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Pronunciation Pedagogy: Second Language Teacher Cognition and Practice

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PRONUNCIATION PEDAGOGY:
SECOND LANGUAGE TEACHER COGNITION AND PRACTICE

by

AMANDA A. BAKER

Under the Direction of John M. Murphy

ABSTRACT

Over the past few decades, increasing research has examined the cognitions (knowledge and beliefs) of second language (L2) teachers. Such efforts have provided insight into what constitutes teachers' beliefs and knowledge about teaching, how these cognitions have developed and how they are reflected in classroom practice (see Borg, 2006). Although numerous studies have been conducted into the curricular areas of L2 grammar and, to a lesser extent, L2 literacy, far fewer have examined L2 teachers' cognitions concerning L2 pronunciation instruction. The purpose of the present study, therefore, was to explore some of the dynamic relationships that exist between L2 teachers' cognitions and actual pedagogical practices, how these cognitions

have developed over time, and what relationships exist between both students' and teachers' perceptions. In the study, the cognitions and practices - as they relate to the teaching of L2 pronunciation - of five experienced teachers in an Intensive English program were investigated. The teachers participated in three types of data collection procedures over one semester - three semi-structured interviews, five classroom observations, and two stimulated recall interviews. Also, their students completed questionnaires. Findings revealed that, in terms of the development of teachers' cognitions, a graduate course dedicated to pronunciation pedagogy had the greatest impact of the teachers' cognitions. In addition, all teachers experienced some degree of insecurity about teaching pronunciation. This was especially true for teachers who had never taken a course in pronunciation pedagogy. Yet even those teacher with specific training in pronunciation pedagogy lacked confidence in certain areas, especially in how to diagnose and address problems with pronunciation. Furthermore, some of the teachers were hesitant to assess students' pronunciation, fearing that negative feedback might be damaging to the learners' identities. However, through viewing the results of the student questionnaires, the participant-teachers were surprised to learn that students favored receiving explicit feedback in class in front of their peers over other types of feedback. One final major finding was that the teachers predominantly employed controlled techniques when teaching pronunciation and that, of all the techniques used, guided techniques were used less frequently.

INDEX WORDS: Pronunciation teaching, Oral communication, Teacher cognition, Teacher beliefs, Teacher knowledge, English as a second language (ESL), English as a foreign language (EFL), Second language teachers, Classroom research

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by

AMANDA A. BAKER

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Georgia State University

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2011

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DEDICATION

To my family for their love and unwavering support

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CHAPTER ONE

INTRODUCTION

1.1 Prelude

Integral to the formal second language (L2) learning experience are two prominent figures: the student, who is ultimately responsible for acquiring a second language, and the teacher, who must provide sufficient guidance as to enable learners to achieve a particular level of language proficiency. The current study focuses on the latter: the L2 instructor. As articulated by Earl Stevick, when it comes to L2 teaching, "...the teacher is 'central' with regard to the cognitive content, the structuring of time, the articulation of goals, the setting of climate, and the final human validation of the whole undertaking" (1980, p. 21). The intention of this research is not to downplay the role of the learner in the learning process but rather to emphasize another fundamental dimension. It is thus important to highlight the position of the teacher within this language learning experience. Faced with a group of learners either from diverse first language (L1) backgrounds, with varied learning styles and/or with dissimilar motivations for learning another language, teachers must structure lessons in ways that best promote the learning of the target language. Integral to this challenge are the beliefs and knowledge teachers possess about teaching a language in general and about teaching different L2 areas in particular (e.g., reading, writing, speaking, listening, pronunciation, cultural awareness) and teachers' actual classroom practices. Together these mental constructs and observable behaviors help to shape the path along which L2 learning occurs. Exploring *teacher cognition* - defined as the relationship between the beliefs, knowledge and perceptions that teachers' have with respect to their teaching practices (Borg, 2003b) - , therefore, can provide insight into how teachers' beliefs and knowledge interact in the language classroom and influence their pedagogical behaviors, actions and activities. Within this research sphere, the main focus of the current project is to examine the

interaction between the cognitions and pedagogical practices of experienced English as a Second Language (ESL) teachers and the teaching of one particular curricular skill area: L2 pronunciation.

The study of teacher cognition has received considerable attention for decades with the purpose of ultimately understanding the relationships that exist between teachers' mental processes and their instructional practices in a variety of different contexts. In particular, teacher cognition research serves to inform teacher education to help enhance the learning development of pre-service, novice and experienced teachers. An essential element of this research, however, is the inclusion of observations of teachers' actual classroom practices and not merely teachers' self-reports of their practices (Borg, 2006). Unfortunately, all too many studies fail to include classroom-based data in investigations of teachers' cognitions. As the classroom functions as a crossroads where both teaching and learning take place, where teacher knowledge and beliefs intersect with student behavior and attitude, the classroom plays a primary role in the development of teachers' cognitions.

In the study of second language teacher cognition (hereafter L2TC), research has examined teachers' cognitions in relation to teaching many L2 skills areas, especially grammar (e.g., Andrews, 1994; Phipps & Borg, 2009), reading (e.g., El-Okda, 2005; Johnson, 1992) and writing (e.g., Cumming, 1990; Tsui, 1996). In comparison, pronunciation remains underexplored. One of the few studies to focus on teachers' knowledge and beliefs as related to teaching pronunciation is Baker (in press); yet, this research does not include observations of teachers' actual classroom practices. The lack of research into pronunciation and L2TC is surprising considering the essential role that pronunciation plays in successful communication.

Intelligible pronunciation is important not only in interactions involving native speakers, but between non-native speakers as well (Levis, 2005; Pickering, 2006).

The limited amount of research into L2TC and pronunciation pedagogy is perhaps representative of the overall neglect that has also been observed of pronunciation in classroom-oriented research. To date, classroom research has comprised examinations of the relationship between instruction and improved phonological ability (Couper, 2003, 2006; Saito, 2007) and between instruction and improved intelligibility (Derwing, Munro, & Wiebe, 1997; Derwing, Munro, & Wiebe, 1998; D. Macdonald, Yule, & Powers, 1994) as well as investigations of students' beliefs concerning pronunciation instruction (Couper, 2003; Derwing & Rossiter, 2002), particular accents (Gatbonton, Trofimovich, & Magid, 2005; Scales, Wennerstrom, Richard, & Wu, 2006) and error correction (Cathcart & Olsen, 1976). Aside from these few studies, the teaching and learning of pronunciation in the classroom has been largely unexplored, revealing a noticeable gap in the ESL research base. This need for increased research into actual classrooms to investigate the various dimensions of pronunciation instruction and acquisition has been commented on by other specialists (Derwing & Munro, 2005).

In a similar vein, relatively few teacher education programs provide courses on how to teach L2 pronunciation. In fact, research and scholars have indicated that many L2 teachers receive little or no specific training in this area (Breitkreutz, Derwing, & Rossiter, 2001; Derwing, 2010; Derwing & Munro, 2005; Murphy, 1997) and that teachers are reluctant to teach pronunciation due to lack of training in pronunciation pedagogy and/or access to appropriate materials (Fraser, 2000; S. Macdonald, 2002). Despite this apparent neglect, there is strong demand among ESL learners for pronunciation instruction (Couper, 2003; Derwing & Rossiter, 2002) and many learners expect to be able to acquire native-like accents (Derwing & Munro,

2003; Kang, 2010; Scales, et al., 2006; Timmis, 2002). The desire to achieve a native-like accent persists despite inherent difficulties associated with adults learning L2 pronunciation (Pica, 1994; Scovel, 2001) and emerging efforts to legitimize English as a Lingua Franca varieties of pronunciation in ESL/EFL teaching (Jenkins, 2007; McKay, 2002; Walker, 2010).

Given the overall lack of both empirical, classroom-based research on pronunciation teaching/learning and teacher cognition research in this area, the aim of the current project was to enhance our pronunciation-specific ESL knowledge base by investigating teachers' cognitions and classroom practice when teaching pronunciation to ESL learners.

1.2 Overview of the Study

Following the introductory chapter, the remainder of the dissertation is divided into four chapters. In chapter two, I provide an overview of research into L2TC and pronunciation teaching. After first reviewing the construct of teacher cognition in general, I examine several of the key questions that have formed the basis of L2TC research in recent decades. Next, the chapter describes in more detail any study that has focused, at least in part, on teachers' beliefs or knowledge in relation to the teaching or learning of ESL or EFL pronunciation. The chapter then examines some of the major themes in pronunciation pedagogy, as discussed by pronunciation specialists and teacher educators, that form what specialists currently consider to be the knowledge base of pronunciation teaching today. Finally, the chapter ends with a presentation of the four research questions that are investigated in the current study.

Chapter three describes the research methodology underlying the study. Semi-structured interviews, classroom observations, stimulated recall interviews and student questionnaires form the backbone of the research. In addition to outlining each of the methods used and discussing

the advantages and disadvantages of each method, data analysis procedures and ethical issues are addressed. The backgrounds of each of the participants are also provided.

In chapter four, the results from the research are reported and discussed. The first part of the chapter explores how the teachers' cognitions have developed over time as influenced by their prior L2 learning experiences, teacher education, teaching experience, and reflective practices. The remainder of the chapter investigates teachers' current cognitions as related to pronunciation pedagogy. Included in this discussion are the teachers' cognitions about the following: English pronunciation, how to teach pronunciation, curriculum and materials, learners, and attitudes toward teaching English pronunciation.

The final chapter concludes the dissertation by first reviewing some of the study's major findings. The chapter then identifies potential limitations with the study, outlines implications for both teacher education and L2TC research, and explores directions for future research.

CHAPTER TWO

LITERATURE REVIEW¹

2.1 Teacher Cognition

The study of teacher cognition is a complex undertaking, requiring examination of multiple cognitive processes – from the arguably more “objective” cognitions of different knowledge types (i.e. knowledge about language, knowledge about students) to the more “subjective” cognitions of beliefs, perceptions and attitudes – all explored from within the context of teachers’ classroom practices. These mental constructs have all been examined to varying degrees in teacher cognition research. In a survey of such research, Borg (2006) summarizes several reappearing notions that appear to embody the core meaning of teacher cognition:

These are (a) personal, (b) practical (though informed by formal knowledge), (c) tacit, (d) systematic and (e) dynamic. Teacher cognition can thus be characterized as an often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic – i.e. defined and refined on the basis of educational and professional experiences throughout teachers’ lives” (p. 35).

