” ($r = -.154$), “knowledge of terms in pronunciation teaching” ($r = .083$), and “self-confidence in ability to teach pronunciation” ($r = -.013$). The results of these tests showed that the variables in the data set were acceptable for use of the further analysis using the structural equation modeling.

Table 4.37

Mahalanobis Distance in Model for Use of Incidental Feedback

| Observation number | Mahalanobis d -squared | $p1$ | $p2$ |
|--------------------|--------------------------|------|------|
| 20 | 18.414 | .010 | .650 |
| 15 | 18.393 | .010 | .284 |
| 32 | 16.908 | .018 | .279 |
| 64 | 13.434 | .065 | .902 |
| 82 | 12.976 | .073 | .871 |

Note: This shows only the five highest d -squared values.

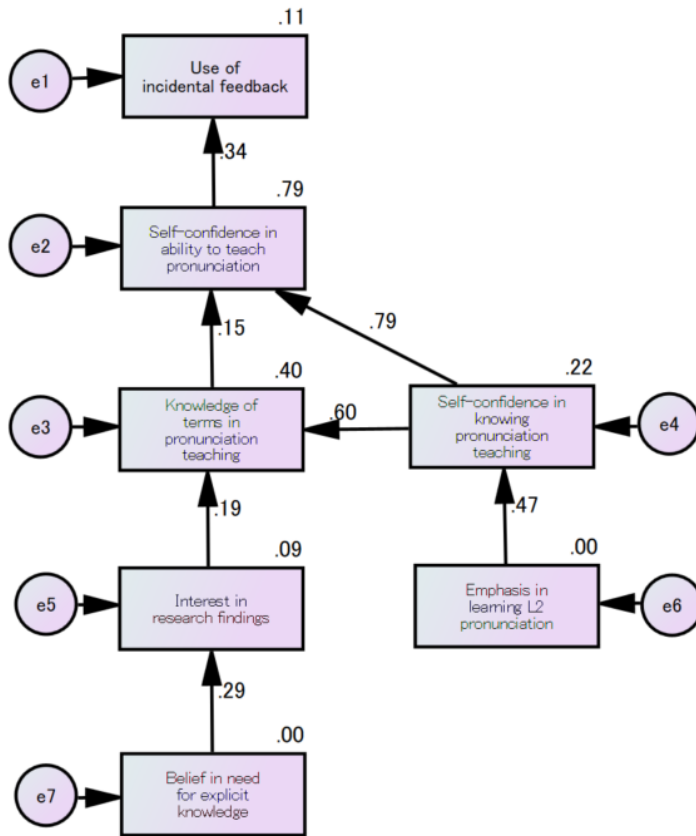
Table 4.38*Correlation Matrix of Variables in Model for Use of Incidental Feedback*

| | Beliefs in needs of explicit knowledge | Emphasis in learning L2 pronunciation | Interest in research findings | Self-confidence in knowing pronunciation teaching | Knowledge of terms in pronunciation teaching | Self-confidence in ability to teach pronunciation | Use of drilling exercise |
|---|--|---------------------------------------|-------------------------------|---|--|---|--------------------------|
| Beliefs in needs of explicit knowledge | 1 | | | | | | |
| Emphasis in learning L2 pronunciation | .090 | 1 | | | | | |
| Interest in research findings | .292** | .168* | 1 | | | | |
| Self-confidence in knowing pronunciation teaching | .080 | .470** | .160 | 1 | | | |
| Knowledge of terms in pronunciation teaching | .112 | .313** | .284** | .618** | 1 | | |
| Self-confidence in ability to teach pronunciation | .031 | .208* | .344** | .498** | .360** | 1 | |
| Use of incidental feedback | -.023 | .266** | -.154 | .255** | 0.083 | -.013 | 1 |
| Mean | 4.0882 | 4.0392 | 2.8431 | 3.3625 | 3.8824 | 3.3922 | 2.8137 |
| Standard Deviation | 0.83373 | 0.87791 | 1.31815 | 0.90008 | 0.85601 | 0.94562 | 1.21647 |

**Significant at $p < .01$. *Significant at $p < .05$.

Figure 4.4

Decision-Making Model for Use of Incidental Feedback



The fit indices indicated that the decision-making model for use of incidental feedback in pronunciation teaching was a good fit (see Table 4.39). The CMIN was 19.814 with a degree of freedom of 14. The probability was .136, which was not significant at the level of $p < .05$. In other words, the null hypothesis that this model correctly represents what the variables and paths indicate cannot be rejected. The CFI value was .977, which was higher than the minimum acceptable value

of .95. The TLI was returned as .966, which was considered to be close enough to 1.000. The RMSEA value was .064, which was slightly greater than the acceptable value of .05 for good fit but was considered a reasonable fit (Byrne, 2016). Finally, the SRMR was .0777, which was less than the required value for acceptable fitness of .08. Therefore, the overall decision-making model for use of incidental feedback was fit at more than the acceptable level.

Considering the standardized regression weights of the variables in this model, the self-confidence in knowledge about effective pronunciation teaching and emphasizing pronunciation in learning an L2 as a learner are two important predictors that eventually lead to “self-confidence in ability to teach pronunciation,” although the regression weight from “self-confidence in ability to teach pronunciation” to “use of incidental feedback” was not as strong as the other two important variables in this model.

Table 4.39

Fit Indices for Model for Use of Incidental Feedback

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|----------------------------|--------|----|------|------|------|-------|------|------|-------|
| Use of incidental feedback | 19.814 | 14 | .136 | .977 | .966 | .064 | .000 | .124 | .0777 |

4.2.5 Decision-Making Models for Use of Other Feedback Types

As Table 4.20 shows, other variables in terms of teaching strategies were included in the models for other feedback types. The test of normality among the following variables showed that they were normally distributed. The results of the Mahalanobis distance test also demonstrated that all the participants were within the acceptable range. Therefore, the data set was found to be normally distributed and acceptable for further analysis of structural equation modeling. However,

the results showed that the following three models could be acceptable but were not as good as the previous four models: use of post-task feedback, peer feedback, and self-evaluation. Therefore, the Mahalanobis d -squared, decision-making models, and fit indices for these models were added to Appendix E.

4.2.6 Decision-Making Model for Pronunciation Teaching Strategies

There were eight models, including the original one, analyzed by means of the structural equation modeling based on the questionnaire results. Four of the models were found to be a particularly good or reasonable fit, and the other three were found to be acceptable, and the variables that construct the models appeared to represent appropriately what the model indicated. More specifically, the teachers' decision of to what extent they use different teaching strategies seems to have been based on how confident they were in their ability to teach pronunciation. The teachers' self-reported knowledge of the common key terms used in pronunciation pedagogy and their self-confidence in knowing effective teaching methods in pronunciation teaching both predicted the teachers' self-confidence in their ability to teach pronunciation. Their emphasis on pronunciation learning when learning an L2 predicted their self-confidence in knowing effective pronunciation teaching methods. Finally, the beliefs that teachers should learn explicit knowledge about phonology and phonetics for teaching predicted the level of interest in finding out about research on pronunciation pedagogy, which predicted their self-reported knowledge of key terminology in pronunciation pedagogy.

This chapter reported the results from an extensive survey on teaching practice; teachers' experiences as teachers and learners; and their beliefs, interests, knowledge, education, and self-confidence. In contrast to the findings from previous studies, many EFL teachers at Japanese

universities explicitly teach English pronunciation, although many of them did not receive teacher training in pronunciation pedagogy. Based on the analysis through the SEM, those teachers who believed that they needed explicit knowledge about pronunciation teaching exhibited interest in research findings in this area, further leading to the gaining of knowledge of terminology commonly used in the relevant literature. Those who emphasized pronunciation learning when learning an L2 as language learners also tended to become confident in pronunciation teaching. This self-confidence, together with their terminological knowledge about pedagogical pronunciation, led to their self-confidence in their ability to teach pronunciation effectively and finally to their decisions to use the following effective teaching strategies: use of explicit teaching, use of mechanical drills, use of pronunciation models, and providing incidental feedback. Although the models offered a generalizable framework in terms of decision-making about different teaching strategies, a more in-depth description of how those teachers made their decisions deserves exploration. Also, the findings for this phase were gathered from teachers at different universities, leading to results that inevitably suggest contextual differences, including student population, the students' proficiency level in English, and the school curriculum. Therefore, it is still unclear whether these teachers would make decisions in a similar manner when teaching the same group of students. The second phase will address this issue qualitatively.

Chapter 5

Decisions About Pronunciation Teaching Based on Interlanguage Pronunciation

5.1 Overview of Findings in Second Phase

The previous chapter showed the findings from the first phase of this study based on a large-scale questionnaire survey. The first phase focused on whether teachers incorporate pronunciation and what pronunciation teaching strategies they use in their EFL classes. The interdependent factors, including beliefs, interest, knowledge, L2 learning experience, and self-confidence, were also found to predict the participants' choice of teaching strategies. However, the participants teach at different universities, the student populations of which vary widely in terms of proficiency level. Some of the university classes consisted of a large number of bilingual students who spent an extensive period in English-speaking countries, whereas others consisted of students whose proficiency level was limited. To control for this contextual difference that may influence the teachers' decisions on pronunciation teaching, the second phase focused on the teachers' instructional decisions based on their diagnostic assessment of pre-recorded interlanguage pronunciation, namely, this phase explored how teachers made decisions about pronunciation teaching when they listened to the stimuli recorded by Japanese university students.

To discuss the results from the second phase, two separate steps are required. First, as an answer to the second research question (i.e., What pronunciation features do EFL teachers decide to teach based on their assessment of interlanguage pronunciation?), the teachers' diagnostic assessment of learners' pronunciation and their pedagogical decisions about what pronunciation features they would teach will be discussed. The later section (see 5.3 Rationale for Teachers' Decisions on the Teaching of Pronunciation) will feature a discussion of the content analysis of the focus group

discussion data, which serves as the response to the third research question (i.e., What are EFL teachers' rationales for their decisions about pronunciation teaching based on their assessment of interlanguage pronunciation?). The primary focus of the focus group discussion was to determine teachers' rationales for the pronunciation features that they decided to teach based on their diagnostic assessment. In the focus group interviews, three key questions were asked:

1. Based on your needs assessment of the pronunciation of the three learners, what pronunciation features would you teach in a 15-week speaking course?
2. What other aspects of the language would you teach in this course?
3. What is your rationale for your decisions about teaching pronunciation and other aspects of the language?

Although follow-up questions were sometimes asked when discussions were sidetracked to remain on topic, the participants in each focus group generated the following four themes:

- Intelligibility-based decisions for teaching pronunciation
- Intelligibility of and familiarity with accents
- Teachability for instructional decisions, and
- Rationale for not teaching pronunciation

Because the paradigm in pronunciation pedagogy shifted from accuracy-based with native-norm pronunciation teaching to an intelligibility-based approach, it is important to explore how well this teaching standard has influenced teachers in practice. In the previous phase, the participants' self-reported familiarity with the terms "intelligibility" and "comprehensibility" was high, with mean scores of 3.84 and 4.10 out of 5, respectively. Now, how their familiarity with these terms translated into their diagnostic assessment and instructional decisions should provide an in-depth

understanding of the relationship between the knowledge and decisions about teaching. In response to this question, each theme will be discussed with the use of quotations and summaries of the responses in the focus group discussions.

5.2 Pedagogical Decisions

The first set of the findings from the second phase of the study concerned participants' decisions on the teaching of pronunciation and other aspects of the language. As they listened to a set of recordings of Japanese university students, a reading aloud task and a picture description, the participants took careful notes on the script, open space, and pictures in their handouts (see Pronunciation Diagnostic Assessment in Appendix D). Immediately following the listening session, the participants were prompted to decide whether they would teach pronunciation and, if they would, what pronunciation features they would teach. The instruction was given in writing in the sheet as well as orally by the interviewer, and the teachers were to decide what pronunciation features and other language problems they would teach to the imaginary speaking class where there were three learners whose pronunciation was provided as stimuli. The teachers were allowed to use the list of pronunciation features in the first page of the handouts as a reference, and they were encouraged to take careful notes on the sheet regarding decisions they made as well as anything they noticed as they listened to the stimuli.

Table 5.1*Pedagogical Decisions on Pronunciation Features*

| | Consonants | Vowels | Word Stress | Sentence Stress | Intonation | Speech Rate | Thought Groups | Connected Speech | Others |
|--------|------------|--------|-------------|-----------------|------------|-------------|----------------|------------------|-------------------------|
| Yukiko | + | + | | + | + | + | + | | Vocabulary |
| Simon | + | + | + | + | + | + | | + | Hesitation devices |
| Peter | | | | | + | | | | |
| Yuko | + | + | + | + | + | + | | | |
| John | + | + | + | | + | + | | + | Vocabulary and grammar |
| Mayumi | | | | | | | | | |
| Dana | + | + | | | + | + | | | Subject–verb agreement |
| George | | | | + | | | + | | |
| Mie | | | | | | | | | Organization of stories |
| Tom | | | + | | + | | + | + | Tense consistency |
| Maki | + | | + | + | + | | + | | Hesitation devices |
| Kate | + | + | | | + | | + | | Enunciation |

Note. “+” indicates the pronunciation features that the participants decided to teach.

The participants’ instructional decisions were found to vary. Table 26 summarizes the instructional decisions made by the participants, where a plus (“+”) indicates the pronunciation features they decided to teach. Two of the participants (Mayumi and Mie) decided not to teach pronunciation, and another participant (Peter) decided to teach intonation only in terms of pronunciation. George decided to teach sentence stress and thought groups, which were two closely connected features. The other eight participants decided to teach several features, ranging from four

to seven pronunciation features. The results show that intonation was the most common pronunciation feature that the participants decided to teach ($n = 9$), with consonants as the second-most common feature selected ($n = 7$). The third-most common pronunciation feature that the participants chose was vowels ($n = 6$), and five participants each chose word stress, sentence stress, speech rate, and thought groups. Finally, only three participants decided to teach connected speech. Other features that the participants expressed interest in teaching included vocabulary, hesitation devices (e.g., fillers), grammar, organization of stories, and enunciation. It should be noted that, although the participants were all experienced teachers and listened to an identical set of stimuli, they decided to teach different features in pronunciation.

5.3 Rationale for Teachers' Decisions on the Teaching of Pronunciation

A thematic emergence analysis was employed to analyze the qualitative data collected in the focus group interview. The data revealed the participants' rationale for the instructional choices based on their assessment of the recordings. The common themes that emerged from the data were intelligibility-based decisions for teaching pronunciation, intelligibility and accent familiarity, teachability for instructional decisions, and rationale for not teaching pronunciation.

5.3.1 Intelligibility-Based Decisions for Teaching Pronunciation

One of the common reasons for teaching pronunciation was related to intelligibility, comprehensibility, and difficulties with understanding. In the overall decisions on whether the interviewees would teach pronunciation, intelligibility seemed to play a key role. In the focus group discussion of the first group, in an over 5-minute stretch of exchanges, Mayumi raised the importance of pauses, which would be related to teaching thought groups:

So, the pausing was very strange. They were putting in pause[s] depending on where their thought stopped, or something. So, the sentence breaks were very unnatural, and without the pictures, it would be difficult to follow what they were thinking.

Later, she responded to the interviewer's question asking whether pauses have an impact on intelligibility, "[i]t totally makes a difference in what the speaking is trying to say." The group began discussing the role of grammar in intelligibility, and she responded "if the pause was in the correct place" to the question of whether she would understand the message if the recorded speech had been grammatically accurate but the pronunciation errors had remained.

Yuko in the same group mentioned that her decisions to teach some aspects of pronunciation were based on intelligibility. She stated:

Especially learner 3, when she read this text aloud, I was able to catch everything because I have the transcript, but when she made the story out of these pictures, I had difficulty figuring out what she actually said. So, that means we really should teach pronunciation....I thought we really should teach consonants, vowels, stress, accent—so, just about every aspect of pronunciation.

She continued and emphasized the importance of intelligibility in spontaneous speech production rather than reading a text aloud:

Because in the real world we have to talk spontaneously, with no planning time. So, this picture task is closer to the real-world situations, in a sense, because they have to make it up instead of reading the text.

In a later exchange, when the focus group discussed the influence of the pictures on the intelligibility of the recorded narratives, John commented that he would probably not understand the narratives without pictures at hand. In response to his remark, Yuko suggested that intelligibility in spontaneous speech productions under conditions close to real contexts should be considered:

“Without the pictures, and that’s the closest to the real-world situation. So, when people explain things, we do without pictures.” Further, she expanded her notion of intelligibility in other real-life contexts that the students might encounter in the future. She discussed the pronunciation needs in business contexts:

So this, in business setting[s], is really different, too. And [a] more transparent pronunciation style is preferred in business English. Not necessarily in the American style in American business setting, either. So, some of my friends are in [the] business field, and they really want clear, transparent pronunciation so everybody would be able to understand.

To Yuko, achieving intelligible pronunciation shaped her decisions in her pronunciation teaching because she considered intelligibility in business contexts of the learners’ needs.