As Borg also notes, the role of teacher cognition research is strongly connected to research in teacher education that has focused on understanding and improving processes of teacher learning and development for both pre-service and in-service teachers (novice and experienced). Freeman and Johnson (1998, p. 401) comment further that teacher learning is a “socially negotiated” process where both personal experiences – through communication with students, other

¹ An earlier version of this literature review served as the basis for the following publication:
Baker, A. A. & Murphy, J. (in press). Knowledge base of pronunciation teaching: Staking out the territory. *TESL Canada Journal* 28(2)

educators, administrators and parents – and “the acquisition and interaction of knowledge and beliefs about oneself as a teacher, of the content to be taught, of one’s students, and of classroom life” are integral to its development. According to Borg (2003b, p. 81), research into teacher cognition focuses on four basic questions:

- what do teachers have cognitions about?
- how do these cognitions develop?
- how do they interact with teacher learning?
- how do they interact with classroom practice?

In addressing what teachers have cognitions about and how they develop, it is important to further examine two main cognitive processes: knowledge and beliefs. The boundary between these two processes, however, is not always transparent, and frequently they cannot be effectively (or even appropriately) teased apart. Nevertheless, the next sections will briefly describe these two processes to provide a greater understanding of what they may entail.

2.1.1 Knowledge

In the literature on L2TC, researchers may ascribe to different models of teacher knowledge, including, but not limited to, Clandinin and Connelly (1987), Elbaz (1983), and Shavelson and Stern (1981). One of the models frequently referred to is that of Shulman (1986, 1987). In this model, Shulman distinguishes among seven categories of teacher knowledge, including:

- *subject matter content knowledge* – (i.e. knowledge about language)
- *general pedagogical knowledge* – (i.e. general teaching methodologies/techniques)
- *curriculum knowledge* (i.e. knowledge about a language program and relevant resources)

- *pedagogical content knowledge* – (i.e. knowledge about how to teach a particular subject using appropriate examples, explanations, illustrations and techniques)
- *knowledge of learners* – (i.e. L1 backgrounds and students' motivations)
- *knowledge of educational contexts* – (i.e. ESL, English as an international language, intensive English programs).
- *knowledge of educational ends, purposes, and values, and their philosophical and historical grounds*

An important point with respect to research on teachers' knowledge is that it can generally be explored empirically. Teachers can be questioned to a certain extent through interviews, questionnaires, tests of their declarative knowledge (about language, students, educational contexts), etc.

2.1.2 Beliefs

The dividing line between teacher knowledge and beliefs is at best hazy. Knowledge may not always be consistently articulated by teachers, but even more so, neither can beliefs. In one of the more extensive reviews of teachers' beliefs, Pajares (1992) points out that beliefs are rarely operationalized in studies, and thus are difficult to separate from knowledge. Rather, he posits that many studies may rely on popular notions, such that “[b]elief is based on evaluation and judgment; knowledge is based on objective fact” (p. 313). Nevertheless, the overall subjectivity of beliefs, in comparison with knowledge, increases the difficulty for empirical study. In an effort to clarify this “messy construct”, Pajares provides the following definition of belief:

...a view of belief that speaks to an individual's judgment of the truth or falsity of a proposition, a judgment that can only be inferred from a collective understanding of what

human beings say, intend, and do. The challenge is to assess each component so as to have confidence that the belief inferred is a reasonably accurate representation of that judgment (p. 316).

2.1.3 Relationships between Cognitions and Pedagogical Practice

The connection between teachers' beliefs and knowledge and what teachers do in the L2 classroom is a topic of primary interest among many teacher cognition researchers and teacher educators. The impact of various factors, including, but not limited to, formal/informal education, external factors (i.e. school administration or policy), student factors (i.e. motivation, L1 background), and teacher factors (i.e. teaching experience), on teachers' classroom practices are frequent themes in teacher cognition research. Responses to these issues necessitate some investigation into the classroom practices of the teacher. In fact, Borg (2006) questions the effectiveness of any study that fails to provide that crucial link between cognitions and teaching practice. He argues that the main objective of teacher cognition is to capture an in-depth understanding of what teachers do in the classroom. This requires a nexus of knowledge, beliefs, and actual practice, and not merely isolated accounts of perceived classroom practices.

2.2 Important Questions in L2TC Research

Over the past few decades, increasingly more research has examined the cognitions of L2 teachers. Such research has provided insight into what constitutes L2 teachers' beliefs and knowledge about teaching ESL/EFL, how these cognitions have developed and how they are reflected in classroom practice – to name but a few areas of research (see, for example, Andrews & McNeil, 2005; Basturkmen, Loewen, & Ellis, 2004; Borg, 2006). In specific domains of L2 teaching curriculum, L2TC has focused mainly on the areas of grammar (e.g., Popko, 2005) and, to a lesser extent, reading (e.g., El-Okda, 2005) and writing (e.g., Farrell, 2006), although some

studies have explored connections to pronunciation (e.g., Baker, in press) and vocabulary (e.g., Zhang, 2008).

In research seeking to investigate one or more of the under-researched areas of L2TC, it is beneficial to survey some of the more pertinent questions, findings, and/or conclusions from earlier studies. The next sections are organized according to the following themes: teachers' cognitions, teachers' cognitions and practice, and factors influencing teachers' cognitions and/or pedagogical practices. In cases where more than one study investigated the same, or similar, research question, only one study is discussed in depth.

2.2.1 Teachers' Cognitions

Several studies have looked into the types of knowledge and beliefs that teachers have about language and language teaching. The following three questions may be relevant to investigations into less researched areas of L2TC:

1. What types of knowledge do teachers possess about language (i.e. subject matter knowledge, pedagogical content knowledge, etc.)? (Andrews, 2006; Andrews & McNeil, 2005)
2. What is the relationship between teachers' content knowledge, knowledge of learners, and pedagogical knowledge with respect to teaching grammar? (Johnston & Goettsch, 2000)
3. What is the importance of knowledge about language (KAL) for students? (Mitchell & Hooper, 1992)

With respect to the first question, one study that explored this question was Andrews and McNeil (2005). They examined, in part, L2 teachers' subject-matter cognitions in relation to grammar instruction by reporting on the cognitions of three non-native EFL teachers in Hong

Kong secondary schools. They discovered limitations in the teachers' knowledge as demonstrated through teachers' performance on a test of language awareness. While all three teachers scored highly in terms of identifying and correcting errors, they differed and scored lower in terms of the production of metalanguage and, especially, explanation of errors.

Regarding the second question, Johnston and Goettsch (2000) explored the types of knowledge possessed by four experienced ESL teachers. Results revealed a complex relationship existing between elements of the teachers' knowledge base such that, although important, content knowledge alone cannot sufficiently address learners' needs, but rather the teacher must also possess an understanding of how to impart that knowledge in ways meaningful to learners (pedagogical content knowledge) and, in order to do this successfully, teachers must also have knowledge of the learners themselves.

In relation to the third question, Mitchell and Hooper (1992) investigated L1 English and modern language teachers' views of explicit language knowledge and their strategies for developing students' language proficiency. Overall, the two groups linked knowledge about language with traditional morpho-syntactic knowledge relating mainly to written language. Their beliefs, however, differed in how important they viewed this knowledge to be for their students. The modern language teachers attributed more value to knowledge about language (KAL) than did the L1 English teachers.

2.2.2 Teachers' Cognitions and Practice

A wide variety of research has also involved investigations into the relationships between teachers' cognitions and their actual classroom practices. The following eight questions may be

the most relevant for exploratory studies into other, less researched, areas of L2TC. One study for each question is discussed in greater detail below.

1. How do teachers' cognitions about language converge with or diverge from their classroom practices? (Basturkmen, et al., 2004; Brumfit, Mitchell, & Hooper, 1996; Collie Graden, 1996; Farrell, 2006; Farrell & Lim, 2005; Johnson, 1992; Ng & Farrell, 2003)
2. What types of instruction (i.e. formal, ad hoc, explicit, implicit, communicative, etc.) do teachers use? (Borg, 1999b, 2001, 2003a; Farrell & Lim, 2005; Ng & Farrell, 2003)
3. What types of learning activities are most frequently used by teachers? (Hawkey, 2006)
4. How does knowledge about learners affect teachers' cognitions and/or practices? (Borg, 1998b; Burns, 1992)
5. What relationships exist between teachers' cognitions and classroom practices and students' beliefs and perceptions of teachers' practices? (Diab, 2005; Hawkey, 2006; Zacharias, 2007)
6. How do teachers' cognitions about the use of technology in the classroom affect their teaching? (Lam, 2000; Shin & Son, 2007)
7. How do teachers' cognitions about published or other materials affect how they teach? (Zacharias, 2005)

Question 1: This particular question is frequently addressed in studies of language teacher cognition. Numerous studies have found either convergences or divergences between teachers' beliefs and actual practices. Basturkmen, Loewen and Ellis (2004), for example, presented a case study of three ESL teachers, and examined the teachers' beliefs and practices regarding the role of *impromptu focus on form* in their intermediate-level, communicative lessons. As with other

studies that have found discrepancies between teachers' stated beliefs and their actual practices, this study was no exception. While several beliefs were congruent with their practices, others differed.

Question 2: Borg (2001) explored the influence of two teachers' perceptions about their knowledge of subject matter on their classroom practices and decision-making. Findings revealed that one teacher, who was confident about his KAL, frequently conducted spontaneous lessons about grammar whereas the other teacher, who lacked confidence in his KAL only addressed grammar through limited formal instruction.