George, in another focus group, clearly stated that he would base his instruction on intelligibility: “for me, the pronunciation is intelligibility, so whether they are intelligible or not is the problem.” Immediately after this, he mentioned that he would teach even when the speech is intelligible to enhance comprehensibility (i.e., reducing listeners’ effort to comprehend the message):

And I include in that, intonation and sentence stress because if it’s monotone and....It’s intelligible, but you have to concentrate, so most listeners are gonna switch off. It’s not unintelligible, but it involves straining, it involves effort on the part of the listener. So, I kind of consider these two factors intelligibility and strain on the list.

Again, he pointed out some example words that he would teach because they were not intelligible or difficult to understand: “And I would just draw attention to the occasional problematic words. I mean, with learner 3, I can see a pattern that she was getting wrong, some words were difficult to hear. Language, she said ‘rangage’ or something.” This showed that he would teach pronunciation when the learners’ pronunciation was not easy to understand.

He added later that comprehensibility mattered: “Not only intelligibility, but also make them easier to listen to. So, reduce this strain of the other interlocutor.” Close to the end of the focus group discussion, he emphasized that his instructional focus was intelligibility:

I certainly have changed the way I teach pronunciation. I used to use a native speaker model before; I didn't really think about it—the political implications of it, in the past. But I certainly have done over the past few years, yeah. So, that's why I focus now, really, on intelligibility. I mean, if you have a student who wants to sound British or American, then, fair enough. But I don't think it's necessary.

In this way, he specifically related his decision to teach pronunciation with problems with intelligibility.

In the other focus group, Tom began that his instructional focus would be on comprehensibility, although he tried to separate pronunciation from comprehensibility. In other words, his instructional focus would be on how students would be able to communicate their intended meaning but not on pronunciation:

I would focus more on comprehensibility because I didn't really think about pronunciation. If we're having a conversation and they're describing a story, for speaking, comprehensibility is most important. I do think intonation and word stress factor into this second task, but I would mostly focus on how comprehensible the output is, not so much.... Well, pronunciation is factored in there, but does that make sense?

It seemed that he thought of other aspects of the language but was not successful in separating pronunciation issues to achieve comprehensibility. Later, he revealed that his judgment about pronunciation was based on intelligibility when Kate, one of the other interviewees in his group, commented that checking enunciation is difficult: “Absolutely. When I was listening, like Kate, little arrows and circling, I have to focus on do I understand this? Is pronunciation of some words good or not?”

Kate, in this focus group, emphasized intelligibility as the instructional focus. She tended to dominate the discussion of pronunciation errors that she spotted in the recorded speech and practical ideas and concrete examples of her teaching strategies to teach pronunciation. She offered a brief syllabus for pronunciation teaching in the focus group discussion and later revealed that she had had experience with accuracy-based pronunciation teaching in the 1980s. However, she reemphasized that the current trend in pronunciation teaching was intelligibility- rather than accuracy-based instruction:

We're not talking about good pronunciation. We're talking about intelligibility, so I think it's quite empowering because it means that a person can sound Chinese or Japanese and you can identify where they're from, and pronunciation is something about their identity, so it's a good thing that they sound Japanese or Chinese, so the whole world has changed.

She further commented that she would not excessively correct pronunciation errors when the errors did not lower intelligibility:

I think this is a product of the '80s, really, because that's what I had to do on my MA to look at each detail and analyze the problem, but that was compared to native speakers, so now the paradigm has changed completely, so it doesn't seem right to say, "That's wrong," as long as it's intelligible.

From this, it is apparent that her instructional decisions on pronunciation teaching are based on intelligibility, although she demonstrated her ability to identify pronunciation errors in detail.

Overall, the data showed that many of the teachers would consider intelligibility to be one of the most important criteria when they decide to teach or not to teach pronunciation. The data also revealed that some of the participants concerned intelligibility in wider contexts outside the classroom. The interviewees often imagined the future situations that the students would be encountering and assessed the students' needs in pronunciation.

5.3.2 Intelligibility and Familiarity with Accents

Most of the interviewees mentioned that intelligibility is an important criterion when they make instructional decisions about pronunciation. Several of the interviewees expanded their interpretation of intelligibility to mutual intelligibility; they expressed the possible impact of their or other speakers' familiarity with particular accents on their intelligibility. As they listened to the recorded speech, or as they heard their students' pronunciation, they paid attention to intelligibility not only to them but also to potential listeners who the students might be encountering in future contexts, particularly where the interlocutors would be non-Japanese.

Simon referred to his experience with non-Japanese students in his class to explain the possible danger of relying merely on his own subjective judgment when encountering issues with intelligibility. When Peter, one of the other participants in this group, asked, "Did you feel that [pronunciation errors] impeded your understanding?" Simon commented,

That's a tricky question, isn't it? Because once you're used to an accent, it becomes much easier to overlook. I find when I get non-Japanese speakers coming to my class, I have a lot of difficulty understanding them initially....Even if they're higher level, I think some of the speech problems, the pronunciation problems, would be difficult for a person who doesn't have any experience with the Japanese accent.

Later, when asked whether he would decide to teach the same features or make different decisions in teaching pronunciation, Simon's anecdote underscored that his decisions based on intelligibility had changed over time:

I think I can only sort of assume, but if I came here completely fresh and I didn't know the Japanese accent, [my decisions would be different]. I remember I couldn't understand anyone when I first came here....I just could not understand what people were saying. People I was teaching at an FAO chain, and high-level people, "I don't know what you're saying, I'm sorry." And so, if I taught with that into the classroom, I think it'd be a very different course.

Later in the same focus group, Yukiko specifically mentioned intelligibility as a reference for her instructional decisions and admitted the possibility of the influence of her familiarity with the accent: “My decision would be based on my difficulty of understanding words even though I share the first language with them, but still some words [were] very difficult for me to understand, [that] could be different from yours, native instinct.” As a native speaker of Japanese, Yukiko revealed her concern about using intelligibility as a criterion when determining whether she would teach pronunciation.

Another two Japanese participants, Mie and Maki, in two separate groups revealed their concerns about the use of their subjective assessment and decisions based on intelligibility because they completely understood the recorded speech. Mie said, “In terms of the intelligibility, I am Japanese. And I’m used to Japanese accents, so I think my intelligibility of the students’ pronunciation is high, I would say. I don’t know. Maybe I can understand their English better.” From this statement, it was not particularly clear whether Mie thought she should rely on other criteria to make instructional decisions in terms of pronunciation teaching, but earlier in the discussion, she showed her intention to focus on other aspects of the language than pronunciation:

Yeah, so it’s interesting that, when she reads aloud, it’s more smooth. But when she was telling the story, it was not too fluent. So, maybe the reason she did not speak smoothly was not because of the pronunciation, but she didn’t have much vocabulary, or maybe she couldn’t construct the sentences smoother.

In this comment, Mie did not mention intelligibility, but at least she stated that she did not think that the pronunciation was the issue here. In fact, she chose nothing related to pronunciation to teach but rather revealed her preference to teach discourse and organization of stories.

In her focus group, there were the other two interviewees who were native speakers of English. Both of them mentioned their changes in difficulties with understanding Japanese-accented pronunciation over time.

George: No, but it helps us too, I think. Because we're getting so used to it.

Dana: Right, that's true.

George: Especially because we...you speak Japanese, don't you? So, if you speak the language, then—

Dana: Well, you have the cultural background, too, to see the perspective whether, right? What they're trying to...yeah, that has definitely decreased. When I first came, I had a much harder time, that's right. Now it's...

George: I don't really remember that...honestly. I think I got used to the accent, quite quickly.

Maki was in the other focus group and also had difficulties determining pronunciation features to teach based on intelligibility because she understood Japanese-accented speech better than English with other foreign accents. She, however, stated that she would define intelligibility as what is intelligible to her due to the difficulties to take other language speakers' judgment into consideration:

Well, because I'm Japanese, I think I can understand Japanese-accented English much better than English with a Thai accent or Chinese accent, so for me, I think intelligibility is intelligibility for me. If I can't understand, maybe, but I don't know....It's difficult for me to [imagine native speakers' perspectives].

However, she revealed that she would correct epenthesis (i.e., adding an extra vowel in a closed syllable with a consonant ending) even though it would not impede her understanding. She explained, "I'm Japanese. I can understand. For him, I think I feel I should tell him. He should notice what he is doing, because he doesn't know what he is doing," and she emphasized the impact of the

number of syllables in communication, offering her British husband's failure in communicating in Japanese due to the difference in the number of syllables between Japanese and English:

Regular. He said something in Japanese, but the number of syllables [was] different. People judge from number of syllables. "Re-gyu-ra-a ma-n-ta-n" should be "re-gyu-ra-a ma-n-ta-n" or maybe he said regular mantan, as in two syllables. Maybe. So, maybe, the people didn't understand it.

She further explained her belief about the impact of the number of syllables on intelligibility: "So, I think putting extra vowels changed the number of syllables, so maybe it's related to intelligibility" as she continued with another example of her husband's communication breakdown due to the wrong number of syllables in ordering orange juice in Japanese. Her earlier concern and this anecdote revealed her belief about the influence of accent familiarity on intelligibility.

In another focus group, George began his anecdote in relation to a communication problem caused by an issue with intelligibility because he had a lack of familiarity with the speaker's foreign accent, "Yeah, yeah, yeah, yeah. I try and think about what intelligibility problems there might be in that international context, you know?" and he continued, "I would say that I was in a conference in Singapore last year, and there was a Taiwanese woman, and I just did not understand her. Her presentations I just didn't understand." As a language teacher, his decision about pronunciation teaching is made so that his students would not have problems with intelligibility outside of Japan.

In another group, Tom emphasized the importance of referring to intelligibility in authentic contexts particularly with interlocutors who had little experience with Japanese-accented pronunciation. He explained,

I think people in general. That's how I always look at it because as a teacher, I feel I'm accustomed to my students, their speech, so it's very difficult to take myself out of that, but I do try to think generally like....For example, if they were talking to my parents, would my parents be able to understand?

He further connected this with his decisions to teach pronunciation when learners spoke with

katakana accents:

For example, if the student is given a lot of *katakana* sounds, I live here. I teach here, so I can understand what they're saying, but I always try to put it in a context. Outside of Japan, maybe this would be a little difficult, so that's how I grade the intelligibility.

He later justified his idea of considering authentic contexts when assessing the intelligibility of learners' pronunciation. He offered an anecdotal account of communication problems due to his

father-in-law's Japanese accent:

So, for example, my wife's father speaks very good English that I can understand, but he speaks very *katakana* English. He went to the UK, and he went into a café, and he asked for hot coffee. "I wouldo liku hoto cohee. Hoto cohee." And they gave him a Coke because they couldn't understand at all.

His explanation revealed that his intention to correct *katakana*-accented pronunciation (e.g., epenthesis and syllable-timed nature) was because it would have negative impacts on intelligibility outside of Japan.

5.3.3 Teachability for Instructional Decisions

During the focus group interviews, the interviewees referred to teachability as a determining factor for whether they teach particular features of pronunciation. Mayumi began discussing the issue of rising intonation at the end of the sentences and was concerned about whether the students should be taught.

Especially in this one, both tasks, I noticed that she tends to go up at the end of the sentence. Even like the way I'm talking right now—it's not even a question, but even with a statement, she tends to go up. To me, with this, I got the impression that she was not really confident with her English speaking or reading in general. And then she was given this task, that she has nothing to rely on. So, one thing I'm not sure is if that comes from her lack of confidence in doing something in English that made her go up in words of the

sentence that she made for the second task. If that came from lack of confidence, then I'm not sure if that's something she should be taught in class or not.

Later, Mayumi did not make instructional decisions based on the teachability of intonation, but she clearly referred to that. She said, "It's teachable, but if it comes from lack of confidence, then... It might be something unconscious." Here, she admitted that intonation at the end of the statement would be teachable but was still undecided about whether or not she should teach it.

Simon, in another focus group, justified his inclusion of minimal pairs because he had witnessed learners' improvements recalling his past experience.

[Segmentals such as "th," "s," "l," and "w"], you can do them in a few 5-minute minimal pairs exercises throughout the semester and get huge improvements. I think that's something that's pretty minimal effort put in, and you can get a lot of aesthetic benefit, which I think they like that. I think the students come away feeling quite pleased when they can speak better, so I would do a little bit of pronunciation at least.

It seems that his previous experience in teaching segmentals /l/, /θ/, and /w/ was successful, which led him to his belief that these segmentals were teachable. Simon's belief about the teachability of these consonants influenced his decision more strongly than intelligibility as a determiner of instructional decisions.

I would actually focus on certain minimal pairs. Like the "th"/"s"/"z" problem I kept hearing. And it's... Like Peter said, there's not a huge barrier to comprehension because French people kind of always pronounce "th," and that's not huge. But it's something you can help fairly quickly and improve the way they sound, which also improves the way they're perceived by other speakers.

He emphasized the impact of foreign accents on people's perceptions caused by errors in segmentals that do not necessarily interfere with communication.

In the same focus group, Yukiko revealed her decision based on teachability. She offered an anecdotal account of her experience teaching thought groups on the day of the interview but did not mention the teachability of this feature.

For example, today we did thought groups. So there [are] some key sentences from the lecture. The students have to guess where to slash first, and then after that, they listen to the lecture. And then shadowing or trying to imitate it as if they are lecturing it. So, I think thought group sentence-level stress can be easily incorporated in class.

Whether she had knowledge regarding the teachability of thought groups was not identified in this account. However, earlier in the interview, Yukiko clearly stated her strong interest in pronunciation learning and teaching. She stated, “I’m also interested in this topic as a researcher, and then last semester, last year, I did the kind of awareness-raising activity.” The first phase results also showed that her familiarity with the technical terms and literature in second language pronunciation teaching as well as her interest in pronunciation research were high. Thus, her rationale for including thought groups in her instructional decisions was supported by her knowledge through experience and relevant literature.

In another focus group, Dana discussed that sentence stress would be easier to teach. She started with identifying pronunciation errors of all three learners’ recordings and then moved on to prioritizing some features of the others. “The third one has different areas, but I would concentrate on [sentence] stress, first, before targeting that. ’Cause I think it’s easier to teach it, right?” Immediately after this, Dana demonstrated how she would teach sentence stress; therefore, it can be assumed that she had taught sentence stress, and it was easier for her to teach. Later in the discussion, she revealed how her teacher cognition had been developed through her experience teaching pronunciation and that development had changed her way of teaching pronunciation into a teachability-based approach:

For me, with teaching, and what I would choose, I think it’s, like I said, when I first came, the *katakana* English influence really bothered me, so I used to focus more on those kinds of issues like the hard sounds at the end or the pausing. But over time, it’s just much more efficient to.... What I would choose to focus on are the ones that I think the students quickly pick up. I just want them to make quick improvements, and the pronunciation of the “th” or

the language, they don't catch on as quick.... They just take so much more time and practice.

Her account of her shift of prioritizing pronunciation features over time clearly illustrated her development as a teacher, and her decisions were made based on teachability rather than intelligibility. From this account, it can be assumed that, when she said "easy to teach," she meant that students showed their improvement in the feature when she taught.

George, in this focus group, mentioned that teaching some consonants has a teachability issue. He did not say that consonants were unteachable, but he emphasized the difficulty of teaching for teachers at the same time as the difficulty of learning for learners. As he responded to Mie by suggesting that she focus on sentence stress rather than /θ/ and /ð/, he commented in his exchange with the other two interviewees, "Cause it's also demotivating for students. Because no matter how much you practice 'th.'" Immediately after this, Dana continued, "If you can't get it...that's right," implying that the consonants /θ/ and /ð/ would be challenging for learners. Then, he continued, "It's the same with 'r' and 'l'" adding that consonants /r/ and /l/ are problematic consonants. Soon after that, he showed his preference for sentence stress over consonants or mechanical drills using minimal pairs, again offering a possibility with an unwilling tone: "I mean, you can do these drills in class..." It was also apparent that he was not suggesting adopting drills of consonants in class because he referred to a report saying that /θ/ and /ð/ would disappear from the English language in the future. He explained, "'th' is maybe....All the research is saying that it might be a waste of time anyways, so it would disappear from the English language...seriously, no, they reckoned that we won't be using 'th' in 50 years." Later, in the interview, he reported that this suggestion was taken from a report article written by a group of linguists.

5.3.4 Rationale for not Teaching Pronunciation

Finally, some accounts for not teaching pronunciation features emerged in the focus group discussion. George, who stated that /θ/ and /ð/ would disappear from the English language, decided not to teach these sounds due to their conjectured disappearance and the potential demotivation among some learners to learn these challenging consonants. Peter, in a different focus group, discussed the particularly low impact of teaching on promoting learners' pronunciation.

Honestly, the pronunciation didn't bother me, really. I don't know if you've got experience in doing this, but I think it's a bit ambitious to expect them to make a good 'th' and 'l' and 'r' sounds. It's very difficult.

He continued later in the discussion that, even if the students successfully learned /θ/ and /ð/, they would encounter other non-native speakers who would not be able to produce /θ/ and /ð/.

The amount, honestly, if you look around the world, how many languages do you use the 'th' sound? There's hardly any. So, I think, when they're going to be talking, even if they do master this 'th' sound after a great or a less amount of practice, if they talk to other non-native speakers, they don't do it, anyway.

George's concern about the impact of spending some amount of time mastering /θ/ and /ð/ on their future encounter was identified here.