Question 3: Hawkey (2006) explored teachers' and students' perceptions of prominent language learning activities used in the EFL classroom. Results from the questionnaires revealed that teachers' and students' perceptions of the frequency of certain activities used in the classroom differed. Selected findings showed that, for grammar exercises, students ranked them fifth while teachers ranked them eleventh. Analysis of the observed lessons revealed that nine of the 20 lessons could have received greater systematic attention to grammar.

Question 4: Burns (1992) examined the impact of six ESL teachers' thoughts and beliefs on their actual instructional practices when using written language to teach beginning-level ESL students in a class aimed to develop spoken language. Results revealed a tension between teachers' desire to provide students with authentic language and their desire to provide grammatically "correct" language as well (a written language standard not necessarily found in spoken language norms). Furthermore, individual student factors such as low speaking proficiencies also played a role in how teachers presented material in the classroom, and written language was used to facilitate the learning of pronunciation.

Question 5: Diab (2005) explored the intersection between one ESL teacher's feedback on students' writing and two students' responses to this feedback. Partial findings demonstrated an accord between the teacher's and students' views on error correction and feedback strategies with the students confirming the teacher's belief that grammar and error correction were important to students. The students also believed that all comments provided by the teacher were essential for improving their learning.

Question 6: Lam (2000) examined teachers' opinions towards the use of technology in the classroom and the factors that might inform their decision to use technology. The study's main finding was that teachers were not so much "afraid" of or resistant to technology, as they were concerned with its tangible benefits, specifically as to how beneficial using such technology would be for students. In general, teachers used technology, specifically computers, as a tool to simplify daily activities or to make their lives more efficient. The two most frequently cited reasons for their use were its appeal as an alternative mode of presentation and its motivational value for students.

Question 7: Zacharias (2005) explored teachers' beliefs about internationally-published materials in comparison to those published locally in Indonesia. Results revealed a strong preference for internationally-published materials, especially for teaching listening (87%) and pronunciation (86%) skills. In fact, a number of teachers expressed some distrust toward locally-published materials, arguing that inadequate editing, lack of consistent content, and incomplete materials led them to use what they considered to be the higher quality international publications. Another finding, as evinced in the observations, was that many teachers modified their use of the international publications to make them more appropriate for their students. Zacharias highlights this observation as a mismatch between the teachers' practices and beliefs.

2.2.3 Factors Influencing Teachers' Cognitions and/or Pedagogical Practices

A number of L2TC studies have also looked into various factors that may have an impact on teachers' knowledge, beliefs, and instructional practices. The following five questions may be of interest in studies of less researched areas of L2TC.

1. How does teacher education/training affect teachers' cognitions and/or practices?
(Bigelow & Ranney, 2005; Borg, 1998b, 1999c; Burns & Knox, 2005; Farrell, 1999; Meijer, Verloop, & Beijaard, 1999; Popko, 2005; Tercanlioglu, 2001)
2. How does the prior learning of another language affect teachers' cognitions and/or practices? (Borg, 1999c; Eisenstein-Ebsworth & Schweers, 1997; Ellis, 2006)
3. How does experience in teaching (i.e. novice vs. experienced teacher) affect teachers' cognitions and/or practices? (Borg, 1999c; Farrell, 1999; Gatbonton, 2008)
4. How does collaboration/knowledge sharing with other teachers affect teachers' cognitions and/or practices? (Sengupta & Xiao, 2002)
5. How does personal time spent in reflection affect teachers' cognitions and/or practices? (Meijer, et al., 1999)

Question 1: Popko (2005) looked into how graduates of an MA TESL program utilized their KAL when later teaching ESL. The results suggested that, despite similar educational backgrounds, they differed greatly in applying that knowledge to their ESL classrooms. In fact, each participant seemed to rarely employ their KAL when teaching. These findings are similar to those of Bigelow and Ranney (2005) in showing the difficulties pre-service or new teachers face in transforming their declarative knowledge into classroom practice.

Question 2: Ellis investigated how knowledge and experience gained through learning another language influenced ESL teachers' professional beliefs and knowledge. Results revealed

that L2 learning – whether through formal, informal, childhood, adult or other contexts – can inform beliefs. The diversity and complexity of information taken from the interview and language biography data provided insight into how language teachers perceived and developed their approaches to teaching language learners.

Question 3: Gatbonton (2008) built on an earlier study (Gatbonton, 1999) by examining novice L2 teachers' pedagogical knowledge (PK) and comparing findings with those gathered from the earlier study of the same knowledge possessed by experienced ESL teachers. Based on an analysis of teachers' pedagogical thoughts as expressed through stimulated recall interviews, results revealed that, contrary to expectation, the experienced and novice teachers were similar in many respects. In particular, one of the similarities was the number of major PK categories shared (20 of the 21) among the two groups. Furthermore, Gatbonton found that seven of the nine most dominant categories for the experienced group were also the most dominant for the inexperienced group, even though the ranking of these categories were different. One interesting difference between the two was the greater emphasis that novices attributed to affective categories such as student behavior and how students responded to teachers.

Question 4: Sengupta and Xiao (2002) explored how teaching experience in a university L2 writing center shaped three teachers' personal theories of ESL writing. Presented in the form of three narratives, the study illustrates how a combination of meetings and collegial interactions can reshape teachers' assumptions about L2 writing. The knowledge sharing environment cultivated by the pilot program aided the teachers in reflecting on their teaching and in learning from their teaching experiences.

Question 5: Meijer, Verloop, and Beijaard (1999) examined teacher's practical knowledge (TPK) - "the knowledge and beliefs that underlie [a teacher's] actions; this kind of

knowledge is personal, related to context and content, often tacit, and based on (reflection on) experience” (p. 60) – in relation to teaching L2 reading comprehension. They learned that TPK was not shared by all teachers and that the knowledge of some teachers was more complex than others. This knowledge was not only influenced by professional development training, but also by the amount of reflection teachers give to issues they considered important.

2.3 Pronunciation Pedagogy and L2TC Research

One of the curricular areas that is under-researched in L2TC, and that may benefit from the research questions and finding surveyed in the previous section, is the teaching of pronunciation. The locus of pronunciation within current teacher cognition research is particularly small with only a few studies devoting some attention to this area.

2.3.1 The Locus of Pronunciation within Oral Communication and L2TC Research

The study of L2TC in connection to general oral communication pedagogy has been the focus of a small handful of studies. Currently, only three studies into teacher cognition and its connection to teaching oral communication skills appear to involve research into teachers’ actual practice as evinced by classroom observations.

Phipps and Borg (2007) explored discrepancies between teachers’ beliefs and observed practices in order to improve our understanding of the development of teachers and teacher educators. Apparent differences between the beliefs and practices of three teachers enrolled in a DELTA (Diploma in English Language Teaching to Adults) program in Turkey were explored in three areas: oral error correction, group work for oral practice, and controlled grammar practice. They found that teachers frequently encountered difficulties transforming their beliefs into

classroom practices as a result of both problems arising from various contextual factors and difficulties the teachers experienced in trying to determine how to teach in a manner consistent with their. The researchers concluded that teachers may benefit from mentorship in dealing with these issues, and that enriching our understanding of the relationship between practice and beliefs is essential in assisting teachers. Aside from the brief discussion of oral error correction and group work for oral practice, findings related specifically to the teaching of pronunciation are not discussed.

Cohen and Fass (2001) investigated the beliefs and observed classroom activity of 40 teachers and 63 students regarding oral language instruction and assessment at a Colombian university. Findings indicated that students and teachers differed concerning their views on the amount of teacher talk during class time. Students attributed greater class time being spent on teacher talk than did the teachers, which coincided with student preferences for greater teacher talk time. In addition, teachers' opinions frequently diverged over the efficacy of the school's textbook series. Although most teachers modified activities from textbooks to suit students' needs, the books were considered sufficiently appropriate since these changes were easy to implement. Finally, based on reported practice, the teachers seemed to agree that pronunciation and grammatical accuracy were awarded greater attention in the assessment of students' language production as opposed to features considered more communicative such as fluency and comprehensibility. Although this study provides a brief glimpse into the teachers' cognitions concerning pronunciation and the assessment of students' oral production, no mention of other practices related to pronunciation or of any observations related to the teachers' actual teaching of pronunciation are made.

A study by Cathcart and Olsen (1976) examined the beliefs of teachers and ESL students in the USA about methods they considered to be the most appropriate for correcting grammar and pronunciation errors in classroom conversation. Questionnaire results showed that students indicated a strong preference for conversation error correction, especially in regard to pronunciation and grammar (in order of preference), with most wanting such correction the majority of the time. These students also felt that teachers paid greater attention to pronunciation and grammar than to vocabulary and word order. The students' beliefs matched their preferences although they felt grammar probably received somewhat more attention overall. Generally, students thought that teachers more frequently used the students' preferred approaches to grammar and pronunciation correction. In addition, the comparison between the teacher and the student questionnaire data revealed that students wanted teachers to correct them more frequently than the teachers actually did. In relation to pronunciation errors, both teachers and students favoured the "correct" (i.e., L1 native speaker) model approach. This study, albeit limited to a specific focus on pronunciation in terms of error correction, provides some insight into the cognitions of teachers and students as well as into the recorded practices of the teachers. However, the article does not clearly connect the recorded lessons with the cognitions of the same teachers who were surveyed. The data gathered from the recorded lessons was used in the creation of items for the questionnaires, but the cognitions of any individual teacher was not linked back to her/his self-recorded lesson. Furthermore, the study was conducted more than three decades ago in a time prior to the current communicative language teaching era of ESL/EFL teaching. In the work of many contemporary language teachers, attention to form (the structure of language: grammar and pronunciation) plays either a secondary role (H. D. Brown,

2007) or, in worst-case scenarios, no focus at all (Williams, 1995) in many instructional contexts. Thus, these results may not reflect the current practices of contemporary ESL/EFL teachers.