Peter was not willing to incorporate pronunciation teaching in his plan for this speaking class. One of the major reasons involved intelligibility. He did not think that the learners in the recordings had problems with intelligibility; thus, there would be no need to teach pronunciation.

To me, the individual segments didn't really cause many problems. And I know, yeah, maybe it's because we're used to the accent to some extent, but I really didn't think their pronunciation was bad at all.

Peter's explanation demonstrated that his instructional decisions were based on his subjective judgment on intelligibility and that he did not identify pronunciation problems that could lower intelligibility when listeners were not as familiar with the Japanese accent as he was. However, later

in the discussion, there was a moment when he compromised and admitted that there was a need to consider contexts outside the classroom or even Japan.

These pronunciation issues aren't salient because the students know what each other is trying to say, and we're used to it, so it might be a question of, yeah, if it's with the purpose of them using it abroad, then it might be worth paying a bit more attention to particular pronunciation.

Through the focus group interview, Peter developed a thought of a possible risk in relying on merely his own subjective judgment of intelligibility.

John, in another focus group, showed his concern about the learners' lack of competence in vocabulary and grammar impeding effective communication. He added vocabulary and grammar to the list of features to teach to the learners.

And probably the last thing I want to say—especially I noticed with the third one—she didn't seem to have a wide range of vocabulary or grammar, so she was struggling simply to express what was in the pictures.

Although his decisions included a few pronunciation features, he discussed this learner's limited vocabulary two additional in the interview:

When they were reading, considering that they only had 30 seconds' preparation, I thought they all did really well: even though their enunciation or pronunciation wasn't clear, they battled through quite well. And the third girl, who was the lowest, she seemed to have a bit of an idea about linking sounds, or maybe she was like a natural. I'm not sure....Even though she had the smallest grammar and vocabulary understanding.

In his second account, the lack of vocabulary served as a comparison to pronunciation in the reading aloud task. It was clear that John had more positive impressions of the learner's pronunciation than of her vocabulary and grammar. The last time he mentioned this learner's limited vocabulary was when the group was discussing the learners' overall proficiency; he simply commented in the exchange of thoughts with Yuko and Mayumi, "But at the time, she seemed to have the smallest

vocabulary, I thought.” The learner’s limited vocabulary compelled John to consider that she had limited proficiency in overall English, although he believed that her pronunciation sounded natural.

Finally, in another focus group, Mie once considered teaching sentence stress in terms of pronunciation, although her notes did not include this topic among her selection of pronunciation features to teach. Intelligibility played a role in her decision, as discussed earlier, because she had understood the learners’ pronunciation with little difficulty. Even when Mie pointed out that sentence stress should be taught, she merely responded to the other two interviewees as they discussed the prioritization of sentence stress over the consonants /θ/ and /ð/, “And I think it’s more effective for students. I think it’s better to focus on the sentence stress rather than ‘th’ sound.” As discussed earlier, Mie compared the inconsistent performance of one learner in two discrete tasks and suggested that the reason for the gap in performance was in the learner’s limited vocabulary and grammar, not in pronunciation.

Yeah, so it’s interesting that, when she reads aloud, it’s more smooth. But when she [was] telling the story, it was not too fluent. So, maybe the reason she did not speak smoothly was not because of the pronunciation, but she didn’t have much vocabulary, or maybe she couldn’t construct the sentences smoother.

In addition, Mie further suggested teaching discourse markers based on her needs assessment on the picture narrative tasks so that the listeners would follow the storyline as the learners narrated.

If I teach the second part, that’s picture telling, storytelling. I think I need to teach the organization of the storytelling because they are very telling the stories. But at the same time, if they can use “first,” or “next,” or “third”—those discourse markers—it would be more helpful for the listeners to understand the flow of the story, I guess.

This participant initiated the discussions of teaching vocabulary, grammar, and discourse markers based on her needs assessment, but the only one pronunciation-related decision, sentence stress, was

merely in response to the other interviewees. From this, it appeared that Mie would rather teach aspects of the English language other than pronunciation.

5.4 Summary of Findings in Second Phase

Given the dissemination of research findings and the intelligibility-based pronunciation pedagogy that a number of researchers and educators in the field have advocated, it is not surprising at all that the common rationales for the participants' decisions to teach or not to teach pronunciation were based on the intelligibility of the learners' pronunciation. However, as some participants pointed out, teachers should consider their familiarity with learners' accents when teachers make pedagogical decisions because the learners' pronunciation may not be intelligible to those who have little experience with the learners' first language. The participants also discussed the teachability of some pronunciation features, and their beliefs about what was teachable depended on their previous experience in teaching. Some participants' decisions not to teach pronunciation seemed to be based on their beliefs about what was intelligible or teachable, which stemmed from their previous teaching experience. Chapter 6 will discuss all these factors in greater depth.

Chapter 6

Discussion and Future Implications

6.1 Introduction

Using a mixed-method design, this study offered significant insight into teacher cognition among EFL teachers at universities in Tokyo. In summary, in response to the first research question, the belief that teachers need to gain explicit knowledge about pronunciation, teachers' interest in research findings on pronunciation pedagogy, their self-reported knowledge of key terms in pronunciation pedagogy, and their self-confidence in their ability to teach pronunciation effectively are, in this sequence, found to form a path. Also, emphasis on pronunciation in learning an L2 as a learner and self-confidence in one's ability to teach pronunciation effectively form a path in this order. These paths lead to the teachers' use of pronunciation teaching strategies: explicit explanation about pronunciation, mechanical drill exercises, using pronunciation models, and giving incidental feedback. Regarding the second research question, the pronunciation features that teachers decide to teach based on the interlanguage pronunciation of Japanese learners vary. One of the participants decided to teach seven different pronunciation features (consonants, vowels, word stress, sentence stress, intonation, speech rate, and connected speech), whereas two of the participants decided to teach nothing related to pronunciation. Finally, with regard to the third research question, teachers' decisions about pronunciation teaching are intelligibility based and seem to be related to their knowledge about research in pronunciation pedagogy. Also, their decisions about whether they teach pronunciation is based on their past successes and failures in teaching this subject. The above directly relates to teachers' self-confidence in knowing effective means of teaching pronunciation and to their ability in knowing how to teach pronunciation effectively. Finally, teachers decide to

focus on grammar, vocabulary, and other aspects rather than pronunciation because they think pronunciation is less serious than those based on their assessment. Here, accent familiarity might influence intelligibility judgement and, therefore, decisions about pronunciation teaching. In short, they tend to adopt an intelligibility-based approach although their diagnostic assessment based on intelligibility may lead to inconsistent outcomes depending on their knowledge and experience. Also, self-confidence in pronunciation teaching, which originates in their experience and their knowledge about pronunciation pedagogy, seems to be a major factor for decisions to teach.

Although the quantitative analysis of the first phase and the qualitative analysis of the second phase have advantages, they also have limitations. This section discusses the key findings from this study with possible concerns with the interpretation of the results as well as the limitations of the study. Finally, this chapter will conclude with implications for future teacher education and research.

6.2 Pronunciation Teaching Strategies

One of the purposes of the first phase in this study was to determine the strategies to teach pronunciation. On a positive note, the results showed that teachers used a few pronunciation teaching strategies found to be effective in the previous studies. One example of such strategies was using a pronunciation model. Listening to a pronunciation model seemed to promote perceptual skills of the learners, which were found to further improve their pronunciation (Bradlow et al., 1997). Providing incidental feedback was the second-most common strategy that the teachers used. Incidental feedback was also found to be effective in promoting learners' awareness of pronunciation and, therefore, their pronunciation along with explicit teaching (Saito & Lyster, 2012). In the decision-making model developed in this study, the teachers' level of self-confidence predicted the use of incidental feedback

as well as explicit teaching. In other words, the more confident the teachers were about their ability to teach pronunciation, the more often they taught pronunciation explicitly and provided incidental feedback on pronunciation. Another strategy commonly used and found to be predicted by the model was the use of mechanical drills. With the shift from the audiolingual method with overemphasized accuracy in pronunciation to communicative language teaching, repetitive practice became undervalued. Ideally, repetitive practice should be contextualized so that pronunciation is learned in meaningful contexts, but even decontextualized mechanical drills could promote automatization of pronunciation, thus substantially enhancing speech production fluency (Gatbonton & Segalowitz, 2005). Therefore, it can be stated that the decision-making models led to sound pedagogical choices.

The results in the first phase showed that the majority of the university-level English teachers in Tokyo were teaching pronunciation in one way or another. Many of the teachers seemed to employ multiple strategies, although approximately 10 percent of them never used any of the teaching strategies or taught pronunciation in class. Combined with the results for their class title and the language focus of each, the vast majority of teachers were not teaching standalone pronunciation courses. That is, the teachers were instead integrating pronunciation components into other skill areas. In fact, one of the questionnaire items in this study revealed that many of the participants believed that pronunciation should be integrated into other skill areas. In the early 1990s, Murphy (1991) suggested the integration of pronunciation into listening and speaking, or oral communication courses, because pronunciation was regarded as one of the central components in aural and oral competence. Later, Levis and Grant (2003) offered a practical guideline for integrating pronunciation into oral communication courses: their article lists key principles in teaching pronunciation in an integrated manner with examples of practical, hands-on activities. As

Jones (2016) suggested, there are a number of practical, efficient, and effective ways to integrate pronunciation teaching into not only oral communication courses but also reading and even grammar instruction. The integration of pronunciation components into other skill areas may no longer be a new approach and is becoming an increasingly common practice of many English language teachers in Tokyo.

6.3 Variables Influencing Decisions About Teaching Strategies

As discussed in Chapters 3 and 4, all the variables in the questionnaire survey could not be included in the decision-making models. The original decision-making model contained the following seven variables: (1) teachers' self-confidence in their ability to teach pronunciation, (2) teachers' self-confidence in knowing pronunciation teaching, (3) length of teacher training, (4) teachers' knowledge of key terms in pronunciation pedagogy, (5) teachers' emphasis on pronunciation when they learned a second or foreign language, (6) teachers' interest in catching up on recent research findings in pronunciation pedagogy, and (7) teachers' beliefs that they need to develop explicit knowledge about pronunciation. In the original model, all these variables were linked to teaching strategy (use of explicit teaching), but only self-confidence in the ability to teach pronunciation seemed to have the direct relation with use of teaching strategy. Also, the distribution normality test did not allow the length of teacher training to be included in further SEM analysis. The revised models were developed according to consultation with previous studies as well as the empirical data from the pilot, as described in Chapter 4. The revised model, with the remaining six variables, was tested with the terminal variable, which is one of the teaching strategies. The models leading to the following were found to be a good fit: (1) use of explicit explanation about the sound system and how to pronounce English, (2) use of mechanical drills of decontextualized materials,

(3) providing pronunciation models for imitation practice or perception training, and (4) giving incidental feedback on pronunciation errors. The other three models, which led to (5) giving feedback on pronunciation after students complete their tasks and practices, (6) giving students opportunities to evaluate and offer feedback on peers' pronunciation, and (7) giving students opportunities to evaluate their own pronunciation were considered acceptable based on the fit indices.

What the models represent is that the teachers' decisions regarding to what extent they employ these pronunciation teaching strategies were first determined by how confident they were in their ability to teach pronunciation. In other words, the more confident the teachers were in their ability to teach, the more often they employed these teaching strategies. This finding seems to be in line with what the previous teacher cognition research has revealed: one of the common reasons for neglect in teaching pronunciation was found to be lack of self-confidence (Couper, 2017; Foote et al., 2011; Macdonald, 2002). For teachers to employ a teaching strategy, they need to gain self-confidence in pronunciation teaching ability.

Now, how teachers can be confident about their teaching warrants discussion. According to the model, their self-confidence in their ability to teach pronunciation was predicted through two paths, the first of which entails that self-confidence in one's ability to teach stems directly from self-confidence in one's knowledge of effective methods in pronunciation teaching. Theoretically, teachers need to receive either pre-service or in-service training on pronunciation teaching to learn about pedagogical knowledge (Wu, 2001). Further, actual teaching practice can help teachers become confident in knowing effective methods, which in turn helps them make sound choices in teaching (Crandall, 2000; Kanno & Stuart, 2011). In short, both teacher education and teaching

experience seem to facilitate teachers' development of pedagogical knowledge and, therefore, their self-confidence in knowing it. However, neither their training nor teaching experience predicted their self-confidence in knowing effective teaching methods; instead, the key indicator was the extent to which they focused on pronunciation when learning an L2. In other words, the teachers who emphasized pronunciation learning tended to be confident in knowing how to teach pronunciation. Because many of the teachers were non-native speakers of English, their learning experience must have had an impact on their knowledge of English pronunciation. In fact, most of the teachers' self-reported proficiency in their second or foreign language was near-native or advanced, and learning pronunciation was reported as an important part of their language learning. It is reasonable to assume that the teachers who are advanced or nearly native-level language learners gained knowledge about English pronunciation as learners. Their success in language learning may have developed their beliefs about what constitutes successful learning and, therefore, teaching. Their beliefs, developed through their language learning experience, can be powerful because these beliefs appear to influence teachers' ideologies over the duration of their careers (Atlan, 2006; Wong, 2010). This finding might also be related to Chen and Goh's (2011) discussion in this context: teachers who are not well prepared to teach often resort to their own learning experience when teaching. Although the large number of non-native speakers in the participant group might explain this, there are no direct links between these teachers' self-confidence in knowing effective methods and their learning experience with an emphasis on pronunciation.

The other path leading to the teachers' self-confidence in their ability to teach pronunciation was determined by their self-reported knowledge of common key terms in pronunciation pedagogy. Some of the terms included in the questionnaire, for example, consonants

and vowels, can be the terms for phonology and phonetics, which are related to language awareness and therefore can be considered to be subcomponents of pedagogical content knowledge for language teachers (Andrews, 2001, 2003). The teachers in this study were not only successful language learners but also qualified teachers, each with a master's or even a doctoral degree. Through their language learning as well as via higher education, they might have familiarized themselves with pronunciation-related linguistic terms due to the fact that many degree programs tend to offer phonology and phonetics courses (Murphy, 1997). This might explain why the participants' self-confidence with such phonological and phonetic terms as "consonants" and "vowels" was found to be higher than their confidence with pedagogy-based terms such as "prosody" and "suprasegmentals." No matter how they had developed their familiarity with those terms, this pedagogical content knowledge, in turn, seems to have had an indirect impact on their self-confidence in their teaching ability. Their familiarity with key terms in pedagogical pronunciation was also directly predicted by their interest in research findings in this field. It can be easily assumed that, the more they read about pedagogical pronunciation, the more exposure the participants had to those key terms. Finally, the teachers' belief that teachers must gain explicit knowledge about pronunciation determines their interest in research findings in pedagogical pronunciation. This belief, although not shown in the model, seems to be related to language awareness, as part of pedagogical content knowledge described above. Therefore, it can be stated that this path is related to the teachers' pedagogical content knowledge and leads to their self-confidence in pronunciation teaching ability.

The models examined in this study were all based on Borg's (2015) theoretical conceptualization of teacher cognition in language teaching, and the additional theoretical bases for

pronunciation pedagogy were reviewed to identify the possible causal relations among variables (e.g., Baker & Murphy, 2011; Burri et al., 2017; Foote et al., 2011). The models found to be a good fit in this study add support to Borg's model of teacher cognition, at least partially; they show several related factors, including self-confidence in one's ability to teach pronunciation, self-confidence in knowing effective pronunciation teaching, emphasis on pronunciation in L2 learning as a learner, knowledge of key terms in pronunciation pedagogy, interest in research findings, and beliefs that teachers need explicit knowledge, lead the use of teaching strategies in pronunciation teaching. Given that all of these variables develop teacher cognition, this model is similar to Borg's. However, two caveats should be taken into consideration. First, Borg's model does not contain "self-confidence" as an element of teacher cognition. In his work, teachers' "self-perception" includes the notions of what teachers know about their linguistic, pedagogical, and practical knowledge. Therefore, "self-confidence" in this study can be considered synonymous with Borg's term "self-perception." In addition, this study reveals that self-confidence in one's ability to teach pronunciation was the only determiner that directly predicts the use of teaching strategies, in contrast to Borg's model, in which several different determiners constituting teacher cognition interact with teaching practice. This finding, however, adds support to what research into teacher cognition in pronunciation pedagogy has found (e.g., Foote et al., 2011; Henderson et al., 2012; Macdonald, 2002). Further studies should examine whether multiple elements collectively determine the use of teaching strategies or they influence one another in a particular sequence to determine this use.

6.4 Instructional Decisions Based on Assessment of Learners' Pronunciation

In addition to teaching strategies, teachers must make decisions about what pronunciation features they teach when they listen to their students' pronunciation. In the second phase, the selected 12 teachers' decisions varied; some teachers decided to teach a variety of pronunciation features, including both segmental and suprasegmental features, whereas a couple of teachers decided to teach no pronunciation features. As Levis (2006) suggested, it is not a simple task to identify phonological and phonemic errors, even for experienced teachers, and it is challenging to pinpoint the consistencies in the teachers' assessments of the errors that they found in learners' spoken English. The inconsistencies in their identification of errors and, therefore, their instructional decisions should be explained, and their rationales for their decisions elicited in the focus group interviews may offer explanations.