2.3.2 Studies of L2TC and Pronunciation Pedagogy

Over the past decade, several studies with an explicit focus on pronunciation pedagogy have investigated teachers' beliefs about this curricular area. Within an ESL context, Macdonald (2002) investigated the perspectives of eight ESL teachers in language centers in Australia who indicated on a previously completed questionnaire that they were at least somewhat reluctant to teach pronunciation to ESL students. Interviews with teachers revealed a lack of motivation to teach pronunciation due to insufficient centre policies and curricula objectives instructing teachers in how to address pronunciation in their classes. These teachers were unable to articulate any knowledge of how to assess student pronunciation or about useful tools for formal assessment. Many teachers typically only addressed pronunciation on an ad hoc basis when intelligibility was compromised. Furthermore, teachers appeared largely reticent in taking on a monitoring role of student speech. The teachers also seemed to take an ad hoc approach to teaching pronunciation, typically dealing with such issues as the need arose in class or as an element disconnected from the rest of a lesson. Finally, several teachers commented that, in comparison with other skill areas, pronunciation seemed to be relatively neglected with respect to appropriate resources. The findings discussed in this study, however, are based solely on interview data; thus, it is difficult to discern to what degree teachers actually addressed or assessed pronunciation or integrated pronunciation instruction into their lessons and thereby demonstrating a fuller extent of their pedagogical knowledge.

Within the contexts of Canada and the USA, Baker (in press) interviewed five teachers in an exploration of their beliefs and reported practices in connection with the teaching of discourse prosody (e.g., stress, rhythm, and intonation) in the teachers' ESL classes. She also conducted an analysis of a journal in which she had documented her personal experience of teaching pronunciation to beginning-level students in an oral fluency class. The study's goal was to investigate the influence of research on classroom practice; in this case, the influence of research highlighting a positive relationship between the use of discourse prosody and the development of intelligible English as well as how that research did or did not impact the teachers' classroom practices. Findings revealed that the research effort influenced how the teachers prioritized different features of pronunciation in their courses. However, findings also showed that, despite taking a course devoted to pronunciation pedagogy as part of their graduate education (where, for example, they learned about relevant research), teachers seemed to lack confidence in teaching certain aspects of English pronunciation. As with the study by Macdonald (2002), only interview data was used to explore the teachers' cognitions, and as with the study by Cathcart and Olsen (1976), the study focused mainly on one area of pronunciation, namely, discourse prosody.

Branching away from an ESL perspective and focusing instead on an EFL context, several studies examine different elements of teachers' cognitions in relation to the goals of pronunciation teaching. Sifakis and Sougari (2005) explored the connection between pronunciation instruction and English as an International Language (EIL), investigating specifically the beliefs of Greek teachers of English. A survey was distributed to public schools in Greece. 421 EFL teachers from primary, lower secondary and upper secondary schools in Greece responded. The questionnaire elicited information on issues of accent, teaching practices and the ownership of English. Results indicated that a large majority of teachers, especially those

in primary schools, felt that native-speaker norms were important models even though some of the teachers, most notably some of the upper secondary school teachers, believed that intelligibility was the most appropriate goal. Moreover, the teachers' reported teaching practices overall seem to conform to a NS-oriented approach (e.g., using authentic conversations between NSs and using role plays emphasizing NS roles). Furthermore, most teachers (greater than 70%) responded that ownership of English lies in the hands of NSs or, at least, those who speak English competently. The authors concluded that the beliefs of EFL teachers in Greece appear to be primarily externally norm-bound. As with the study by Macdonald (2002), these results are based solely on the reported beliefs and practices of the teachers. In addition, the use of a survey with less than a dozen, mostly Likert-scale items, is unlikely to uncover the depth of insight more commonly required by most L2TC studies.

In another survey study, Timmis (2002) examined the beliefs of 180 teachers from 45 different countries about EFL accents and the adoption of NS norms. He also surveyed 400 students from 14 countries and further interviewed 15 students about these issues. Both the teachers and students were asked to indicate their preference for having English that was either 1) equivalent to a NS, 2) clearly intelligible to both NSs and NNSs, or (for the teacher-participants only) 3) no preference. Most students, except those from South Africa, India or Pakistan, expressed a desire to speak "just like a native-speaker". Conversely, the teachers - NS and NNS alike - showed a somewhat greater preference for the mutual intelligibility option. Many of the teachers indicated that they believed this second option was more "realistic" though not necessarily the option that was more "desirable". In comparison with the previous study by Sifakis and Sougari (2005), the study is considerably more limited in that it does not directly address how the teachers' beliefs might washback to their pedagogical practice.

Another study investigating teachers' beliefs in EFL contexts is outlined in a chapter from Jenkins' (2007) book. The chapter reports on an interview study of teachers' English as a Lingua Franca (ELF) identity, specifically exploring their attitudes and beliefs about accents, perceived effects of accent-related experiences, and teaching ELF accents. Seventeen NNSs from nine different countries participated. In relation to teaching ELF accents, teachers appeared to respond favorably to using these models, at least in theory; however, they also considered such practice as impractical to accomplish in the classroom, citing negative pressure from higher levels of administration – government, educational institutions, and parents –, who preferred the modeling of NS English accents. In the future, however, most teachers hoped that ELF accents would become more widely accepted, thereby increasing teachers' confidence in using their local accent; but other informants felt such a change would take considerable time due to teachers' strong opinions about upholding NS standards. Similar to each of the other pronunciation-oriented studies discussed throughout this section, Jenkins' study reflects the limitation of teachers' self-reports of instructional practice.

Finally, examining one small component of teachers' pedagogical content knowledge, Hismanoglu and Hismanoglu (2010) investigated teachers' preferences in techniques for teaching pronunciation to their students. The participants of the study included English language teachers from five universities in North Cyprus, of whom 73 were NNSs and 30 were NSs. Using a questionnaire, they found that the top three preferred techniques were reading aloud, dictionaries and dialogues, all of which were identified as "traditional" techniques. Curiously, one feature that appears missing from the list of possible "traditional" techniques presented to the teachers in the questionnaire is choral repetition. Repetition practice or imitation is frequently mentioned in the literature as one of the most commonly used techniques throughout history (Jones, 1997;

Kelly, 1971). The authors also explored whether there were correlations between the teachers' preferences and taking a pronunciation course in B.A. education, but no significant relationships were revealed.

In summary, several studies have at least partially focused on issues related to L2TC and the teaching of pronunciation. Table 2.1 provides a summary of the findings related to L2TC and pronunciation pedagogy. However, these findings are based, almost solely, on the reported practices and cognitions of ESL or EFL teachers. Studies with a primary focus on pronunciation and its connection to teacher cognition have yet to involve an in-depth investigation of teachers' cognitions in connection with their observed classroom practices. As argued by Borg (2006), an essential component of L2TC research requires the inclusion of observations of teachers' actual classroom practices. Without this component, our understanding of teachers' knowledge and beliefs is seriously underdeveloped as not only can teacher stated beliefs and theories differ from their actual classroom practices (Borg, 2003b), but some of these beliefs are very likely to be tacit in nature. Teachers may not be able to articulate their personal beliefs, theories, principles or philosophies; thus observations of actual instructional practices are necessary in order to construct an accurate representation of teachers' cognitions.

Table 2.1

Findings related to Teachers' Cognitions and Pronunciation Pedagogy

Studies of ESL Contexts	Studies of EFL Contexts
<ul style="list-style-type: none"> • Preference for having an accent that is mutually intelligible to both NSs and NNSs (as reported by NS and NNSs) (Timmis, 2002) • Preference for providing "correct" models when addressing pronunciation errors (as opposed to 	<ul style="list-style-type: none"> • Ownership of English lies in the hands of NSs or, at least, those who speak English competently (Sifakis & Sougari, 2005) • Preference for teaching ELF accents in theory, but in practice these accents are considered impractical

<p>encouraging student self-discovery) (Cathcart & Olsen, 1976)</p> <ul style="list-style-type: none"> • Insufficient ESL language center policies and curriculum objectives, assessment instruments, materials, and teacher training causes some teachers to be reluctant to formally teach pronunciation except on an ad hoc basis (S. Macdonald, 2002) • Research informs how teachers prioritize different pronunciation features in their ESL courses (Baker, in press) • Despite graduate education including coursework in pronunciation pedagogy, teachers continue to lack the confidence to teach certain aspects of English pronunciation (Baker, in press) 	<p>in the classroom (Jenkins, 2007)</p> <ul style="list-style-type: none"> • Use of NS speech models instead of NNS teachers' own speech (Jenkins, 2007) • Speaking with a local accent considered acceptable, but as a teacher, desire to use a NS accent (Jenkins, 2007) • Primacy of NS models in public schools in Greece (Sifakis & Sougari, 2005) • Orientation toward NS approaches to teaching in Greece (Sifakis & Sougari, 2005) • Prioritization of the role of pronunciation and grammatical accuracy in assessing spoken language production (A. Cohen & Fass, 2001) • Preference for using reading aloud, dictionaries and dialogues for teaching pronunciation in university English language programs in North Cyprus (Hismanoglu & Hismanoglu, 2010)
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2.4 Knowledge Base of Pronunciation Teaching

The lack of adequate research into pronunciation pedagogy and L2TC is surprising considering the essential role that pronunciation plays in successful communication. Intelligible pronunciation is important not only in interactions involving NSs, but between other NNSs as well (Levis, 2005; Pickering, 2006). As the above literature review has revealed, limited research has been conducted into the cognitions of teachers of ESL/EFL pronunciation. Nevertheless, an exploration into L2TC and pronunciation instruction can be informed by knowledge gleaned from other avenues of research and L2 pronunciation specialist knowledge. The rapidly

expanding publication of pronunciation teaching resources (from classroom-based research to teacher training resources) may have a strong influence on the formation of teachers' knowledge and beliefs about what English pronunciation is and how best to teach this skill area to ESL students. By surveying the most relevant points from this array of empirical and theoretical research, a solid foundation may be established and can serve as a springboard for an investigation into what teachers' beliefs and knowledge are concerning the teaching of pronunciation to ESL students. Such an investigation would focus specifically on classroom-oriented research and not experimental research since teachers are considerably more likely to read the former as opposed to the latter. To illustrate this point, Derwing and Munro (2005) write:

An extensive, growing literature on L2 speech has been published in journals that focus on speech production and perception . . . Yet this work is rarely cited or interpreted in teacher-oriented publications. Researchers [much less classroom teachers] may not be aware of this literature in part because it is inaccessible to those without specialized knowledge of phonetics. Moreover, some of the research may not be perceived as practical because it has been carried out under strict laboratory conditions, so that it is not immediately clear how the findings apply to the classroom. . . . Levis [1999a], for instance, presents the disturbing observation that “present intonational research is almost completely divorced from modern language teaching and is rarely reflected in teaching materials” (p. 37). The problem can be resolved only if applied linguists take responsibility for interpreting technical research for pedagogical specialists and incorporating pertinent findings into teacher training materials and student texts (p. 382).

2.4.1 Classroom-Based Research

In comparison with other skill areas, only a few classroom-based research studies on pronunciation teaching and learning have been published, revealing a noticeable gap in the ESL research base. A need for increased research into actual classrooms to investigate the various dimensions of pronunciation instruction and acquisition has been pointed out by other specialists (Derwing & Munro, 2005). To the best of my knowledge, only six studies have been conducted in relevant classroom settings or related environments in the last few decades.

Three studies, two by Couper (2003, 2006) and one by Saito (2007), have explored how classroom instruction has led to decreases in phonological errors. It is important to note, however, that such decreases do not necessarily equate to greater intelligibility, but only phonological improvement. Using an explicit pronunciation syllabus for a course that had previously taught pronunciation only implicitly, Couper (2003) found an overall decrease in learner-produced phonological errors from the beginning to the end of the course. To determine how well a single element was instructed within the explicit syllabus, Cooper took two elements - epenthesis (insertion of additional sounds, such as a schwa before or after a consonant) and absence (deletion of or failure to maintain consonant sounds at the end of words terminating with a consonant or consonant cluster) -, and assessed changes in students' pronunciation both immediately after instruction and twelve weeks later. Findings revealed significant decreases in speaking error rates. In another classroom-based study, Couper (2006) examined the effect of explicit instruction on epenthesis (the addition of an extra sound, usually a schwa, after a consonant) and absence (the inappropriate dropping of a consonant sound) on L2 pronunciation. Results demonstrated that significant improvement was made both in the immediate post-test and in the delayed post-test, indicating that appropriated focused instruction can lead to changes in

learners' phonological interlanguage. Finally, although not strictly classroom-based research, Saito (2007) conducted a pilot study that investigated whether explicit phonetic instruction would improve Japanese EFL learners' pronunciation of the vowel /æ/ (i.e., the vowel in cat). Results revealed that three of the four participants in the experimental group showed significant improvement in pronouncing this vowel both immediately following instruction and one week later whereas the control group showed no improvement. Overall, the three studies demonstrated that instruction lead to phonological improvement.

The next three studies specifically addressed whether pronunciation instruction would lead to improvements in learner intelligibility, and not only to decreases in phonological errors. Macdonald, Yule and Powers (1994) investigated the impact of instruction on L2 learners' acquisition of English pronunciation in the U.S. Overall, results indicated that no particular instructional method yielded significant improvement in performance over another method, and only lab work intervention demonstrated significantly more improvement over the control condition involving no instruction. Derwing, Munro and Wiebe (1997) examined the impact of pronunciation instruction on "fossilized" learners of English in Canada, and determined that only three participants (out of 13) showed significant improvement in intelligibility while another five showed a smaller degree of improvement. Eight of 13 showed improvement in at least one of the three conditions (intelligibility, comprehensibility or accentedness). Finally, Derwing, Munro and Wiebe (1998) studied the impact of different types of pronunciation instruction (segmental accuracy, general speaking habits and prosodic features, or no specific elements) on the speech of English learners in a Canadian ESL program. Results determined that all three groups improved in terms of accentedness, but only the segmental and prosodic groups improved in comprehensibility in a sentence task with the results for the segmental group being significantly

greater than those of the other two groups. Nevertheless, only the prosodic group exhibited considerable improvement in both comprehensibility and fluency in narrative tasks whereas the other two groups showed no improvement. In general, these three studies as well as the previous three indicated that explicit pronunciation instruction can lead to improvements in either phonological accuracy and/or intelligibility or comprehensibility, although the degree of improvement varies among the studies.

2.4.2 Student Perceptions

Another area of research that has received little attention is students' perception of pronunciation learning and teaching; nevertheless, three issues have been explored to a certain extent: a desire for pronunciation instruction, preferences about accents, and error correction.

Several studies have revealed that students have a desire for instruction in L2 pronunciation. One of the questionnaire surveys described earlier in this review, Couper (2003), found that ESL learners in New Zealand considered both explicit pronunciation instruction and pronunciation in general to be important, but admitted to having low confidence in this skill area. Similarly, students' desire for pronunciation instruction was also found in Derwing and Rossiter (2002). This study also determined that over half of the 100 participants highlighted pronunciation as one of the factors in communication breakdowns. In dealing with such breakdowns, most learners reported paraphrasing and self-repetition as the most frequently employed strategies used. Furthermore, although almost 40% of participants could not isolate specific pronunciation problems with their speech, of the remaining participants, a majority identified segmentals as the leading cause of pronunciation problems. In total, only 8% of participants reported taking pronunciation courses and 90% expressed interest in taking such a course if offered. The authors noted that ESL students seem to lack training in the use of

prosodic features despite advocacy for its inclusion in language course by both researchers and teacher educators. If any pronunciation training is received, it appears that the majority of such training may focus on segmental features.

Another area that has been explored in research has focused on students' preferences in relation to accents. Overall, it appears that many students aspire to achieve a native-like accent regardless of whether instruction takes place in Canada (Derwing & Munro, 2003), the USA (Kang, 2010; Scales, et al., 2006), New Zealand (Kang, 2010) or in diverse ESL/EFL learning contexts around the world (Timmis, 2002). In addition, Scales, Wennerstrom, Richard and Wu (2006) found that the majority of the 37 ESL students in their study showed a strong preference for accents perceived as easier to understand, and felt that those with such an accent would be most appropriate as ESOL teachers. Two further studies reported in Gatbonton, Trofimovich and Magid (2005) investigated the relationship between the accuracy of L2 learners' pronunciation and their membership in particular ethnic groups, specifically French or Chinese. The first study, involving French speakers of English in the 1970s during a time of strong Québécois nationalism, found that only the nationalistic listeners working in monoethnic contexts (intragroup) preferred leaders with heavily accented or moderately accented speech whereas the other two groups (extragroup) working in biethnic contexts preferred either non-accented or moderately accented leaders. The second study, conducted thirty years later with Chinese speakers of English who did not experience the same type of ethnic conflict found that, in English, speakers with moderate or no accents were ascribed significantly less ethnic group affiliation than those with heavy accents. With the behavioral analyses, unlike for the Francophones, results showed that both extra- and intra- groups favored working with speakers who they perceived as not having an accent.

Part of one remaining study, that of Cathcart and Olsen (1976) (also discussed earlier in this review) looked at students' beliefs about phonological error correction. In a questionnaire examining teacher and students' beliefs about the best methods for conducting grammar and pronunciation error correction in class, students demonstrated a preference for receiving both. Students also indicated a preference for error correction involving teachers' modeling "correct" pronunciation. This article, however, is considerably dated, and more recent research is required to determine to what extent these findings would be the same today.

In sum, it appears that students have a strong desire for pronunciation instruction, but report having received limited training in this area. Furthermore, many students express a desire to achieve a native-like accent and to be taught by teachers with accents they find easy to understand. It may also be that NNSs whose ethnic identities do not feel threatened prefer working with speakers who they perceive as having a standard NS accent. Finally, more than thirty years ago, one specific group of students preferred a "correct" model approach to pronunciation error correction; however, it is uncertain how students may feel today.

2.4.3 Perspectives of Teacher Educators and Pronunciation Specialists

Unlike many of the research paradigms explored throughout this literature review, a plethora of information has been conveyed by a number of teacher educators and pronunciation teaching specialists about the key components of pronunciation instruction and learning. As it is beyond the scope of this review to provide a complete overview of the recommendations of more than 60 published authors over the past 50 or more years, this brief review will instead focus on only the most common or reoccurring topics from the past 20 years in order to provide the most up-to-date perspectives on teaching pronunciation. Much of the information imparted here may be familiar to ESL teachers since the majority of these resources are geared specifically for them.

The final part of this review of the knowledge base of pronunciation teaching focuses on the perspectives of teacher educators and pronunciation specialists in relation to the following three areas: learner factors, curriculum factors, and teacher factors.

Encapsulated in the mind and body of the learner are a variety of factors that can affect, either negatively or positively, the student's ability to learn and sufficiently produce phonological features of a L2. Numerous authorities on pronunciation instruction have highlighted several of these factors, including speaker's age (Avery & Ehrlich, 1992; Celce-Murcia, Brinton, Goodwin, & Griner, 2010; Kenworthy, 1987; Pennington, 1996; Scarcella & Oxford, 1994), linguistic factors such as the influence of the learners' L1 on the L2 (Avery & Ehrlich, 1992; Kenworthy, 1987), socio-cultural factors such as the desire to maintain an L1 accent or acquire a native English accent (Avery & Ehrlich, 1992; A. Brown, 2008; Celce-Murcia, et al., 2010; Kenworthy, 1987; Scarcella & Oxford, 1994), affective factors such as the learners' attitudinal and emotional states (i.e. Avery & Ehrlich, 1992; A. Brown, 2008; Celce-Murcia, et al., 2010; Kenworthy, 1987; Murphy, 1991; Scarcella & Oxford, 1994), and learner choice or involvement in instructional decisions (Celce-Murcia, et al., 2010; Jenkins, 2004; Levis, 1999b; Pennington, 1996). Whether in an EFL or ESL context, student choice with respect to accents or learning processes is a vital factor to consider when addressing the variety of factors that impact on student learning of English pronunciation.