The results of the focus group interviews reveal that the teachers' judgment of whether the students need to learn pronunciation over other aspects of the language depends on the teachers' subjective opinions about intelligibility. The teachers commonly acknowledged that their experience with Japanese learners' English pronunciation influenced what they deemed as intelligible. In terms of the effects of the teachers' familiarity with foreign accents on intelligibility, repeated exposure to multiple speakers with particular foreign-accented pronunciation enhances the level of intelligibility (Bradlow & Bent, 2008; Kennedy & Trofimovich, 2008). Not only familiarity with the accent but also positive attitudes toward the speakers with particular accents (in this study, the Japanese accent) may have contributed to the teachers' change in intelligibility judgment over the years (Jiang Bresnahan et al., n.d.). The factors that influence accent familiarity and intelligibility are complex (Winke et al., 2014; Winke & Gass, 2013), and thus, when teachers make decisions, they must consider this complex influence because learners will not necessarily communicate with those who

possess positive attitudes towards Japanese accents. In fact, the results reveal that, when making decisions about whether students' pronunciation issues should be addressed in class, the teachers commonly thought of the contexts outside of the classroom when making a judgment about the intelligibility of the students' pronunciation.

Teachability was another major reason for the participants' decision to teach or avoid teaching pronunciation. In their teaching experience, if they witnessed an improvement in students' pronunciation as they taught, they would decide to teach the feature because they knew they could teach it. In other words, the teachers may have relied on their "personal practical knowledge" when making instructional decisions (Tsui, 2003). In fact, many of the rationales provided in the interviews were based on this personal practical knowledge about teaching pronunciation. The teachers in the focus group interviews mostly provided personal and professional experience as a rationale for their pedagogical choices. In total, only three participants discussed what research informed their decisions or referred to relevant literature to support their instructional decisions. Because a growing body of research has offered practical implications and suggestions for effective strategies to teach pronunciation (Lee et al., 2015; Saito, 2012), to fill the gap between what the research recommends to teachers and what teachers do in pronunciation teaching, as Murphy (2014) suggested, formal training should be offered in TESOL/applied linguistics programs for pre-service teachers. In addition, for in-service teachers, in-house faculty development seminars and other professional workshops should be offered to help them to make informed pedagogical decisions. Further training in accordance with the research findings further fosters teachers' pedagogical content knowledge (Shulman, 1986), which aids them in making pedagogically sound decisions.

Finally, when teachers wished to emphasize other aspects of the language, particularly vocabulary and grammar, they tended not to teach pronunciation because they believed that other aspects were more crucial than pronunciation to effective communication. However, this decision to prioritize other aspects of the English language, such as grammar and vocabulary, also seemed to have been based on teachers' personal practical knowledge. However, previous research, particularly on the effects of grammatical accuracy and lexical choice on intelligibility or comprehensibility in this context, may support their decision to focus on grammar and vocabulary (Jung, 2010; Trofimovich & Isaacs, 2012). However, it is also important to note that some research shows that grammatical errors do not necessarily reduce intelligibility (Munro & Derwing, 1995). Regardless of what linguistic variables caused the teachers' decisions to focus on grammar and vocabulary, it is clear that the teachers commonly wished to facilitate the learners' development in intelligibility or comprehensibility.

Although individual teachers appear to have different rationales for their decisions to teach or not to teach pronunciation and, if they teach, what pronunciation features to teach, the intelligibility of the students' pronunciation and teachability seemed to have an impact on their decisions regarding what pronunciation features to prioritize. Their decisions also seemed to have been based on what learners could learn from their teaching; experienced teachers made pedagogical decisions so that they could maximize their students' learning (Gatbonton, 2008), and in this sense, all the participants were experienced teachers who made pedagogically sound choices based on different personal and professional experiences.

6.5 Limitations and Future Directions

The present study offered the decision-making model, and according to this model, one of the predictors that determined the participants' self-confidence in their ability to teach pronunciation was knowledge of technical terms commonly used in pronunciation pedagogy. As Murphy (2006) suggested, teacher training certainly offers both theoretical and practical knowledge about pedagogical pronunciation. At the same time, teachers need to gain first-hand experience to develop self-confidence as teachers (Crandall, 2000; Kanno & Stuart, 2011). However, it should be noted that the lengths of both teacher training and teaching experience, which were included in the questionnaire items, did not fit into the paths in the decision-making models in this study. One possible reason for this issue seems to be the use of different scales. Most of the variables in the analysis involved a 5- or 6-point Likert scale, whereas the length of education in pronunciation was in hours. Indicating the length of teacher training in pronunciation in hours per se may have caused difficulty in responding to the question and therefore hindered the variable's ability to fit in the model. Length of teaching experience was not a predictor of the teachers' self-confidence in their ability to teach; instead, it was found that self-confidence in the ability to teach could predict how long their teaching experience was. In addition, the results were all based on self-reported responses, which may not reflect their real ability, knowledge, and self-confidence because the participants may have overestimated or underestimated their own ability, knowledge, and self-confidence. The reasons for the gap between the findings of this study and those of previous studies should be explored to discern the influence of teacher training as well as teaching experience in relation to teachers' self-confidence in their pronunciation teaching ability.

In addition, the relatively positive results for the current practice of pronunciation teaching, the comparatively high level of interest in pronunciation teaching, and the high level of familiarity

with the technical terminology in second language pronunciation pedagogy may stem from the data collection method. Because this study employed a snowball sampling method to collect the survey data (Teddlie & Yu, 2007), it is possible that more participants who were interested in the research topic, the teaching of pronunciation, participated in the survey than those who were not (Dörnyei & Taguchi, 2010). The possibility of obtaining biased responses from those who were already interested in the topic was unavoidable, and the results should therefore be interpreted carefully.

Another limitation related to the sample is the contexts in both phases. This study focused on universities in Tokyo, where many students throughout the country come to study. The environment in terms of students' exposure to English is different from those in other cities in Japan because students are likely to encounter more non-Japanese, English speaking visitors and residents in Tokyo than in any other place in Japan. These contextual characteristics can influence the teachers' decisions to teach or avoid teaching pronunciation, and the same questionnaire survey may generate different results in alternative contexts. The unique contexts in the second phase likely affected the results. As discussed in Chapter 3 (see *3.4.1 Recruitment and Setting*), the contexts for the second phase (i.e., the university where the participants work and the pronunciation that they assess) were controlled. However, the participants in the second phase were teaching at universities where many students with high English proficiency study, and in these universities, the teachers may have had relatively few opportunities to assess students' pronunciation for intelligibility on a daily basis, in comparison to other universities, because the majority of the students are already intelligible. The focus group discussion among teachers at different universities whose students have limited proficiency in English may result in a different outcome in terms of the diagnostic needs assessment, decisions about pronunciation teaching, and rationale for the decisions. Finally, the

influence of the learners' first language is a key factor. The difficulties with distinguishing /l/ and /r/ among Japanese speakers as well as the syllable-timed nature of the Japanese speakers' English might influence the teachers' diagnosis and decision-making. Both the questionnaire and focus group discussion may lead to different findings in contexts in which other languages are spoken as first languages. Therefore, further research should be conducted in different contexts, including in different universities in other areas of Japan, among teachers from universities who have limited proficiency in English, and in universities in other countries.

Another important issue that arose in this study was the inconsistent instructional decision-making based on the recordings, which may have been inevitable due to the difficulties with identifying errors in pronunciation (Levis, 2018). Although they listened to the identical recordings, the pronunciation features that the participants considered to be problematic and worth addressing varied. There are a few possible reasons for this observation. First, the teachers listened to the recordings only once. In an authentic classroom, teachers listen to students' pronunciation as they speak, and hence, the condition of listening to the recordings in this study was justifiable. However, when the recordings are collected for diagnostic purposes, the teachers may be allowed to listen to them multiple times (Munro & Derwing, 2015) to identify more problems and make sound pedagogical decisions. Another possible reason could be the teachers' varied background in pronunciation teaching, formal training in phonology and phonetics, and their exposure to Japanese-accented pronunciation. As Kennedy et al. (2017) speculated, the ways in which teachers interpreted the pronunciation errors depended on the teachers' formal training in phonology and phonetics, teaching experience, familiarity with the Japanese-accented pronunciation, and tolerance of the accented pronunciation. However, as Munro and Derwing (2015) asserted, learners need guidance in

determining pronunciation foci to improve their intelligibility because learners often fail to identify their pronunciation needs. The teachers' considerable variance in identifying pronunciation errors and pedagogical decisions found in this study should be resolved to facilitate learning toward the common goal: intelligibility. Therefore, the teachers might need formal training in assessing learners' pronunciation and making pedagogical decisions to promote intelligibility.

However, the self-reported responses via questionnaire have their limitations. The respondents' interpretation of integrating pronunciation can be as simple as reading a list of vocabulary aloud together or may involve employing a high-variability perceptual training session in a computer-assisted language classroom. Because several strategies, including explicit instruction, perceptual training, use of visual representation, tactic movement, shadowing, and feedback, have been found to be effective in promoting second language pronunciation, further research should be conducted to investigate how language teachers integrate the pronunciation component in other skill areas. As Borg (2015) noted, to explore the way by which teachers integrate pronunciation teaching in English classes in depth, classroom observation with other research instruments and approaches, such as interviews and questionnaires, should be ideal.

6.6 Implications for Teacher Education and Practice

In this dissertation study, both quantitative and qualitative data were collected. The large amount of quantitative data obtained through the questionnaire allowed the structural equation modeling to develop the decision-making models. However, as previously discussed in the limitation section (see 6.5 Limitations and Future Directions), the self-reported responses are not a true representation of the reality (Dörnyei & Taguchi, 2010) although they are useful and convenient for the collection of a large amount of data. Many of the items in the questionnaire were related to

abstract concepts such as interest, beliefs, self-confidence, and knowledge. However, there are no perfect means to measure these concepts using numerical scales, and developing an inventory to categorize and assess these concepts is still challenging. Studies in teacher education have developed and adopted an inventory to measure teachers' "self-efficacy beliefs" to predict teachers' self-efficacy (see Dellinger et al., 2008). Using this inventory and adding the results to the decision-making models can offer a better understanding of how teachers make decisions when selecting teaching strategies.

It should further be noted that it was not possible to test and examine all the possible paths to decision-making by using the large number of variables included in the questionnaire survey. Although it was reasonable to focus on several variables that were ostensibly related to each other to develop the models, there are thousands of possible models that could incorporate the variables in this study. As more research findings that might influence teachers' decisions on teaching strategies become available, more variables can be fitted into the models. To accomplish this, however, more participants are required because using more variables requires a larger number of samples to develop a fit model. In fact, Takeuchi and Mizumoto (2012) stated that 100 or more samples are necessary for SEM but that 200 or more samples would be ideal. Further research using SEM should collect at least 200 samples to develop a more detailed model with a higher number of variables.

Moreover, regarding the decision-making models developed in this study, teacher education did not directly predict any other variables. However, both pre- and in-service teacher training must play an important role in deciding what teachers teach and how they teach it. The contradictory findings in this study must be explained fully to shape future teacher training programs for pronunciation teaching. Murphy (1997) discussed the real situation in teacher training in master's

programs in the US and called for more pedagogy-based training for prospective teachers. At the same time, programs and workshops should be offered for in-service teachers because, when these teachers studied in a degree program, they may not have been offered pedagogical pronunciation courses. As new research findings offer practical implications about pronunciation teaching, this knowledge about effective pronunciation teaching should be disseminated widely to expand the contribution of the research to learners' development of increasingly intelligible pronunciation. The findings in this research indicate that teachers who are interested in research findings tend to have a higher self-confidence in their ability to teach, which in turn influences their decisions about the use of teaching strategies. Hence, in-service teachers who are not really interested in catching up with recent findings are the ones who require teacher training in pronunciation pedagogy. Therefore, workshops and teacher training for both in- and pre-service teachers should be widely available to help teachers develop their skills in teaching pronunciation.

Future research might need to examine the differences between native and non-native speakers and their self-confidence in their ability to assess and teach in relation to their language proficiency. Because the distinction between native and non-native speaker English teachers was beyond the scope of the present study, no analyses were administered to test the effect of this difference. Particularly in terms of the teachers' language learning experience as learners, the difference should offer a new direction. This study revealed that the teachers' language learning experience (especially an emphasis on pronunciation) influenced their self-confidence in knowing effective methods. Because most of the teachers in this study considered themselves to be highly successful learners with near-native or advanced-level proficiency, their success in learning an L2 should offer useful and practical insights to pronunciation teaching. Further studies investigating the

difference between native and non-native speaker teachers, with a focus on those non-native speaker teachers' success in relation to their self-confidence in teaching pronunciation, should be informative for enhancing the curricula in teacher education and teacher training programs for both pre- and in-service teachers.

Finally, one of the most important pedagogical implications of this study is diagnostic assessment. The qualitative analysis of the participants' accounts for their decisions about pronunciation teaching based on their diagnostic assessment in pronunciation revealed that they commonly referred to "intelligible pronunciation" as the benchmark to determine whether they would address pronunciation when teaching. The fact that these teachers commonly referred to intelligibility when making decisions about pronunciation teaching can be the fruitful result of the dissemination of intelligibility-based pronunciation instruction by the many researchers in the domain of L2 pronunciation (e.g., Levis, 2018; Munro & Derwing, 2015). However, their diagnostic decisions greatly vary because their interpretations of whether the learners' pronunciation is intelligible are different (Munro & Derwing, 2015). Even when teachers share a common pedagogical goal (e.g., intelligible pronunciation), what they decide to teach in terms of pronunciation can differ among teachers. Ideally, this variation should be avoided in future classrooms so that the learners can receive similar feedback from different teachers. To achieve similar or standardized diagnostic assessment, more research findings based on empirical data will be needed, and teacher training programs that integrate the latest findings and encourage the evidence-based teaching practice should be offered widely. Most important, based on improvements in teacher education, the pre-service and in-service teachers should be trained with effective diagnostic tasks to help learners achieve intelligible pronunciation.

6.7 Conclusion

In this study, an exploratory mixed-methods design was employed to explore what university EFL teachers in Japan do when teaching pronunciation. Based on the structural equation model, the teachers' self-confidence in their ability to teach pronunciation was a clear predictor of their choice of teaching strategies (e.g., explicit teaching, use of pronunciation model, mechanical drills, and incidental feedback on pronunciation). This finding added support for what previous studies on teacher cognition on pronunciation teaching found in other contexts (e.g., Foote et al., 2011; Macdonald, 2002). The models revealed overall that strong beliefs and interest in knowing pronunciation pedagogy, willingness to learn L2 pronunciation as learners, self-confidence in knowing effective pronunciation teaching, and self-reported knowledge about common terms used in literature in pronunciation pedagogy predicted teachers' self-confidence in the ability to teach pronunciation and further predicted that the teachers made decisions about pronunciation teaching strategies. However, the length of teacher training in pronunciation pedagogy was not found to be a predictor in the model despite the fact that several studies in teacher cognition demonstrated the impact of teacher training on gaining pedagogical content knowledge (e.g., Baker & Murphy, 2011). To include teacher training in this model, more consideration of how to quantify the quality of teacher training may be necessary. Due to the relatively small number of respondents for the SEM, several factors were also excluded from the model. In light of the practicality of collecting responses from as many teachers as possible, a reduced amount of questions focusing on either self-confidence, interests, beliefs, teacher training, teaching experience, and knowledge might be feasible as a future direction.

In the second phase of this study, four themes consistently emerged from the focus group interviews. The findings indicate that teachers seemed to follow a paradigm shift and make decisions grounded in intelligibility-based pronunciation teaching. However, what was intelligible to individual teachers was not particularly consistent, and their decisions about their pronunciation teaching varied widely. As Trofimovich and Isaacs (2017) summarized, the intelligibility or comprehensibility construct is characterized by multiple factors, including not only phonological and phonetic aspects but also lexical content and variety. This complex nature of intelligibility causes pronunciation assessment to be a highly challenging task for language teachers. Further studies are required to explore what individual aspects of interlanguage teachers observe when they make pedagogical decisions. Additionally, the linguistic aspects of interlanguage pronunciation that should be prioritized for learners to promote their intelligibility deserves additional exploration so that more research-based guidance will be available for teachers.

In summary, this mixed-methods study addressed the three research areas related to pronunciation teaching: (1) the major factors that influence teachers' decisions about pronunciation teaching, (2) diagnostic assessment about what pronunciation features to teach when listening to interlanguage pronunciation, and (3) the rationale for teachers' decisions about pronunciation teaching. In response to the first of the above, teachers' self-confidence in their ability to teach pronunciation effectively is the key factor that directly leads to decisions about pronunciation teaching strategies. Among many other factors examined, self-confidence in knowing how to teach pronunciation effectively, emphasis on pronunciation when learning an L2 as a learner, knowledge about key terms in pronunciation pedagogy, interest in research findings in pronunciation pedagogy, and beliefs that teachers need explicit knowledge about pronunciation are found to constitute a

pronunciation teaching decision model. For the second of the research questions, the study identified inconsistent decisions about what pronunciation features to teach based on teachers' diagnostic assessment of interlanguage pronunciation. The answers for the third question reveal that these inconsistent decisions among teachers might have been caused by their familiarity with the local accent and their knowledge about pronunciation pedagogy (e.g., individual pronunciation features' impacts on intelligibility). The teachers appeared to make intelligibility-based decisions; however, their judgements about what is important for the learners to know for their pronunciation to be intelligible varied depending on the teachers' knowledge and experience. In short, teachers who are confident about their pronunciation teaching teach pronunciation based on their intelligibility-based decisions about teaching, which vary depending on their familiarity with accents and knowledge of pronunciation pedagogy.