In addition to learner factors, although strongly connected to the learner, are curriculum factors that have a critical part in both the learning and teaching of pronunciation. The following five major themes can be found in literature written by teacher educators and pronunciation specialists: integration of pronunciation within the broader English language learning curriculum (A. Brown, 2008; Derwing & Munro, 2005; Levis, 2006; Levis & Grant, 2003; Murphy, 1991;

Naiman, 1992); assessing intelligibility (Levis, 2006); phonological hierarchies advocating either a greater or lesser emphasis on suprasegmentals or segmentals, although dependent on NS/NNS context (Esling, 1994; Firth, 1992; Gilbert, 1987; Jenkins, 2000, 2002, 2007; Levis & Grant, 2003; McNerney & Mendelsohn, 1992; Seidlhofer & Dalton-Puffer, 1995); target pronunciation models such as providing learners with a variety of NS and/or NNS models (Levis, 1999b; Pennington, 1996; Pickering, 2006; Scales, et al., 2006); and setting realistic goals for the learner (Avery & Ehrlich, 1992; Goodwin, 2001). Determining teachers' understanding of these curriculum factors is another important area to consider in exploring L2 teacher cognition.

The knowledge of teachers is another critical area emphasized in resources for teaching pronunciation. In essence, the teacher is encouraged to have a firm understanding of each of the curriculum and learner factors discussed above in order to adequately teach English pronunciation. In addition to these factors, there are two further factors that need to be considered: knowledge about phonology and knowledge about techniques and approaches. Throughout the past several decades, the need for a solid foundation in linguistic knowledge of phonology has been advocated by numerous specialists (Abercrombie, 1991; Burgess & Spencer, 2000; Celce-Murcia, et al., 2010; Murphy, 1997; Parish, 1977; Walker, 2001; Yavas, 2006). Similarly, scholars have also emphasized a need for teachers to have an understanding of how to enable students to both discriminate and produce sounds, how to give students feedback, how to demonstrate to students what they are actually doing, how to set pronunciation priorities, how to plan activities, and how to evaluate learner progress (Kenworthy, 1987). To date, however, no research appears to have been conducted on teachers' knowledge about phonology or about teaching pronunciation.

In summary, this review of classroom-based research, studies of students' perceptions about accents and pronunciation instruction, and themes typically found in teacher resources compiled by L2 pronunciation specialists has revealed both additional gaps in the knowledge base of pronunciation teaching as well as additional themes that may warrant further investigation in studies of teacher cognition and second language pronunciation teaching.

2.5 Research Questions

Based on the above literature review of the knowledge base of pronunciation teaching as well as of L2TC, the following questions have been derived. In particular, these questions focus on ESL teachers with experience teaching multiple skills areas (i.e. reading, writing, speaking, and listening) as would be typical of experienced teachers in a pre-university, intensive English program (IEP).

1. In relation to teaching pronunciation in an IEP, how have the cognitions of experienced L2 teachers developed over time?
2. What cognitions do experienced teachers have with respect to teaching pronunciation?
3. How are the teachers' cognitions reflected in their actual practices?
4. What relationships exist between the teachers' cognitions and classroom practices and their students' beliefs and perceptions of their teachers' practices?

CHAPTER THREE

METHODOLOGY

This chapter sets out to document the research procedures used in this study of ESL teachers' cognitions and practices in teaching pronunciation. After first describing the participants, I will provide a narrative of the methodological steps that were taken to both collect and analyze the data. The chapter will end with a discussion of the ethical issues involved in conducting the study.

3.1 Participants

As the primary focus, five Intensive English program (IEP) teachers agreed to participate in this project on L2TC and pronunciation pedagogy. Each of the teachers taught oral communication (OC) courses in the same IEP, which was housed within a larger department of Applied Linguistics at a research university in the southeastern USA. As way of background information, this same IEP had recently been accredited by the Commission of English Language Program Accreditation (CEA), a national accrediting agency for programs dedicated to providing quality instruction of the English language. In addition to this group of teachers, students from their classes also participated. Each of the groups is discussed in greater detail below.

3.1.1 Teachers

The five teachers who chose to participate were all experienced English language teachers with a range of six to 14 years of teaching experience and experience teaching in a variety of ESL and EFL contexts (see Table 3.1, for a list of teaching contexts). Except for Ginger who was a doctoral student in the department, the participants were all full-time teachers in the IEP. Each of the five teachers taught OC courses at the time the study took place. In the Fall of 2009, Abby taught one of the intermediate OC classes (Level 3), Ginger taught a second

intermediate OC class, and Tanya taught the high beginner class (Level 1). In the Spring of 2010, Laura taught the low intermediate class (Level 2) and Vala taught the high intermediate course (Level 4). (All names are pseudonyms.) In part due to their course assignments, I asked each teacher to participate in the study because the OC courses, particularly the high beginner (level 1) through to the high intermediate (level 4) courses in this 5-level program, included a focus on English pronunciation to varying degrees (as mandated in the course syllabi developed by the program). The participation of these particular teachers was also requested because they were all experienced ESL teachers. Other teachers who were teaching OC courses at the time were either novice teachers, graduate students/teaching assistants who did not have the time to participate in the study, or, in the case of one teacher, uncomfortable with the idea of being video-taped.

In terms of education, each participating teacher had earned an MA degree related to Teaching English to Speakers of Other Languages (TESOL). Tanya, Laura and Abby had all received their degrees from the same institution, that is, the same department in which the IEP was housed (designated as Degree Location A in Table 3.1). Ginger and Vala, however, received their degrees from different universities in the USA (designated as Degree Location B and C, respectively). Table 3.1 summarizes this information.

Finally, each of the participating teachers is a native-speaker of English. One teacher, Abby, is also a bilingual speaker of both English and Portuguese. It is important to note that the IEP occasionally employs non-native speakers of English to teach OC courses; however, in the semesters during which this study took place, the non-native English speaking teachers happened to be assigned different courses.

Table 3.1

Teacher Backgrounds

	Tanya	Laura	Abby	Ginger	Vala
Years Teaching Experience	7	6	6	14	7
Experience Teaching in ESL/EFL Contexts	USA (ESL)	USA (ESL)	Brazil (EFL); USA (ESL)	Japan (EFL); Djibouti (EFL); USA (ESL)	USA (ESL)
Current OC Course	High Beginning	Low Intermediate	Intermediate	Intermediate	High Intermediate
MA degree – TESOL-related	Yes	Yes	Yes	Yes	Yes
Degree Location	A	A	A	B	C

3.1.2 Students

The students enrolled in the courses taught by the five teachers all agreed to participate in the study. In total, 63 students in the five courses provided consent. Most of the courses had at least 12 students (ranging up to 17); however, the high beginning course taught by Tanya only had four students. According to Tanya, low numbers of students in the high beginning OC course is fairly typical, and frequently the high beginning course is not offered due to such low enrolment.

Overall, aside from Tanya's high beginning course, most of the OC courses included students from a variety of first language (L1) backgrounds, ranging from Korean, Chinese, Vietnamese, French and Spanish to Arabic, Bambara, Somali and bilingual speakers of French/Lingala and Wakhi/Urdu. Table 3.2 provides a summary of student background information and includes details about the length of time students claimed to have studied English and their lengths of residence in an English-speaking country. Note, however, that some

students appeared to confuse the second to last question, in that they answered with the same information for both time spent studying English and the time spent in an English-speaking country. For example, some low intermediate and intermediate students indicated that they had studied English for three months and that they had spent three months in a English-speaking country. Yet, to start in this academic-oriented IEP at the intermediate levels would require some prior knowledge of English.

Table 3.2

Student Backgrounds

	Tanya's	Laura's	Abby's	Ginger's	Vala's
Total # of Students	4	17	12	13	17
First Language (# of Students)	Korean (3) Arabic (1)	Korean (5) French (4) Chinese (3) Arabic (2) Vietnamese (2) Bilingual: French & Lingala (1)	Spanish (4) French (2) Chinese (2) Vietnamese (1) Korean (1) Bambara (1) Bilingual: Wakhi & Urdu (1)	French (4) Korean (3) Chinese (3) Vietnamese (2) Spanish (1)	Chinese (7) Spanish (4) Vietnamese (3) Somali (1) Korean (1) French (1)
Time spent** studying English	3 months - 4 years	5 months - 10 years	3 months - 7 years	6 months - 18 years	3 years - 16 years
Length of Residence	3 months - 5 years	3 months - 4 years	3 months - 2.5 years	3 months - 2 years	3 months - 4.2 years

Note: Some students may have confused the question about the time spent studying English as being the amount of the time they have spent studying English in a English-speaking country only.

3.2 Methods²

Research into L2TC has employed a variety of different research methods over the past thirty years with the intention of gaining a better understanding of teachers' cognitions. A large

² Part of an earlier version of this literature review on research methods served as the literature review in the following publication: Baker, A. A., & Lee, J. (in press). Mind the gap: Unexpected pitfalls in doing classroom research. *The Qualitative Report*, 16(5).

preponderance of this research has involved one or a combination of two or more of following research methods: classroom observations (e.g., Borg, 2001; Farrell & Lim, 2005), interviews (e.g., A. Cohen & Fass, 2001; Jenkins, 2007), stimulated recall sessions (e.g., Gathbonton, 2008; Mullock, 2006), think-aloud sessions (e.g., Diab, 2005), focus groups (e.g., Hawkey, 2006; Popko, 2005), online discussions (e.g., Burns & Knox, 2005), journaling (e.g., Bigelow & Ranney, 2005; Sengupta & Xiao, 2002), concept mapping (e.g., Meijer, et al., 1999), response scenarios (e.g., Basturkmen, et al., 2004; El-Okda, 2005), tests (e.g., Andrews & McNeil, 2005; Hislam & Cajkler, 2005), and questionnaires (e.g., Cathcart & Olsen, 1976; Eisenstein-Ebsworth & Schweers, 1997). In investigations of L2TC involving small numbers of participants (as in the case of the current study), interviews and observations have been used to capture this type of information; thus this project used similar methods for collecting data, specifically using semi-structured interviews, stimulated recall interviews and classroom observations. Each of these methods and their use within the proposed project are described in detail below. In studies involving comparisons of teachers' cognitions and practices with the perspectives of students in the teachers' classes, three main types of data have been collected: questionnaires (e.g., Cathcart & Olsen, 1976; A. Cohen & Fass, 2001; Hawkey, 2006), interviews (e.g., Brumfit, et al., 1996; A. Cohen & Fass, 2001) and writing samples (Borg, 1998b; Farrell & Lim, 2005). In the present study, students were asked to complete a questionnaire about their beliefs regarding pronunciation.

Each of the methodical procedures discussed above has its inherent strengths and weaknesses; however, when combined, such a mixed methods approach enhances the validity of L2TC research. Creswell (2003) defines a *mixed methods* approach as:

...one in which the researcher tends to base knowledge claims on pragmatic grounds (e.g., consequence-oriented, problem-centered, and pluralistic). It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews) so that the final database represents both quantitative and qualitative information (p. 20).

Through the triangulation of different research methods (e.g., semi-structured interviews, classroom observations, stimulated recall interviews and structured questionnaires), the overall validity of a research study can be dramatically improved. The coupling of quantitative and qualitative methods not only enhances the generalizability, and thus the external validity, of the findings, but also the ecological validity as a result of extensive exploration into at least one local context. Gillham (2000) argues, “[t]his multi-method approach to real-life questions is important, because one approach is rarely adequate; and if the results of different methods converge (agree, or fit together) then we can have greater confidence in the findings” (pp. 1-2). Thus, a multi-method approach to studying L2TC and pronunciation teaching can eliminate or at least reduce some of the limitations inherent in any of the methodological procedures used in isolation.

3.2.1 Teacher Data

The three main methods used to collect data from the five instructors were: semi-structured interviews, classroom observations and stimulated recall interviews. The use of three methods assists in data triangulation in that each method provides a different perspective on the data collected in order to better inform any conclusions that might be drawn from one method alone.

3.2.1.1 Semi-Structured Interviews

The vast majority of qualitative studies of L2TC attempting to gather large amounts of descriptive data from a small number of participants frequently employ semi-structured interviews. Landridge (2004, p. 50) provides the following description of semi-structured interviews:

Semi-structured interviews, unlike unstructured interviews, use a standardized interview schedule. The interview schedule consists of a number of pre-set questions in a mostly determined order. However, this type of interview is not completely reliant on the rigorous application of the schedule. If the interviewee wanders off the question then the interviewer would generally go with it rather than try to immediately return to the next question in the schedule...And to further focus attention on the interviewee and their views the interviewer generally says very little.

The flexibility of adapting the interview schedule to "go with the flow" increases the potential for gaining access to or discovering greater insight into the thought processes of teachers. As posited by Fontana and Frey (2000), "interviewing is one of the most common and powerful ways in which we try to understand our fellow human beings" (p. 645); thus, the flexibility of semi-structured interviews permits not only researchers to ask more questions to learn more about teachers' cognitions, but it also allows interviewees greater freedom to provide more in the way of background, additional anecdotes or other information about a given topic or issue as they see fit. Part of the difficulty in conducting interviews, however, is that planned questions are not always easy to frame in such a way that is clearly understood by the interviewee. Fontana and Frey (2000) explain that the "spoken or written word has always a residue of ambiguity, no matter how carefully we word the questions or how carefully we report or code the answers" (p.

645). Nevertheless, if questions are worded clearly, semi-structured interviews offer strong potential for enhancing the richness and depth of insight into teachers' cognitions.

Based on this potential, semi-structured interviews were chosen as one of the study's main methods. In total, three semi-structured interviews took place per teacher during the semester in which the teachers participated. The first occurred prior to the first classroom observation near the beginning of the semester and lasted approximately 70-90 minutes. (See Appendix A for sample interview questions; many of these questions were piloted in an earlier study I conducted with other teachers [Baker, in press]). The second interview was held following the second set of stimulated recall interviews (to be described later) at around the 3/4 point of the semester. The semi-structured interview lasted approximately 30-40 minutes, and served to follow-up on issues discussed in the initial interview. Specifically, the second interview explored in more depth how teachers' knowledge about students informs their classroom decision making (See Appendix B for sample interview questions). In fact, many of the questions that appeared in the second interview also served as items on the questionnaire that would be distributed to students one to two weeks later. The third interview took place at the end of the semester. It addressed issues discussed in the first two interviews, and also served as a project debriefing for participants. This final, 30-40 minute interview, however, differed somewhat from its initial purpose. At the end of one of the teachers' second semi-structured interviews, I took a few minutes to schedule a time that would be convenient for the teacher to have me distribute the student questionnaires to her class. Toward the end of our discussion, the teacher learned that some of the questions that I had asked during the interview would also appear in the questionnaire to be distributed to students. Upon realizing this, she expressed an interest in seeing the results of the questionnaire. I willingly agreed to provide her with a summary of the

results. Later that same day, I considered that it might be beneficial to include the results of the questionnaire as part of the final interview. Thus, at the beginning of the third semi-structured interview, I provided each participant with a copy of the summary results for her class. We then went through each item in the questionnaire together, and the teacher commented on any results that were of interest to her. The remainder of the interview involved questions concerning the teacher's experience as a participant in the project. (See Appendix C for sample interview questions). Each of the three interviews were audio recorded using an Olympus digital voice recorder (Model #: WS-321M) and later transcribed during the following semester.

3.2.1.2 Classroom observations

As Wajnryb (1992) points out, the classroom is central to the development of teacher's knowledge base. While other factors such as previous language learning experience (Ellis, 2006) and teacher training (Burns & Knox, 2005) may have strong influences on what teachers think and do, the classroom remains the primary location where teacher learning and development takes place; therefore, as often articulated by Borg (2003b, 2006), investigations of teachers' cognitions without reference to classroom practice are unlikely to be as fruitful as those that include examinations of what teachers do in the classroom, and preferably these should involve observations of actual classroom practice as opposed to teachers' self-reports of classroom practice.

In research on L2TC, observational inquiries have largely followed more qualitative approaches (Borg, 2006). With the purpose of such research to understand phenomena, observations involving instruments that quantify specific or predetermined teacher behaviors are rare. Rather, research into this area has focused on describing teachers actions' in relation to their cognitions about their practice. As one teacher's cognitions typically differ from those of another

teacher, and with each having their own unique or individualized practice, creating instruments to quantify their behaviors is not particularly advantageous when conducting in-depth explorations of teachers' multilayered cognitions. Less structured observations, in comparison, permit greater access to the diverse, and sometimes unanticipated, behaviors, actions and events, which may take place in the classroom, thus providing more insight into teachers' cognitions.

As one of the oldest surviving research methods in use today, observations in general, and less structured observations in particular, offer numerous benefits to researchers. One of the most valuable strengths of observations is the window they provide into actual classroom life. As most research in L2TC investigates authentic classroom contexts, observers can gain an understanding of teachers' behaviors in natural settings. Cohen, Manion, and Morrison (2007, p. 397) posit that the "use of immediate awareness, or direct cognition, as a principal mode of research thus has the potential to yield more valid or authentic data than would otherwise be the case with mediated or inferential methods." Related to the notion of authenticity, observations supply researchers with data which is more objective than that gathered through self-reports (Dörnyei, 2007). In addition, unlike teachers' self-reports, which impart second-hand accounts or perspectives on action in the classroom ranging from immediately after a given class to several months later (or longer!), observations supply direct information on classroom events, actions and behaviors in real time. When comparing teachers' self-reports of their classroom practices and cognitions to their actual classroom practices, the relative objectivity of observations can demonstrate the degree to which teachers' self-reports (as gathered through interviews, journals or other methods) reflect their actual pedagogical practice. Observations can function as a form of "reality check" (Cohen et al., 2007, p. 396). This issue has been of particular interest in numerous L2TC studies (i.e. Basturkmen, et al., 2004; Collie Graden, 1996).

Additional benefits of observations include exposure to habitual or everyday behaviors (Bartels, 2005; L. Cohen, et al., 2007), exposure to unanticipated events or actions (L. Cohen, et al., 2007), and flexibility, permitting the observer to focus on different patterns of interest from one observed class to the next as new patterns surface in the data (Silverman, 2006).

Despite the numerous advantages of observations conducted in classrooms, there are also several limitations. In fact, Dörnyei (2007) emphasizes that the value of data collected through observations requires a great deal of skill on behalf of the observer. Many of the disadvantages of observational research discussed below reflect the types of skills observers need in order to carry out effective research. Potential limitations of classroom observations include: premature judgments made prior to investigation of a phenomenon based on extensive literature reviews (L. Cohen, et al., 2007; Evertson & Green, 1986); personal biases or selectivity that may distort the researcher's perceptions about a particular phenomenon (L. Cohen, et al., 2007; Evertson & Green, 1986); Finally, observer effects such as the observer's paradox or the Hawthorne effect might result in participants changing their regular behaviors due to the presence of an observer in the classroom (Gass & Mackey, 2007). For example, in L2TC research, teachers might incorporate activities or techniques into their teaching, which normally would not be present in their teaching, in a desire to demonstrate behaviors they feel the observers wish to observe (see, for example, Burns & Knox, 2005). Furthermore, in searching for the commonplace, the researcher may mistakenly identify one or more behaviors, actions or events as typical in the teachings of a particular teacher when, in fact, they may not be representative of her or his classroom practice (Borg, 2006; Evertson & Green, 1986). In L2TC research, this representation of classroom practice shows considerable variation from one study to the next. Appendix D provides a survey of almost two dozen studies involving classroom observations and details the

number of instructors who participated and how many classes were observed per instructor. As results from the survey reveal, the conclusions and generalizations from each of these studies are based on results collected from a range of only one or two observations per participant (e.g., Johnston & Goettsch, 2000; Popko, 2005) to as many as seven or more (e.g., Farrell, 2006; Johnson, 1992). The exact number of observations is sometimes difficult to identify due to the failing of many studies to provide detailed descriptions of the observational process (e.g., Andrews, 2006; Phipps & Borg, 2007). The number of participants in each of these studies may also vary, ranging from only one participant (Farrell, 2006) to 21 participants (Cathcart & Olsen, 1976). In several cases, studies with only one or two participants will have a larger number of observations per participant whereas studies with larger numbers of participants will have a smaller number of observations per participant. As mentioned above, researchers must be especially careful when making generalizations about teachers' behaviors and actions when results are determined from only a limited number of observations and/or participants. As summarized by Cohen et al. (2007) "...the greater the number of observations, the greater the reliability of the data might be, enabling emergent categories to be verified" (p. 408). Failure to address these possible disadvantageous may reduce the validity of the data.