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Appendices

Appendix A: University of Bristol Graduate School of Education Ethical Form

GSoE RESEARCH ETHICS FORM

Name: Katsuya Yokomoto (SID: P1052831)

Proposed research project: *Pronunciation pedagogy at universities in Tokyo: A demographic survey of current English teachers' practice, experience, knowledge, confidence, interests, and beliefs (Tentative title)*

Proposed funder(s): N/A

Discussant for the ethics meeting: Prof. Akiko Kawasaki

Names of supervisors: Dr. Talia Isaacs and Prof. Guoxing Yu

Has your supervisor seen this submitted draft of your ethics application? Y/N

Please include an outline of the project:

Research Aims and Questions:

The main purpose of the present study is twofold: (1) to investigate current English teachers' educational and professional backgrounds in language learning and teaching; familiarity with technical terms in pronunciation teaching; and confidence in, interest in, and beliefs about pronunciation teaching and (2) to find how these variables are related to what pronunciation features they teach and how they teach these features.

To achieve the two aims above, the following research questions are proposed.

1. What are the educational and professional backgrounds of university English teachers in Tokyo?
2. What relationships among familiarity with pronunciation-related terms, confidence in teaching pronunciation, interest in pronunciation teaching, and beliefs about pronunciation teaching and learning can be found?
3. To what extent do these variables influence their decisions about pronunciation teaching?

Research design:

An exploratory, sequential mixed design through a large-scale online questionnaire and focus group discussions will be implemented.

Participants:

English teachers at universities in Tokyo

Data Collection Procedure:

Phase 1

Online questionnaires.

I will develop questionnaires online using the Bristol Online Survey tool from scratch and pilot them with several participants who have similar backgrounds to those of the prospective participants. Upon the completion of the questionnaire development, I will contact current and past colleagues in addition to the school administrators at universities in Tokyo, explain the research purposes and design, and ask them to distribute the link to the online questionnaires to call for prospective participants. The questionnaire should take no more than 25 minutes and should not pose any foreseeable risks to the participants. There is no financial compensation for participating in this survey.

Phase 2

Recording of Japanese learners' pronunciation.

Two sets of recordings will be collected from three university students. They will read aloud a short passage of 138 words and narrate a short story based on a set of 8 pictures. Their recordings will be used for the diagnostic task for teacher participants in focus group discussions.

Focus group discussion.

Twelve teachers who participated in the first phase will be selected. Each group will be from the same university, and three teachers will be in each of the four focus groups. They will listen to the recordings to diagnose the learners' pronunciation and decide what pronunciation features to teach and how they would teach them. Following the diagnosis, they will discuss their decisions. The teachers will be taking notes on the learners' pronunciation as well as their decisions. The discussions will be video and audio recorded for the qualitative analysis, and the teachers' notes and the researcher's field notes will be used as data for triangulation.

Data Analysis:

Phase 1

For the statistical analysis of the questionnaire responses, correlations among backgrounds, familiarity with technical terms, confidence level, interests, beliefs related to pronunciation learning and teaching, and the extent to which they focus on pronunciation will be examined.

Phase 2

The recorded focus group discussions will be transcribed, and the thematic content analysis will be used to analyze the participants' decisions about pronunciation teaching in both what features to teach and how they would teach them. The teachers' notes and field notes taken by the researcher in addition to the video will be used when necessary

for triangulation and clarification.

Ethical issues discussed and decisions taken:

Researcher access/exit.

Phase 1. The researcher will make an appointment with the school administration at several universities to request that they distribute the online questionnaires to the teachers at their universities. In addition, the researcher will attend regional conference meetings in Tokyo to call for participation. Finally, the invitation will be sent electronically employing a snowball effect through social networking services. The invitation contains the consent form that outlines the objectives and design of the study, with the researcher's name and contact information.

Phase 2. The researcher will contact and make an appointment with the participants and book a quiet conference room for the focus group discussions on the university campuses where the participants teach. After the focus group discussions, the researcher will leave the premises unless the participants need to inquire about anything related to the study. Also, the researcher's contact information will be provided in the consent form given to the participants in case they have inquiries about the research.

Information given to participants:

The objectives and design of this study will be outlined in the consent form that will be embedded in the invitation for Phase 1 and will be printed and signed in Phase 2. The information about the researcher, including his contact information and affiliation, data collection procedures, and potential risks, will be provided to the participants. Also, the participants will be informed of how confidentiality in data collection and data storage will be secured as well as how the anonymity in possible publications will be protected so that the participants will be identified by the third party.

Participants' right of withdrawal:

All the participants will have the right to withdraw from the research at any time. The researcher will eliminate the data of the participants who wish to withdraw as soon as they request to leave.

Informed consent:

In Phase 1, the invitation to the online questionnaire serves as the consent form, and only those who agree with the terms outlined in the invitation would proceed to participate in the online questionnaire. In Phase 2, the researcher will explain the purpose and design of the study at the beginning of the focus group discussions orally, and two sheets of a written consent form will be provided to the participants. Only those who agree and sign the consent form will participate in the discussions, and the participants and the researcher will keep one of the signed forms.

Complaints procedure:

Participants who have an issue with the procedures will be encouraged to contact the researcher at any time. The contact information will be provided in the invitation to the online questionnaires for Phase 1 and in the consent form for Phase 2.

Safety and well-being of participants/researcher:

For both phases, the participants and the researcher's safety and well-being will be the priority. The online questionnaires will be designed to be completed within 25 minutes and can be filled out at separate times when participants cannot complete them at once. The focus group interview will be conducted in a comfortable room to reduce the psychological burden to the participants. The pronunciation diagnosis will be completed within 15 minutes, and the group discussions will be completed within 30-45 minutes.

Anonymity/confidentiality:

All personal information will be confidential. The questionnaire responses will be coded with numbers, and video recordings, audio recordings, and notes will be coded with pseudonyms. All the participants' identities will be protected during data collection and analysis using the codes. Finally, their identities will remain anonymous in all reports of the results by avoiding reporting any information that will identify the participants, including their names and affiliations, in this dissertation and any other publications.

Data collection:**Phase 1:**

Online questionnaires. The questionnaires will be developed and conducted online via the Bristol Online Survey tool. The questionnaires will be designed to elicit the university teachers' beliefs, interests, teaching experience, learning experience, and teaching practice related to pronunciation teaching. The questionnaires should take approximately 15–25 minutes to complete.

Phase 2:

Pronunciation recordings. Three university students will be recruited from the researcher's university. They will record their pronunciation using two tasks: a reading aloud and storytelling based on pictures. Their pronunciation will be recorded in a sound-proof room at the researcher's and the students' university. The recording process, including the preparation and recording will take about 10–15 minutes in total.

Teachers' notes. The teacher participants will take notes on the learners' pronunciation as they listen to the recordings. The teachers' notes will be collected as data that provide details about the diagnosis and their decisions about teaching.

Audio recordings. The whole focus group discussions will be audio recorded. The focus group discussions will primarily focus on the teacher participants' decisions about

pronunciation teaching based on their diagnoses of the learners' recordings and their rationale about their decisions. The audio recordings will be transcribed, and the transcriptions will be used for the analysis.

Video recordings. The whole focus group discussions will be video recorded. The primary purpose of having video recording will be to identify the individual participants from the group discussion. When verbal exchanges overlap, or when the speaker is not recognizable, the video recordings will be consulted.

Field notes. During the focus group discussions, the researcher will take careful field notes on the content and flow of the discussions as well as other events that will happen during the discussions.

Data storage/Data analysis/Data protection act:

All the collected digital data, including the questionnaire results, pronunciation recordings, audio recordings, and video recordings will be stored in a password-protected computer in a locked office on the researcher's university campus. The teachers' notes and field notes will be stored in the locker in the locked office on the researcher's campus. The researcher will be the only person who will have access to any of the collected data, except the online questionnaire results, which can be accessed by Dr. Talia Isaacs merely for the purposes of supervision. The questionnaire responses stored in the computer will be coded using reference numbers, and the data from focus group discussions will be coded using pseudonyms to protect the participants' personal information even in the case the data are stolen. All the data will be stored until the completion of the doctoral dissertation, and they will be destroyed upon completion.

Data analysis:

The data analyses in both phases will be conducted on the computer only. The statistical analysis using the data collected from the online questionnaire will be administered on the computer in the office only. The qualitative analysis in Phase 2 will be done mainly by using the software for qualitative analysis on the computer. When the teachers' notes and field notes are needed for analysis, these notes will be examined.

Feedback: The student participants will receive feedback on their pronunciation from the researcher, and that will serve as an additional reward to the gratuity. The teacher participants who wish to learn about the results of the study may provide their contact information in the online questionnaires. The summary of the results will be sent to those teachers.

Responsibilities to colleagues/academic community:

Academic honesty will be ensured throughout the research activity. The researcher will ensure there will be no mistakes in terms of data collection and analysis as well as

reporting results, and he will be responsible for any mistakes related to this research.

Reporting of research:

The results of the research will be reported as the doctoral dissertation as part of the completion of the doctoral degree at the University of Bristol. Part of the results will be published in academic articles or book chapters. In any publications, the anonymity of the participants will be protected.

If you feel you need to discuss any issue further, or to highlight difficulties, please contact the GSoE's ethics co-ordinators who will suggest possible ways forward.

Signed: Katsuya Yokomoto (Researcher) Signed: Akiko Kawasaki (Discussant)

Date: January 25, 2013

Consent form for participation in focus group discussion

The researcher provided the written document outlining the purpose of the project, the design of the project, including the data collection methods, data protection procedures, anonymity protection, and the right to withdraw from the project at any time. The researcher also orally explained details about the project purpose, design, data protection, and anonymity protection.

1. Participation in a research project conducted by Mr. Katsuya Yokomoto is voluntary. I understand that the study is designed to gather information about university-level teachers' pronunciation assessment process. I will be one of approximately 10–12 participants for this study.
2. I have the right to decline to answer any question or to end the focus group discussion if I do not feel comfortable.
3. I may withdraw and discontinue participation in this project at any time.
4. I understand that participation in this focus group interview involves two tasks: a pronunciation needs assessment task and a follow-up focus group discussion. I understand that my well-being is the priority. I understand that the whole session including preparation, explanation about the procedures, and the two tasks, will last no longer than 90 minutes.

5. I understand that the researcher will record the sessions using audio and video recording devices in addition to his research field notes.
6. I understand that all the notes written in the materials can be used as data in addition to the recordings.
7. I understand that all the data collected will be stored in a password-protected computer in a locked office.
8. I understand that my anonymity will be protected by excluding my name and affiliation in the publication.
9. I understand that this project has been reviewed and approved by the Faculty of Science Human Research Ethics Committee at the University of Bristol.
10. The researcher has answered all the inquiries about the project from the participants.
11. I have read and understand the explanation about the project and my participation. I voluntarily agree to participate in this project.

Participant's Name (print)

Participant's Signature

Date

Katsuya Yokomoto

Researcher's Name

Researcher's Signature

Date

Appendix B: The Participants' Universities in the First Phase

| | |
|------------------------------------|---------------------------------------|
| Aoyama Gakuin University | Seikei University |
| Bunkyo University | Seisen University |
| Gakushuin University | Senshu University |
| Gakushuin Women's College | Showa Pharmaceutical University |
| Hosei University | Showa Women's University |
| International Christian University | Sophia University |
| J. F. Oberlin University | Tama University |
| Japan Women's University | Tamagawa University |
| Juntendo University | Tokai University |
| Kagawa Nutrition University | Tokyo Denki University |
| Meiji University | Tokyo Kasei University |
| Meiji Gakuin University | Tokyo Medical and Dental University |
| Meikai University | Tokyo University of Technology |
| Mejiro University | Toyo Gakuen University |
| Musashino Gakuin University | Toyo University |
| Musashino University | University of the Sacred Heart, Tokyo |
| Nihon University | University of Tsukuba |
| Rikkyo University | Waseda University |
| Salesian Polytechnic | (in alphabetical order) |

Appendix C: Pronunciation Pedagogy Survey in the First Phase

Pronunciation Pedagogy Survey

0% complete

Page 1: Pronunciation Pedagogy Survey

Thank you very much for participating in this survey. This survey is part of my doctoral dissertation where the main purpose is to investigate how teachers' beliefs about teaching pronunciation as well as educational and professional background influence their diagnosis process. This project will be conducted under the supervision of Dr. Talia Isaacs, my dissertation advisor. This survey consists of five parts. The first part will ask for your basic contact information. The second part will ask about your current practice of pronunciation teaching and confidence level in teaching pronunciation. The third part will ask you about your teaching and educational background. The fourth part will ask about your interests in teaching English pronunciation, and finally the fifth part will ask you about your beliefs about teaching and learning English pronunciation. It may take 15-25 minutes to complete this online survey.

Based on the results of this survey, some of you will be asked to participate in the later phase of the project, where you will be asked to diagnose Japanese learners' pronunciation and follow-up interview will be conducted.

The data and personal information collected in this survey will not be used for any purpose other than this project and will be saved securely. Your identity will be safeguarded by using pseudonyms in data storage and reports. You have the right to withdraw from this project at any time without reason or explanation.

If you have any questions or concerns about the questionnaire and/or project, please do not hesitate to contact me via email. My email address is edxky@bristol.ac.uk.

Best Regards,

Katsuya Yokomoto

Pronunciation Pedagogy Survey

12% complete

Page 2

Please note that using the backspace key may cause you to go back to the previous page without saving your responses.

Pronunciation Pedagogy Survey

25% complete

Page 3: Part I: Contact Information

In this part, you will be asked to provide your name and contact information. Your name and contact information will not be publicized anywhere and be used merely to contact you when I need to clarify your questionnaire response(s), when I ask you to participate in the later phase of the project, and/or when I send you the survey results.

Please feel free to use a pseudonym if you would not like to provide your real name here.

1. Please type your **FIRST** name here. (e.g.) Michael If you use a pseudonym, please indicate that by adding "(P)" at the end. (e.g.) Michael (P)

2. Please type your **FAMILY** name here. (e.g.) Johnson If you use a pseudonym, please indicate that by adding "(P)" at the end. (e.g.) Johnson (P)

3. Please provide the name of the university you are currently teaching. If you are teaching at two or more universities, please choose one.

4. Please provide your email address so that I can contact you if I have questions about your responses in this questionnaire, if I ask you to participate in the next phase of the project, and/or if I send you a summary of the survey results. If you feel uncomfortable with providing your contact information, please leave the following box blank. If you prefer another means of communication (e.g. Phone number, etc.), please provide your contact information here.

5. Would you like me to send you a summary of the survey results?

YES NO

Pronunciation Pedagogy Survey

37% complete

Page 4: Part II: Practice of Pronunciation Teaching and Confidence in Teaching English Pronunciation

In this part, you will be asked what you have been doing in terms of pronunciation teaching.

This part of the survey uses a table of questions. [view as separate questions instead?](#)

6. Please type in the names of the courses you are currently teaching at UNIVERSITIES. If you are teaching one type of course for 2 different groups of students (e.g. English Writing for one Economics class & one Education class), please use one box. If you are teaching 2 different courses for the same group of students (e.g. both English 2 and Academic Reading 1 for one Business class), please use 2 boxes. Then, please choose all the skills you are teaching in each of the courses. Finally, in each of the courses you are teaching, how much do you emphasize pronunciation? Please indicate using a 5-point scale (1=no focus, 5=main focus).

| | Please type in the name of each of the courses you are currently teaching. | Which skill(s) and/or content is taught in each of the courses? Please select all that are taught in each course. | | | | | | | | | | How much do you emphasize pronunciation teaching in each of the courses (1=no focus, 5=main focus)? | If you selected Other, please specify: | | |
|----|--|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------------------|--|--------------------------|---|--|-----------------|--|
| | | Speaking | Listening | Reading | Writing | Grammar | Pronunciation | Vocabulary | Content (including academic subjects) | Test Preparation (e.g. TOEFL, TOEIC, etc.) | Other | | | | |
| 1 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 2 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 3 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 4 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 5 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 6 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 7 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 8 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 9 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 10 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 11 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 12 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 13 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 14 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |
| 15 | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Please select ▼ | |

This part of the survey uses a table of questions, [view as separate questions instead?](#)

7. When you teach English pronunciation, how do you teach English pronunciation? How often do you use each of the following approaches? Please indicate the frequency using a 5-point scale (1=Never, 5=Always) If you do NOT teach pronunciation at all, please choose NO PRONUNCIATION for all the items. If you use other approaches, please specify in the next question (Question 8).

| | Please choose one that you think most closely indicates how often you use each of the approaches listed below. Please choose NO PRONUNCIATION for all the items below if you do not teach pronunciation at all in your classes. | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | NO PRONUNCIATION | 1: Never | 2: Seldom | 3: Sometimes | 4: Often | 5: Always |
| Explaining sound systems (including how to produce particular sounds) explicitly | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Providing learners with model sounds (including your own voice, CDs, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Providing learners with time to practice drilling exercise | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Giving incidental corrective feedback when learners engage in communicative tasks | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Giving corrective feedback after a task has finished | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Having learners give peer-evaluation (e.g. Learners give feedback on other learners' pronunciation, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Having learners give self-evaluation (e.g. Learners evaluate their own pronunciation, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. If you use other approaches than those listed in the previous question, please specify your approaches to teaching pronunciation here and indicate how often you employ each of the approaches using a 5-point scale.

| | Please briefly explain your approaches to teaching pronunciation. | Please choose one that you think most closely indicates how often you use each of the approaches listed below. | | | | |
|------------------|---|--|--------------------------|--------------------------|--------------------------|--------------------------|
| | | 1: Never | 2: Seldom | 3: Sometimes | 4: Often | 5: Always |
| Other Approach 1 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Approach 2 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Approach 3 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Approach 4 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Approach 5 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. To what extent are you familiar with the following terms used in literature related to pronunciation pedagogy? Please indicate your familiarity using a 5-point scale.

| | Please choose one that you think most closely represents your level of understanding for each of the items listed below. | | | | |
|-------------------|--|---|---|---|---|
| | 1: I have never heard of this | 2: I have heard of this, but don't understand what it is all about. | 3: I have heard of this and partly understand what it is about. | 4: I have a reasonable knowledge and understanding of this. | 5: I am very confident about my knowledge of and use of this. |
| Intelligibility | * | * | * | * | * |
| Suprasegmentals | * | * | * | * | * |
| Syllable-timed | * | * | * | * | * |
| Consonants | * | * | * | * | * |
| Phonemes | * | * | * | * | * |
| Comprehensibility | * | * | * | * | * |
| Vowels | * | * | * | * | * |
| Segmentals | * | * | * | * | * |
| Prosody | * | * | * | * | * |
| Stress-timed | * | * | * | * | * |

10. How confident are you in using the phonetic alphabet (e.g. IPA, etc.)? Please indicate your confidence level with the phonetic alphabet using a 5-point scale.

| | Please choose one that you think most closely represents your level of confidence. | | | | |
|---|--|--------|--------|---------|--------------|
| | 1: Very low | 2: Low | 3: Mid | 4: High | 5: Very high |
| Reading the phonetic alphabet | * | * | * | * | * |
| Writing the phonetic alphabet | * | * | * | * | * |
| Using the phonetic alphabet when teaching pronunciation | * | * | * | * | * |

This part of the survey uses a table of questions, [view as separate questions instead?](#)

11. How confident are you in teaching English pronunciation to university students? Please indicate the level of confidence using a 5-point scale.

| | Please choose one that you think most closely represents your level of confidence. | | | | |
|--|--|--------|--------|---------|--------------|
| | 1: Very low | 2: Low | 3: Mid | 4: High | 5: Very high |
| Knowledge about effective methods to teach English pronunciation | * | * | * | * | * |
| Knowledge about the sound system of the English language | * | * | * | * | * |
| Knowledge about the learners' needs in pronunciation | * | * | * | * | * |
| Ability to diagnose learners' pronunciation | * | * | * | * | * |
| Ability to explain the sound system of the English language | * | * | * | * | * |
| Ability to teach English pronunciation | * | * | * | * | * |

Pronunciation Pedagogy Survey

50% complete

Page 5: Part III: Background Information

In this part, you will be asked about your biographic, educational, and professional background.

12. When is your birthday?

Dates need to be in the format 'DD/MM/YYYY', for example 27/03/1980.

Please make sure the date is between 01/01/1925 and 31/12/2014.

(dd/mm/yyyy)

13. Gender

Male

Female

14. Nationality (Type your nationality in the box below)

15. How many years have you taught English (including ESL, EFL, practicum, etc.)? (e.g.) 6 months => 0.5, 3 years => 3

a. Of your English teaching experience, how long have you taught Japanese learners including both ESL and EFL contexts?

b. Of your English teaching experience, how long have you taught English at the university level (including Japan and other countries)?

c. Of your university-level English teaching experience, how long have you taught at Japanese universities?

16. Please indicate your foreign/second language proficiency level using a 9-point scale. If you have learned more than one foreign/second language, please consider the language with the highest proficiency level.

Please select ▼

- a. As a language learner, how important has it been for you to learn the pronunciation of that foreign/second language? Please indicate the level of importance using a 5-point scale.

Please select ▼

- b. How have you learned foreign language pronunciation? Please choose all that you have tried.

- I have never learned a foreign/second language.
- I have never learned the pronunciation of any foreign/second language.
- Learning the phonetic alphabet/symbols (e.g. IPA, etc.)
- Listening to audio materials (e.g. CDs, radio, etc.)
- Imitating audio materials (e.g. shadowing, overlapping, etc.)
- Imitating native speakers' talk (e.g. friends, teachers, etc.)
- Asking teachers to correct your pronunciation
- Asking your friend(s) to correct your pronunciation
- Recording your own speech
- Learning the spelling-pronunciation correspondence (e.g. phonics, etc.)
- Singing songs in the second/foreign language
- Using application(s) that include pronunciation practice
- Reading aloud
- Other

- c. How has your pronunciation learning experience influenced your pronunciation teaching?

- I have never learned a foreign/second language.
- I have never learned the pronunciation of any foreign/second language.
- My pronunciation learning has not influenced my teaching.
- I tend to teach English pronunciation in the way I have learned the pronunciation of my foreign/second language.
- I tend to teach English pronunciation in the way my language teacher has taught me.
- Other

- d. To what extent do you think your foreign/second language pronunciation learning has influenced your English pronunciation teaching? Please indicate the level of influence using a 5-point scale.

Please select ▼

17. Which of the following training in English phonetics and/or phonology (i.e. in linguistics department) have you received?

- Undergraduate
- Certificate program (e.g. CELTA, DELTA, etc.)
- Postgraduate Master
- Postgraduate Doctor
- Professional seminar/workshop
- In-house faculty development
- None of the above
- Other

18. Which of the following training in English pronunciation TEACHING (i.e. TESOL, TEFL, etc.) have you received? Please choose all that apply.

- Undergraduate
- Certificate program (e.g. CELTA, DELTA, etc.)
- Postgraduate Master
- Postgraduate Doctor
- Professional seminar/workshop
- In-house faculty development
- None of the above
- Other

19. In total, how many hours of the training in pronunciation TEACHING have you undergone? *Please answer in hours and type only numbers here. (e.g.) 80 minutes x Twice a week x 15 weeks = 40 hours => 40 90 minutes x Once a week x 15 weeks = 22.5 hours => 22.5 50 minutes x Once a week x 15 weeks = 12.5 hours => 12.5

20. How familiar with the following publications related to English pronunciation and pronunciation pedagogy? How strongly has each of the publications influenced your teaching? Please indicate using a 5-point scale. Please see the images below to help you remember each publication. (Please note that the covers may be different depending on the editions.)

| | Please choose one that you think most closely represents your level of familiarity. | Please choose one that you think most closely represents the level of influence of each book on your teaching. |
|---|---|--|
| Avery, P., & Ehrlich, S. C. (1992). Teaching American English pronunciation. Oxford: Oxford University Press. | Please select ▼ | Please select ▼ |
| Cauldwell, R. (2013). Phonology for listening: Teaching the stream of speech. Birmingham, UK: Speech in Action. | Please select ▼ | Please select ▼ |
| Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). Teaching pronunciation: A course book and reference guide (2nd Ed.). Cambridge University Press. | Please select ▼ | Please select ▼ |
| Chun, D. M. (2002). Discourse intonation in L2: From theory and research to practice (Vol. 1). John Benjamins Publishing. | Please select ▼ | Please select ▼ |

| | | |
|--|------------------------|------------------------|
| <p>Cruttenden, A. (2009). <i>Gimson's pronunciation of English</i>. (7th Ed.). Hodder Arnold Publication.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Dalton, C., & Seidlhofer, B. (1994). <i>Pronunciation</i>. Oxford University Press.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Fraser, H. (2001). <i>Teaching pronunciation: A handbook for teachers and trainers</i>. AMES NSW: Department of Education Training and Youth Affairs.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Gilbert, J. (2009). <i>Teaching pronunciation using the prosody pyramid</i>. New York: Cambridge University Press.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Jenkins, J. (2000). <i>The phonology of English as an international language: New models, new norms, new goals</i>. Oxford University Press.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |

| | | |
|---|-----------------|-----------------|
| Jenkins, J. (2007). English as a lingua franca: Attitude and identity. Oxford University Press. | Please select ▼ | Please select ▼ |
| Kelly, G. (2000). How to teach pronunciation. Essex, UK: Pearson Education. | Please select ▼ | Please select ▼ |
| Kenworthy, J. (1987). Teaching English pronunciation. London: Longman. | Please select ▼ | Please select ▼ |
| Ladefoged, P., & Johnson, K. (2010). A course in phonetics. Cengage learning. | Please select ▼ | Please select ▼ |
| Lane, L. (2010). Tips for teaching pronunciation: A practical approach. Pearson. | Please select ▼ | Please select ▼ |
| Morley, J. (1994). Pronunciation Pedagogy and Theory: New Views, New Directions. TESOL. | Please select ▼ | Please select ▼ |
| Murphy, J. (2013). Teaching pronunciation. Alexandria, VA: TESOL International Association. | Please select ▼ | Please select ▼ |

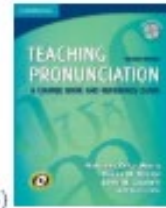
| | | |
|--|------------------------|------------------------|
| <p>Pennington, M. C. (1996). Phonology in English language teaching: An international approach. Routledge.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Roach, P. (2009). English phonetics and phonology: A practical course. (4th Ed.). Cambridge University Press.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Rogerson-Revell, P. (2011). English phonology and pronunciation teaching. Continuum.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Underhill, A. (1994). Sound foundations: Learning and teaching pronunciation. London: Macmillan.</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |
| <p>Walker, R. (2010). Teaching the pronunciation of English as a lingua franca. OUP</p> | <p>Please select ▼</p> | <p>Please select ▼</p> |



a. Avery & Ehrlich (1992)
Brinton, Goodwin & Griner (2010)



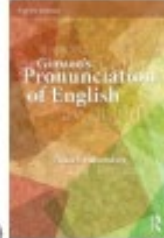
b. Cauldwell (2013)



c. Celce-Murcia,



d. Chun (2002)



e. Cruttenden (2009)



f. Dalton & Seidlhofer
(1994)



g. Fraser (2001)



h. Gilbert (2009)



i. Jenkins (2000)



j. Jenkins (2007)



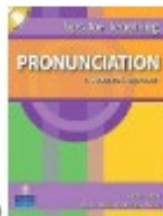
k. Kelly (2000)



l. Kenworthy (1987)



m. Ladefoged & Johnson (2010)



n. Lane (2010)



o. Morley
(1994)



p. Murphy (2013)



q. Pennington (1996)



r. Roach (2009)



s. Rogerson-Revell (2011)



t. Underhill (1994)



u. Walker (2010)

21. Which of the publications above would you recommend to other English teachers? If you have other recommendations, please choose "Other" and provide information about the publication. If you type two or more recommendations in the "Other" box, please number them (e.g 1. AAA, 2. BBB, etc.) If you have no recommendation, please leave this question unanswered.

- a. Avery, P., & Ehrlich, S. C. (1992). *Teaching American English pronunciation*. Oxford: Oxford University Press.
- b. Cauldwell, R. (2013). *Phonology for listening: Teaching the stream of speech*. Birmingham, UK: Speech in Action.
- c. Celce-Murcia, M., Brinton, D. M., Goodwin, J. M., & Griner, B. (2010). *Teaching pronunciation: A course book and reference guide (2nd Ed.)*. Cambridge University Press.
- d. Chun, D. M. (2002). *Discourse intonation in L2: From theory and research to practice (Vol. 1)*. John Benjamins Publishing.
- e. Cruttenden, A. (2009). *Gimson's pronunciation of English. (7th Ed.)*. Hodder Arnold Publication.
- f. Dalton, C., & Seidlhofer, B. (1994). *Pronunciation*. Oxford University Press.
- g. Fraser, H. (2001). *Teaching pronunciation: A handbook for teachers and trainers*. AMES NSW: Department of Education Training and Youth Affairs.
- h. Gilbert, J. (2009). *Teaching pronunciation using the prosody pyramid*. New York: Cambridge University Press.
- i. Jenkins, J. (2000). *The phonology of English as an international language: New models, new norms, new goals*. Oxford University Press.
- j. Jenkins, J. (2007). *English as a lingua franca: Attitude and identity*. Oxford University Press.
- k. Kelly, G. (2000). *How to teach pronunciation*. Essex, UK: Pearson Education.
- l. Kenworthy, J. (1987). *Teaching English pronunciation*. London: Longman.
- m. Ladefoged, P., & Johnson, K. (2010). *A course in phonetics*. Cengage learning.
- n. Lane, L. (2010). *Tips for teaching pronunciation: A practical approach*. Pearson.
- o. Morley, J. (1994). *Pronunciation Pedagogy and Theory: New Views, New Directions*. TESOL.
- p. Murphy, J. (2013). *Teaching pronunciation*. Alexandria, VA: TESOL International Association.
- q. Pennington, M. C. (1996). *Phonology in English language teaching: An international approach*. Routledge.
- r. Roach, P. (2009). *English phonetics and phonology: A practical course. (4th Ed.)*. Cambridge University Press.
- s. Rogerson-Revell, P. (2011). *English phonology and pronunciation teaching*. Continuum.
- t. Underhill, A. (1994). *Sound foundations: Learning and teaching pronunciation*. London: Macmillan.
- u. Walker, R. (2010). *Teaching the pronunciation of English as a lingua franca*. OUP
- Other

22. Why would you recommend the publications above? Please choose the reason(s) below or state your own reason(s). If you have no recommendation, please leave this question unanswered.

| | Please choose the publication(s) that you recommend for respective reasons. If you do not have any recommendation, please go on to the next question. | | | | | | | | If you selected Other, please specify: |
|----------------------------|---|--|---|--|--|---|---|--------------------------|--|
| | It helps teachers learn the English sound system. | It helps teachers decide what pronunciation features to teach. | It lists hands-on activities that can be used in class. | It helps teachers integrate pronunciation teaching into other English classes. | It helps teachers understand theories in pronunciation teaching. | It helps teachers write syllabi for pronunciation teaching. | It guides teachers with diagnosing learners' pronunciation. | Other | |
| Avery & Ehrlich (1992) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Cauldwell (2013) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Celce-Murcia et al. (2010) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Chun (2002) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Cruttenden (2009) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Dalton & Seidlhofer (1994) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Fraser (2001) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Gilbert (2009) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Jenkins (2000) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Jenkins (2007) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Kelly (2000) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Kenworthy (1987) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Ladefoged & Johnson (2010) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Lane (2010) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Morley (1994) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Murphy (2013) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Pennington (1996) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Roach (2009) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Rogerson-Revell (2011) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Underhill (1994) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Walker (2010) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Other 1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Other 2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |
| Other 3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text"/> |

Pronunciation Pedagogy Survey

62% complete

Page 6: Part IV: Interests in Pronunciation Teaching

In this part, you will be asked about your interests in pronunciation teaching.

This part of the survey uses a table of questions, [view as separate questions instead?](#)

23. To what extent do you agree or disagree with the following statements about your interests in pronunciation teaching? Please indicate the level of your agreement using a 5-point scale. Please do NOT leave out any items.

| | Please choose one that you think most closely represents your opinion about each of the items below. | | | | |
|---|--|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1: Strongly disagree | 2: Disagree | 3: Don't know | 4: Agree | 5: Strongly agree |
| I am interested in teaching pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would like to learn effective ways to teach pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am reluctant to attend professional seminars/workshops on pronunciation teaching. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to catch up with recent findings in pronunciation teaching. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am uninterested in pronunciation teaching. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would like to learn theories in pronunciation teaching. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I tend to emphasize pronunciation when teaching English. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like finding teaching materials and textbooks for pronunciation teaching. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am reluctant to teach pronunciation when teaching English. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

In this part, you will be asked about your beliefs about pronunciation teaching and learning.

This part of the survey uses a table of questions, [view as separate questions instead?](#)

24. To what extent do you agree or disagree with the following statements about your beliefs about pronunciation teaching? Please indicate the level of your agreement using a 5-point scale. Please do NOT leave out any items.

| | Please choose one that you think most closely represents your opinion about each of the items below. | | | | |
|--|--|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1: Strongly disagree | 2: Disagree | 3: Don't know | 4: Agree | 5: Strongly agree |
| Teachers should know the English sound system to teach pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers can help learners improve their pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Courses solely focusing on pronunciation should be offered in primary education in Japan. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Courses solely focusing on pronunciation should be offered in secondary education in Japan. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Courses solely focusing on pronunciation should be offered in university education in Japan. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When teachers are fluent English speakers (including native speakers), they know how to teach pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Explicit explanation about the English sound system helps learners learn pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers can teach pronunciation without explicit knowledge about the English sound system. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers should learn how to teach English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pronunciation teaching should be integrated into other skill courses. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers should avoid correcting pronunciation errors. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Explicit explanation about how to produce each sound helps learners learn pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers should spend time in class to teach English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers can help learners learn English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having learners repeat native speakers' pronunciation is an effective way to teach pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

25. To what extent do you agree or disagree with the following statements about learning English pronunciation? Please indicate your level of agreement using a 5-point scale. Please do NOT leave out any items.

| | Please choose one that you think most closely represents your opinion about each of the items below. | | | | |
|---|--|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1: Strongly disagree | 2: Disagree | 3: Don't know | 4: Agree | 5: Strongly agree |
| Learning English pronunciation is needed for effective communication. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Japanese university students should improve their English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners are likely to have communication breakdown when they speak English with incorrect word stress (e.g. VANilla instead of vaNilla, etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Speaking English with incorrect sentence stress is likely to interfere with effective communication. (e.g. i'm going TO THE store ON friday. etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners at any age can learn English pronunciation to mastery. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mispronouncing the consonants /l/ and /r/ is likely to cause communication breakdown (e.g. light vs. right, climb vs. crime, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners should speak with correct intonation in English to communicate effectively (e.g. "Did you watch it?" with a rising tone, etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| University students in Japan dislike learning English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners of English can communicate even when they have foreign accent. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mispronouncing the vowels "o" in cot and "a" in cat causes communication breakdown. (e.g. pod vs. pad, hot vs. hat, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners should learn to sound like native speakers. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Hearing a large amount of native speakers' pronunciation helps learners improve their pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners of English should reduce their foreign accents for effective communication. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Japanese university students' pronunciation is good enough for effective communication. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mispronouncing the vowels "oo" in pool and "u" in pull is likely to cause communication breakdown (e.g. fool vs full, stewed vs. stood, etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Japanese university students are interested in pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Learners can communicate effectively even when they speak with incorrect intonation (e.g. Saying "Would you like coffee or tea?" with a rising tone at the end of both "coffee" and "tea", etc.). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Learners at any age can improve their English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mispronouncing the consonants "th" in theme and "s" in seam is likely to cause communication breakdown (e.g. thin vs. sin, tenth vs. tense, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| After a certain age, learners stop learning English pronunciation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Pronunciation Pedagogy Survey



Page 8: Final Comments and Feedback

If you have any questions or concerns regarding this survey, please leave any final comments and/or feedback in the box below.

26. Please feel free to write any comments and suggestions here regarding this survey.

Pronunciation Pedagogy Survey

100% complete

Thank You!




Your responses to this survey have been submitted.

If you need a formal record of your submission, please use the following details:

Completion receipt

Receipt number: 1-1-1

Submission time: 2019-08-20 16:26:14 BST

 [Print](#)  [Download PDF](#)  [Email](#)

Appendix D: Needs Assessment Sheets in the Second Phase

Pronunciation Diagnostic Assessment

Imagine that you are teaching a speaking class of 10 students whose proficiency levels are between high beginning and low intermediate at a university and that you are making decisions about what you are going to teach in this class based on a diagnostic assessment at the beginning of a semester. You are going to listen to the speech samples taken from three of those students. The speech sample consists of two parts: reading aloud (the script provided) and storytelling based on a cartoon strip (the cartoon provided). As you listen to them, please take careful notes on their pronunciation and any other aspects of the language on a separate sheet. Then, determine what pronunciation features you would teach in this class this semester (15 weeks). You may decide to teach as many features as you wish.

You may use the following as possible ideas, but it is not necessary that you do so. If you find them useful, you may circle or check the features below and add details.

- Consonants

- Vowels

- Word Stress

- Sentence Stress

- Intonation

- Speech Rate

- Thought Groups

- Connected Speech

- Other

Learner 1

Please take careful notes on the learner's pronunciation and any aspects of the language below.

Task 1: Reading Aloud

Pronunciation learning

Have you ever watched young children play with the sounds of the language they are learning? They imitate, repeat, and sing sound combinations without effort. For young children, learning to speak a new language seems automatic. No one would suspect that complex learning is occurring. For adult learners, pronunciation of a new language is not automatic. Adult learners have to put forth more effort. Why is progress in adults more limited? Some experts say the reasons are biological or physical. Others say they are social or cultural. No matter what the reason is, it is important to realize a few things about clear speech. First, if you are motivated and have good instruction, you will improve your pronunciation. Second, it is not necessary to lose your accent or sound like a native speaker to communicate clearly in English.

Task 2: Storytelling (See the picture frames on a separate sheet.)



(Derwing et al., 2009).

Available at <http://www.iris-database.org/>

Appendix E: Other Decision-Making Models

Figure E.1

Decision-Making Model for Use of Explicit Teaching with Direct Links with 7 Variables

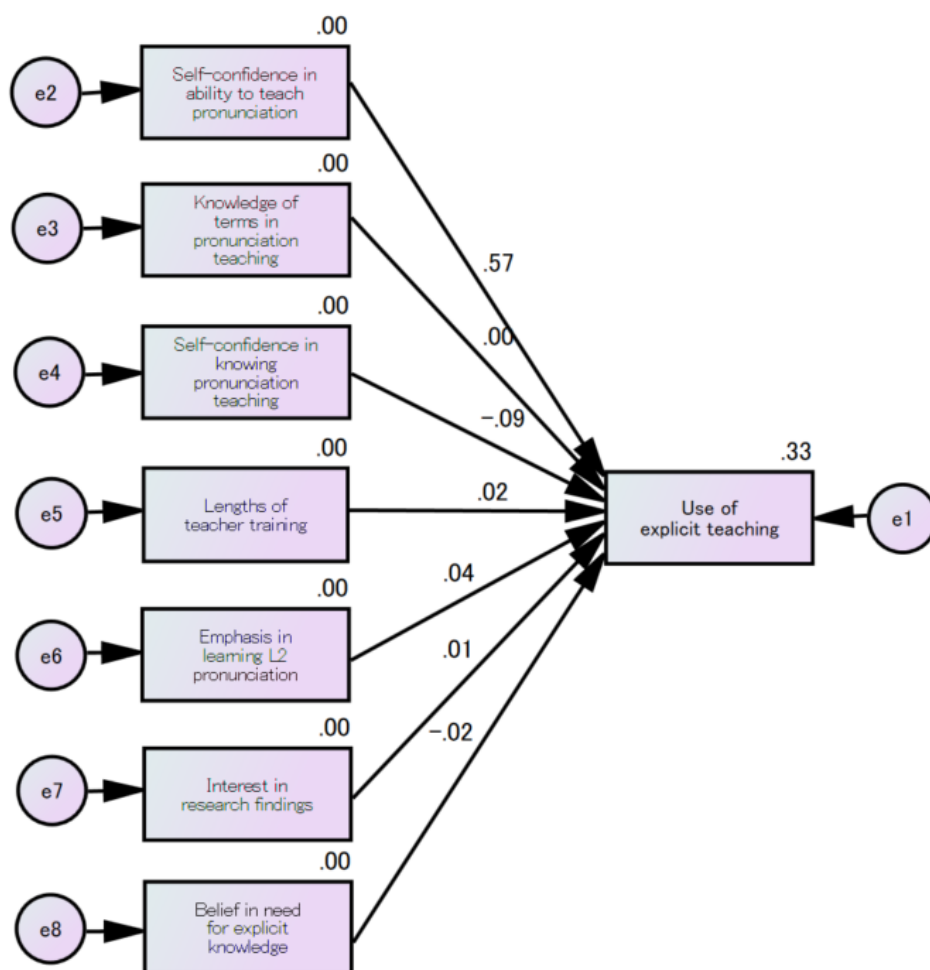


Table E.1.1*Fit Indices for Model for Use of Explicit Teaching with Direct Links with 7 Variables*

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|--------------------------|---------|----|------|------|-------|-------|---------|---------|-------|
| Use of explicit teaching | 265.641 | 21 | .000 | .098 | -.203 | .340 | 195.766 | 300.966 | .2910 |

Table E.1.2*Unstandardized Regression Weights in Model for Use of Explicit Teaching with Direct**Links with 7 Variables*

| | | | Estimate | S.E. | c.r. | p |
|-----|---|----------------------|----------|-------|--------|-------|
| EXP | ← | Conf_PT | 0.794 | 0.114 | 6.949 | *** |
| EXP | ← | Ed_Length | 0.001 | 0.005 | 0.285 | 0.776 |
| EXP | ← | Conf_Knowdge_T | -0.127 | 0.117 | -1.09 | 0.276 |
| EXP | ← | Knowledge | -0.005 | 0.123 | -0.04 | 0.968 |
| EXP | ← | Emp_L2_Pronunciation | 0.064 | 0.12 | 0.535 | 0.593 |
| EXP | ← | Int_Res | 0.005 | 0.08 | 0.067 | 0.946 |
| EXP | ← | Bel_T_Exp_Kn | -0.03 | 0.126 | -0.235 | 0.814 |

Note. *** significant at the level of $p < .001$ **Table E.1.3***Standardized Regression Weights in Model for Use of Explicit Teaching with Direct Links**with 7 Variables*

| | | | Estimate |
|-----|---|----------------------|----------|
| EXP | ← | Conf_PT | 0.566 |
| EXP | ← | Ed_Length | 0.023 |
| EXP | ← | Conf_Knowdge_T | -0.089 |
| EXP | ← | Knowledge | -0.003 |
| EXP | ← | Emp_L2_Pronunciation | 0.044 |
| EXP | ← | Int_Res | 0.005 |
| EXP | ← | Bel_T_Exp_Kn | -0.019 |

Table E.2.1

Mahalanobis Distance of Participants in Model for Providing Post-Task Feedback

| Observation number | Mahalanobis <i>d</i> -squared | <i>p</i> 1 | <i>p</i> 2 |
|--------------------|-------------------------------|------------|------------|
| 15 | 18.232 | .011 | .675 |
| 20 | 18.227 | .011 | .309 |
| 32 | 17.603 | .014 | .170 |
| 65 | 14.577 | .042 | .622 |
| 33 | 14.412 | .044 | .474 |

Note: This shows only the five highest *d*-squared values.

Figure E.2

Decision-Making Model of Providing Post-Task Feedback

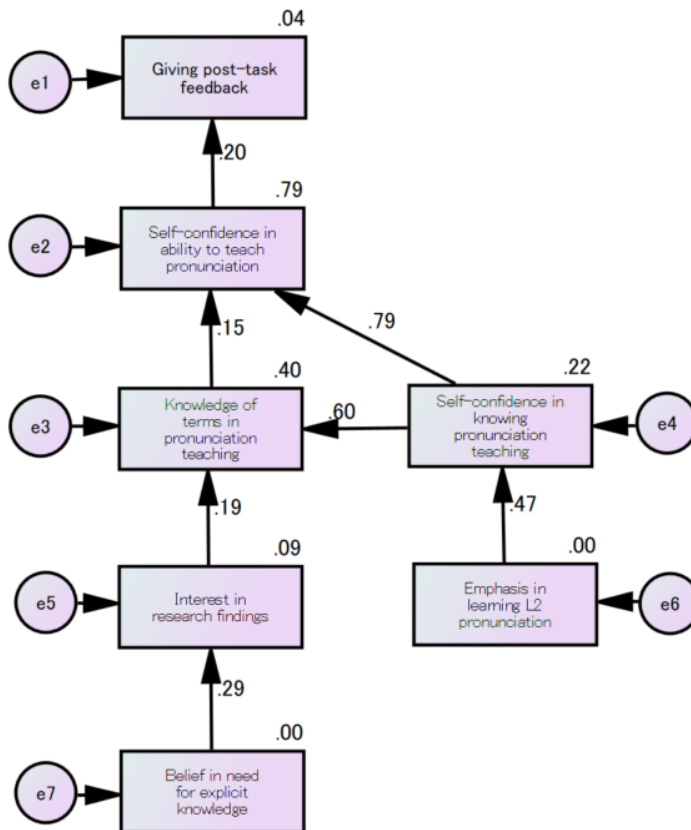


Table E.2.2*Fit Indices for Model for Providing Post-Task Feedback*

| Model | CMIN | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|---------------------------|--------|-----------|----------|------|------|-------|------|------|-------|
| Giving post-task feedback | 19.784 | 14 | .137 | .977 | .965 | .064 | .000 | .124 | .0862 |

Table E.3.1*Mahalanobis Distance of Participants in Model for Use of Peer-Feedback*

| Observation number | Mahalanobis <i>d</i> -squared | <i>p1</i> | <i>p2</i> |
|--------------------|-------------------------------|-----------|-----------|
| 69 | 21.484 | .003 | .273 |
| 86 | 18.416 | .010 | .280 |
| 20 | 18.284 | .011 | .098 |
| 15 | 17.739 | .013 | .047 |
| 32 | 17.285 | .016 | .022 |

Note: This shows only the five highest *d*-squared values.

Figure E.3

Decision-Making Model for Use of Peer Feedback

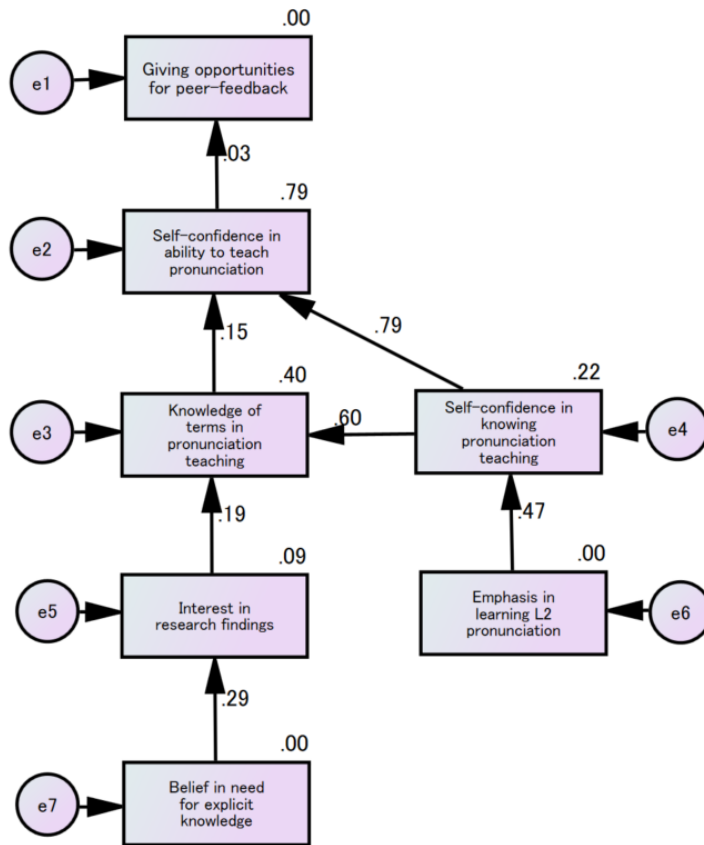


Table E.3.2

Fit Indices for Model for Use of Peer-Feedback

| Model | CMIN | df | p | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|----------------------|--------|----|------|------|------|-------|------|-------|-------|
| Use of peer feedback | 22.821 | 14 | .063 | .964 | .946 | .079 | .000 | 0.136 | .0919 |

Table E.4.1

Mahalanobis Distance for Giving Opportunities for Self-Evaluation

| Observation number | Mahalanobis <i>d</i> -squared | <i>p</i> 1 | <i>p</i> 2 |
|--------------------|-------------------------------|------------|------------|
| 69 | 20.666 | .004 | .355 |
| 20 | 18.237 | .011 | .307 |
| 15 | 17.745 | .013 | .152 |
| 86 | 17.715 | .013 | .048 |
| 83 | 17.702 | .013 | .012 |

Note: This shows only the five highest *d*-squared values.

Figure E.4

Decision-Making Model for Giving Opportunities for Self-Evaluation

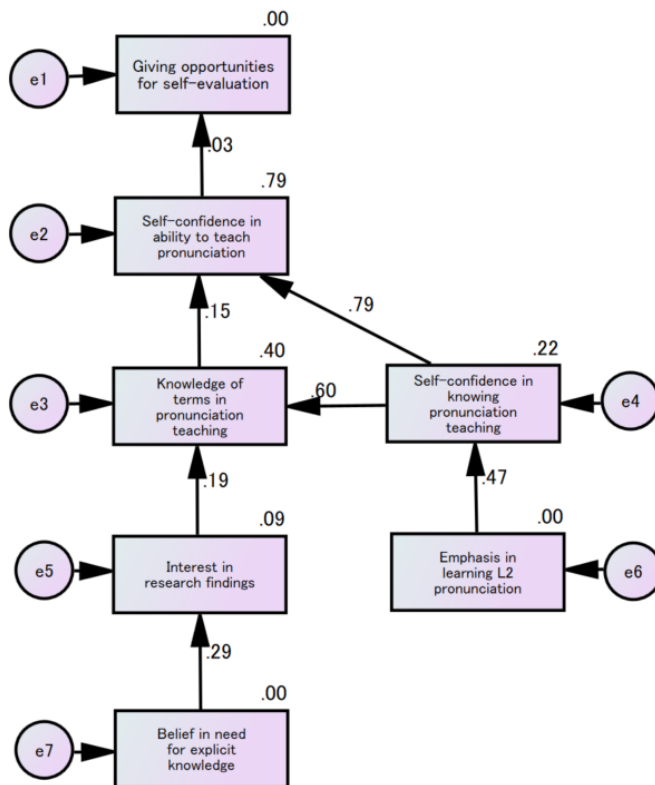


Table E.4.2*Fit Indices for Model of Giving Opportunities for Self-Evaluation*

| Model | CMIN | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | LO90 | HI90 | SRMR |
|----------------------------|--------|-----------|----------|------|------|-------|------|-------|-------|
| Use of self- evaluation | 25.922 | 14 | .026 | .952 | .928 | .092 | .000 | 0.146 | .1035 |

Appendix F: Schedule of Focus Group Discussion

Before the focus group discussion

- Test the recording devices to make sure they are working and that the sound of the recording is in acceptable quality
- Make sure that all the paperwork is ready: Pronunciation Diagnostic Assessment (Appendix C), consent form (Appendix A), and research notes for researcher

Prepare to begin the focus group discussion

- Offer some refreshment
- Offer some time for the participants to catch up with each other
- Make sure that the participants will be seated in chairs positioned so the camcorder can capture their faces
- Make sure that everyone is comfortable before the beginning of the session
- Make sure that everyone understands the confidentiality protection
- Make sure that everyone understands the ethical considerations related to this project

Introduction to the pronunciation diagnostic assessment session

- Briefly re-explain the purpose and nature of the study
- Give explicit instruction on the pronunciation diagnostic assessment task

Pronunciation diagnostic assessment task

- Make sure that the participants take notes on the things they noticed
- Make sure to take notes on anything happening that might compromise the data

Brief recess

- Allow the participants to take a break to refresh

Discussion

- Begin audio and video recording
- The main discussion questions are:
 1. Based on your needs assessment of the pronunciation of the three learners, what pronunciation features would you teach in a 15-week speaking course?
 2. What other aspects of the language would you teach in this course?
 3. What is your rationale for your decisions about teaching pronunciation and other aspects of the language?
- Make sure that all participants share their opinions about pronunciation teaching
- Make sure that everyone will stay on topic during the discussions

Ending the discussion

- Stop the recordings and summarize the discussion

- Thank the participants for their time and contribution
- Collect the consent form and Pronunciation Diagnostic Assessment

Appendix G: Focus Group Discussion Transcript Excerpts

Excerpt from Group 1

Researcher: Okay, the first question. If you're teaching a class of 10 students at the same level as the students you just heard, what kind of things you would teach in this class, in the speaking, if it's a speaking class?

Peter: I think I would start with some fluency techniques, hesitation devices, working on connective speech to help them. When we listen to them in the story telling section, it was pretty clear that they had a little difficulty producing connected, fluent phrases when they're thinking. So that would be something I would focus on.

Simon: The other thing I would say, I thought that was quite a difficult task, so I'm not really sure how accurately that reflects their fluency. I think that there was such a big difference between task two and task one in terms of their fluency. I thought there must've been a lot of cognitive load issues with this task, and I didn't really feel it was a fair reflection of their fluency. Personally, I just wasn't inclined to read much into the way they did that.

Peter: I think you're absolutely right. But, I mean, a native speaker wouldn't have trouble. Partly, even though it is a very complex task, but you wouldn't have long gaps, or you wouldn't find yourself getting stuck on single words. You would use fillers and things like that to let the listener know that you're actually thinking. That was the gap.

Simon: Oh, I see. Well, you could, yeah, if that's the purpose, is to help them ... fill in time while they're thinking. But if it's just a question of normal speaking activities, I don't know why wouldn't you just test them while they're actually speaking to each other?

Yukiko: To get their own ideas, yeah.

Simon: Then that would reflect their fluency, and it's also more related to the kind of task that you're expecting them to produce or hear. Whereas, yeah, if you give them a difficult task, their fluency going to suffer. Then you could teach them ways to, you know-

Peter: Deal with that.

Simon: To deal with it, but to me that's not really the purpose of the course. You know, the purpose of the course is for them to be able to speak to each other on various topics, presumably. Therefore, I'm not really sure how that task really helped.

- Yukiko: Well, I agree with you, Simon. This is a very difficult task. Even for me, if I was shown a picture to describe the story on the spot, it would be very difficult. Sometimes I might struggle with the vocabulary, but even so, I do know that this is different from the speaking task that students can talk about their own opinions. But still, there are so many long pauses that, as a listener, I was kind of losing my patience a little bit. So at least they should know some ... like, try to use more simple words, or if they have too long pauses, they should do something to [??] that. It will be, to some extent, will be the same communication problem that they might encounter. Not this task, but in other tasks. So I wrote “fluency activity,” too, that's one of the main activities I thought I might want to do regularly in this class, too.
- Peter: It does depend. Simon, you were saying it's not really the purpose of the class. I might have missed where that was written down. But if it's a speaking class, it could be designed to teach people to interact with native speakers, interact overseas, not necessarily student-to-student. And so having those ... unless I missed something, having those abilities.
- Simon: Yeah. I'm saying this activity, I'm not sure how that relates particularly well to what I presume would be the learning objective of the course.
- Yukiko: Okay.
- Simon: That was my ... I mean, yeah, you could sort of say more abstractly they need to know how to deal with difficult situations where vocabulary is not coming to them easily. And certainly I would agree teaching fillers, or whatever, is a way of doing that. I'd focus just much more on general fluency and just more tasks that are more related to what you expect them to cope with.
- Yukiko: So we don't always use these kind of tasks, obviously, in this class, but we kind of agreed that we wanted to push students to work harder or improve their fluency, which is kind of speech rate, I think.
- Peter: Yeah, so the speech rate.
- Yukiko: ... for this class.
- Peter: Yeah. That was my first one. Fluency speech rate, connected speech. There's obviously a lot of pronunciation errors.
- Simon: Yeah, but did you feel that they impeded your understanding, particularly in what they were saying?
- Peter: That's a tricky question, isn't it? Because once you're used to an accent, it becomes much easier to overlook. I find when I get non-Japanese speakers

- coming to my class, I have a lot of difficulty understanding them initially.
- Yukiko: Right.
- Peter: Even if they're higher level. But, yes, I think some of the speech problems, the pronunciation problems, would be difficult for a person who doesn't have any experience with the Japanese accent.
- Yukiko: I was focusing on not just a particular, like a consonant or vowels, but I think all learners need to articulate each word more clearly. I think both tasks, it's also in task two. The last girl, the Learner Three, I think she was trying to talk about bags, but because maybe the cognitive load was very big, I wasn't sure what she was talking about. They're even at that level. So no just uh ... I didn't write a vowel such as /aʊ/, that should be dealt with in this class, but they should know how to speak each word more clearly so that ... Maybe they are not paying attention to the reader, because I think they were just reading it to the microphone. So maybe in the speaking practice, if I have two lines like a fluency, then one idea is to make more distance between speakers and listeners so that they have to speak up volume and also as well as how to speak. Another idea I had was maybe ... What's called in English? So you have a message, you have to report a message, but you cannot see my message. So not looking. What's this activity called?

Excerpt from Group 2

- Dana: Right. The *katakana* really affected me when I first came, and so I used to focus on that, but I guess now you get used to it or something, so it doesn't ... I used to target that a lot, was the ending sounds.
- Mie: Yeah, I noticed that, too. Yeah.
- Dana: Like getting ... Hard sounds.
- George: I've got a girl in my intermediate two class who insists on speaking like that.
- Dana: Really?
- Mie: Oh, really.
- George: And she told me, I said, "What are you doing? You're good at English, you don't have to do this."
- Dana: Yeah.
- George: She said, "No, I'm embarrassed to speak in an English accent, so I'm gonna speak in Japanese accent." In *katakana*. Said, "Well I can't really stop you." It's

actually a conscious decision.

Dana: Yeah, that's interesting. Right? Yeah.

George: Anyway, sorry, I digress.

Dana: Yeah.

Mie: If I teach the second part, that's picture telling, storytelling, I think I need to teach the organization of the storytelling because they are very telling the stories. But at the same time, if they can use first, or next, or third, those discourse markers, it would be more helpful for the listeners to understand the flow of the story, I guess.

Dana: Yeah.

George: I think the big problem is that they're searching for vocabulary that "they hit it, they ... bring the bag."

Dana: Yeah, catching something.

George: Yeah. So it completely distorts the meaning. If you didn't have that, you're listening to ... You wouldn't know what the hell was going on.

Mie: Yeah, I thought so, too. No.

George: I've said it before, but this is only a good activity for pronunciation, if they can actually tell the story. I think this kind of thing where it's written down, and they can see, and it's prescribed, then you can really work on pronunciation solely.

Dana: Yeah, but I mean, what you do with having them listen to ... match it, and analyze it, I used to use a lot of, just as a warm-up activity, when I did pronunciation, I used to use a lot of music or songs in the beginning. Not here, but other places where it was ... And targeted those key ... 'Cause when you hear that, you have to hear the intonation of it, so mirror it, right? 'Cause they can't always figure it out themselves. Yeah, we would teach ...

George: Pausing, chunking, sentence stress.

Dana: Yeah.

George: And I would just draw attention to the occasional problematic words. I mean, with learner three, I can see a pattern that she was getting wrong, some words were difficult to hear. Language, she said *rangage* or something.

Dana: Right, a couple times.

George: She didn't say cultural, but cultural. Yeah.

Dana: Her storytelling was much slower than the other ones, too.

George: Yup, and easier to listen to.

Dana: So slow. Yeah.

George: Oh, no the storytelling, yeah. The reading was easier to listen to.

Mie: Yeah, so it's interesting that when she reads aloud, it's more smooth. But when she telling the story, it was not too fluent. So, maybe the reason she did not speak smoothly was not because of the pronunciation, but she didn't have much vocabulary or maybe she couldn't construct the sentences smoother.

George: Yeah.

Excerpt from Group 3

Kate: It's not pronunciation. It's enunciation, I think. Maybe it's part of enunciation, but ...

Maki: I was amazed you checked very details because I've never had that experience of learning how to teach pronunciation. It's so difficult for me to teach each pronunciation. I can focus on fluency because there are much silent pauses, so they should use more fillers or something, but for details, it's quite difficult for teachers who are not trained. Yes, so to check enunciation is quite difficult.

Tom: Absolutely. When I was listening, like Kate, little arrows and circling, I have to focus on do I understand this? Is pronunciation of some words good or not? Other than that, it came down to intonation, fluency of how it's spoken.

Kate: I think this is a product of the '80s, really, because that's what I had to do on my MA to look at each detail and analyze the problem, but that was compared to native speakers, so now the paradigm has changed completely, so it doesn't seem right to say, "That's wrong," as long as it's intelligible.

Maki: And for suprasegmentals, something wrong with big span like suprasegmental, it's easier for me, but for each sound, it is difficult. I feel like, "Oh, this sounds a little bit strange, but I don't know why this is wrong," so ...

Kate: For example, I put marshmallow for the third one. It sounds like the person has got a marshmallow in her mouth, a big one.

Maki: Which part?

Kate: No, no, a natural marshmallow. If you put a marshmallow in your mouth, you can't really say anything really properly.

Maki: That means her consonant was not strong enough? Why did you feel like that?

Kate: Well, it's just impressionistic. If you try to imagine there's a marshmallow in your mouth-

Tom: That's enunciation.

Kate: Yeah, it's enunciation.

Tom: I kind of picked that up when I listened the first time, but for learner three, I thought it was good. Out of all the learners, I thought he sounded the most natural.

Kate: But she said things like "accent" instead of "accent."

Tom: That's accent, the word pronunciation, motivated, and limited.

Kate: And automatic. I can't remember what she said, but it doesn't sounded like automatic. It didn't sound like automatic.

Tom: She didn't stress the B in "combinations." He was like, "Combinat ..." maybe.

Kate: I suspect she said it in a really funny way.

Tom: But it was only the word "limited" I put a question mark on because it was not intelligible. Even though she pronounced these words strangely, of course she didn't stress, they were still easily understood.

Kate: Yeah.

Tom: If I'm reading the script. If I wasn't reading the script, how much would I understand?

Kate: I agree with you because it's all about being able to understand the person's message, isn't it?

Tom: Right.

Kate: For example, with this person, I would record her speaking in Japanese to see if the same enunciation is there in Japanese. Often, when you really analyze the speaker's problem and you get them to say something in Japanese, you think, "Ah, that person is just challenged because she can't do it in Japanese, either." It's just their speech, so I wonder to what extent it's really meaningful to look at detail like that.

Tom: Right, right, but the third learner, for me, was an improvement on the other learners because she was putting some ... It wasn't monotone.

Kate: You're right.

Tom: She was putting some intonation and there was some rhythm to it, and I think the other two learners could benefit because they all have similar issues in pronunciation, so I circled intonation, word stress, and kind of connect the speech more. Try to aim for more fluency rather than focusing on specific-

Kate: Right, right, right, exactly. She says things like "baz" or "bags."

Tom: I didn't pick up that.

Kate: She says "hearth" for "house."

Tom: It's amazing you can learn so fast. Your training is-

Maki: Amazing.

Tom: It's good, isn't it?
Maki: I wrote-
Tom: I had like or two words.
Maki: Learner three is easy to understand, I wrote, because it's easier to understand that. Amazing.
Kate: Maybe it's like a kind of occupational hazard and someone who can't stop looking at details. Maybe it's not good to think in that way. It's much better to think more macro level. Think about meaning.
Tom: How about the second task?
Maki: Learner three had very good pronunciation for reading aloud, but for this one, I feel it was quite difficult to understand.
Tom: Very difficult.
Maki: Very difficult. I don't know why it changes so much.
Kate: She wasn't very comfortable with that task, was she?

Excerpt from Group 4

Mayumi: For me, it's difficult to decide something based on these two. The reason is because this one, they already have the text in front of them, and they can see it.
Researcher: Yes.
Mayumi: For this one, the reason why I'm having a little bit of a difficulty, and I wanted to know how they were instructed about this task, was because they've got no words, and nothing that they can rely on in terms of text, especially considering the level of the students, what I noticed in ... especially, I think, in learner three is that ... Especially in this one, both tasks, I noticed that she tends to go up at the end of the sentence. Even like the way I'm talking right now, it's not even a question, but even with a statement, she tends to go up. To me, with this, I got the impression that she was not really confident with her English speaking or reading in general. And then she was given this task, that she has nothing to rely on. So one thing I'm not sure is if that comes from her lack of confidence in doing something in English that made her go up in words of the sentence that she made for the second task. If that came from lack of confidence, then I'm not sure if that's something she should be taught in class or not. So because of the two different tasks, and it seems to be looking at something

different, I don't know, I'm finding it a bit difficult to decide what should be taught in the class. But I think it's just me. I don't know, I'll probably find out more when other people talk about it.

John: I thought that was a good catch with the intonation. That was a good catch.

Mayumi: It's definitely something that should be taught in a class, but then that depends on where the intonation error is coming from.

John: But it's certain a teachable thing.

Mayumi: It's teachable, but if it comes from lack of confidence, then ... It might be something unconscious.

Yuko: If she had more time for preparation, maybe her English would have been better. That's what I thought. Especially learner three, when she read this text aloud, I was able to catch everything because I have the transcript, but when she made the story out of these pictures, I had difficulty figuring out what she actually said. So that means we really should teach pronunciation. For example, even "bags" ... We have a picture, so these are bags ... Bags, they are ... I thought we really should teach consonants, vowels, stress, accent, so just about every aspect of pronunciation. Because in the real world we have to talk spontaneously, with no planning time. So this picture task is closer to the real world situations, in a sense, because they have to make it up instead of reading the text.

Mayumi: But in general, like John, what would you teach if you had these three in a class?

John: Well luckily, I want to say first of all, that they were all Japanese speakers, so they've all got the same needs, and we're pretty much aware of what they are. So for example, difference in consonants that Japanese doesn't have, like the difference between the L and the R, F and the V, and also her W was really ...

Mayumi: Yeah, I noticed that for everyone.

John: Their Ws were not really well-formed.

Yuko: I noticed the L and R.

John: Yeah, so I think some minimal pair work would be good. Yeah, intonation for all of them, intonation, word stress ... And also I think fluency and drill work I think would be good to give them confidence and that sort of thing. And probably the last thing I want to say, especially I noticed with the third one, she didn't seem to have a wide range of vocabulary or grammar, so she was struggling simply to express what was in the pictures. So yeah,

that's what I found. Do you ladies have any questions for any of the things I said?

Yuko: There may be lack of vocabulary, but also maybe because of lack of preparation time, as Mayumi was saying, confidence ... Yeah, confidence influences performance. So over time, during the semester, if we repeat similar tasks, then students are expected to show improvement.

John: I have a question. I don't know what this thought groups means. What's that?

Mayumi: Isn't it like the groupings of the words? Like where you put the pause?

John: For example?

Mayumi: Like, "Have you ever watched young people ..." Like where you pause in a sentence.

John: Is that what it means?

Mayumi: Is it? Isn't it?