In the case of the current study, each teacher was observed five to six times during the course of one semester. The first three observations took place near the beginning of the semester; however, the first observation was only used to help reduce any possible effect that the recording equipment might have on both the teachers and their students. Numerous researchers have noted that video recordings, in particular, can cause participants to react to their presence, and possibly modify their classroom behaviors (K. M. Bailey, 2006; Borg, 2006). As a result, the primary data used in the analysis of this project began with the second observation. Therefore,

the first set of three observations occurred over three consecutive classes. In most cases, the teachers were observed on Friday, and then again on Monday and Wednesday as the OC classes are held three times a week for 50 minutes. Since all OC classes, regardless of level, are held at the same time, I observed each teacher on a different week.

The second set of two observations occurred typically three - five weeks after the first set. This timeline permitted me to cycle through each of the participants' classes in the first part of the semester before starting with the second set. Whenever possible, these observations were held on a Monday and Wednesday, so that the stimulated recall interviews could take place on the Thursday.

For the most part, each participant was observed five times; however, Laura invited me to visit her class for a sixth time at the end of the semester. She wanted to provide me with the opportunity to observe her class in a dramatic performance in which the students displayed their skills of fluency and pronunciation. I enthusiastically accepted the teacher's offer, and thus a sixth class was observed in her case.

Each of the observations was video recorded. Some of the strengths of audio/video recordings are that they produce data that is not only objective, but also easily reviewed (collaboratively or independently), replayed, and transcribed (depending on the quality of the recordings) (K. M. Bailey, 2006). Coding of the data can also take place at a later time, eliminating the need for the researcher to code while simultaneously observing a class (Dörnyei, 2007). In addition, although solely audio recordings may be less intrusive than video, video recordings offer several key benefits not available through audio recordings alone: they supply both visual and audio information (K. M. Bailey, 2006; Borg, 2006); they provide extra

information on non-verbal communication (Gass & Mackey, 2007); and they demonstrate how the teacher organizes the classroom and class activities (K. M. Bailey, 2006).

The main disadvantage of recordings, but most particularly for video recordings, is their invasiveness, which may cause participants to react to their presence, and possibly modify their classroom behaviors (K. M. Bailey, 2006; Borg, 2006). Researchers need to place recording equipment in locations which are more likely to reduce possibilities for participant reactivity. In addition, they can only capture action which takes place in their line of sight (Bailey, 2006); however, in the case of teacher cognition research with its emphasis on the teacher, as long as the teacher remains in the camera's range, this limitation is less of an issue.

During the observations, I video-taped the lessons using a Sony HDR-XR2000 120GB High Definition Camcorder. This particular device was selected for the study because: 1) it provides the convenience of storing video footage of all of the study's observed lessons, and (2) it features Bluetooth wireless microphone capabilities. The wireless microphone (Sony Model # ECM-HW2(R)) consisted of two devices. The first was a receiver that attached to the camcorder and the second was a small wireless device that clipped on to the participant's shirt. The sound quality of this device was extremely clear, enabling me to transcribe all words spoken by the teachers in their lessons and by a number of students as well. Thus, even during small group or pair work activities, the device captured the voices of most of the students with whom the teacher interacted. As for the camcorder, it was placed in a fixed position at the back of the room to capture the teachers' movements and actions throughout the lesson. During the lessons, I pivoted the camera to follow the teacher as she moved around the classroom.

In addition to the video recordings, I also took field notes while observing the classes. Field notes can be useful in observations in that they can supply an outline of events that occur

during a lesson as well as an interpretive element to the data (Bailey, 2006). Another strength of field notes is that they can be used to develop teacher profiles. Bailey explains that “[t]o generate a profile or “typical lesson” report, the full-length field notes can be summarized. Three or more sets of summarized notes on one teacher can be combined to generate a profile of the teacher, by looking for the notable similarities across the various summaries” (p. 109). From these field notes, lesson outlines were compiled by the researcher in order to provide an account of the main events/activities taking place during a lesson. The main purpose of these field notes was to document when any pronunciation-related episodes took place during the lesson. This documentation assisted in the preparation of the stimulated recall interviews to be discussed in the next section.

3.2.1.3 Stimulated Recall Interviews

Stimulated recall protocols are a type of retrospective verbal report that involves a participant receiving a stimulus (a recorded event) and then recounting her/his cognitions at the time the event took place. As with semi-structured interviews and classroom observations, using stimulated recall procedures has both advantages and disadvantages; yet, their use appears to receive greater criticism than the other two procedures. One of the main criticisms of stimulated recalls is the degree to which (or even whether or not) these retrospective reports generate accounts of the actual thought processes experienced by the participant during the event encapsulated by the stimulus. Gass and Mackey (2000) warn that “humans are essentially sense-making beings and tend to create explanations, whether such explanations can be justified or not” (p. 5). Rather than verbalizing real thoughts, participants may instead articulate their beliefs about what they may have thought at the time of the event (Bartels, 2005; Borg, 2006) or, as described by Yinger (1986, p. 273), participants may instead generate “reflection-on-action.”

Unfortunately, it is difficult to confirm the extent to which stimulated recall can actually produce accurate reports of teachers' thought processes (Calderhead, 1981; Tuckwell, 1982). Calderhead (1981) notes that researchers may have to rely mainly on trust when accepting the veracity of retrospective reports. Furthermore, even if accurate reports can be elicited, the completeness of those reports may also be questioned. Ericsson and Simon (1993) point out lack of knowledge or faulty memory may result in incomplete reports of cognitive processes. Furthermore, teachers may not register commonplace behaviors or thoughts as necessitating verbalizing, and therefore fail to provide precise descriptions of these processes (Borg, 2006). Related to report completeness, time lag – the duration of time between the recorded event and the stimulated recall interview – may have an adverse affect on teachers' memories. Bartels (2005) recommends that stimulated recalls take place as soon after the event as possible, although he concedes that this may be challenging due to teachers' busy schedules. Finally, the extensive amount of time required to organize stimuli, conduct stimulated recall interviews, and later analyze the combined data can be exhausting for the researcher (Bartels, 2005; Gillham, 2000; Meade & McMeniman, 1992). With respect to interviews, Gillham (2000) calculates that the “problem is not the time spent doing the interview: it is the time spent transcribing it and the time spent analyzing it. You can reckon that a one-hour interview will take ten hours to transcribe, and five hours to analyze...if you are good at it” (p. 100).

Despite these disadvantages, stimulated recalls offer a number of potential benefits for research into teacher cognition. One of the greatest benefits of using stimulated recall interviews in a study of teacher cognition is the additional information that becomes attached to observations of various events, action, behaviors, and other phenomenon in the classroom by allowing teachers to voice their perspective on situations in which they were involved

(Calderhead, 1981; Dörnyei, 2007; McKay, 2006; Nunan, 1992). These interviews can provide researchers with insight into the cognitive processes and personal theories which motivate various types of teacher behaviors and actions (Kormas, 1998; Meade & McMeniman, 1992). They can also assist in the exploration of procedural knowledge, propositional knowledge, and knowledge organization (Bartels, 2005). In addition, with stimulated recall frequently being used in conjunction with other research methods, typically classroom observations, conducting these types of interviews usually increases the validity of research findings and interpretations. Borg argues that, “[p]articularly where there is keen interest in what teachers do, the value of verbal commentaries emerges even more clearly when they are combined with data collected through observation...” (2006, p. 225). Furthermore, stimulated recalls can also be considered “naturalistic” data (Lyle, 2003) since they are strongly connected to authentic contexts. Lyle (2003) explains that “video-[stimulated recall] provides an opportunity to maintain the real-life context” (p. 873).

In research on L2TC, stimulated recall interviews have been used in tandem with observations to uncover teachers’ thoughts while teaching, thus addressing one of the criticisms of observations in that observations used as sole sources of data fail to take into consideration the teachers’ perspective. Appendix E provides a brief survey of 10 studies that conducted stimulated recall interviews. As demonstrated in the appendix, the types of stimuli used in these studies have included video (n=4), audio with/without transcripts (n=2), or written transcripts only (n=3). One additional study, Popko (2005), involved a modified form of stimulated recall by using a combination of notes from observations and copies of the teachers’ lesson plans. The table also shows that most studies have only conducted either one or two stimulated recall interviews per participant and that the number of participants per study has ranged between two

and seven. The final column details the duration of time between the observed lessons and the interview.

With respect to the present study, stimulated recall interviews were used because they remain one of the best options for collecting information on teachers' thought processes even despite some of the potential weaknesses associated with their use. The stimuli used in the study were video-recorded episodes, or classroom activities or events, that related to pronunciation teaching in the teachers' classes. The process of identifying pronunciation-related episodes for each of the four classes was a time-consuming task, especially in light of the time constraints I was attempting to adhere to. My goal was to conduct the stimulated recall interviews within 48 hours of video-taping the second of the two consecutive lessons, and in many cases, I succeeded in conducting the interview within 24 hours or even on the same day as the last lesson. This truncated timeframe between observed lesson and interview was sometimes intense as it typically took several hours to adequately select pronunciation-related episodes from the video-taped lessons. To guide my selection, I used field notes from the observed classes to ensure that I did not miss any of the episodes I had observed in class. Also, watching the video again revealed additional episodes that I had missed live in the classroom, particularly those that took place during the teachers' interactions with students in group or pair work activities. The combination of field notes and re-watching the video helped me to identify nearly all of the pronunciation-related episodes from the lessons. (Later, when the observed lessons were transcribed, only a small handful of additional pronunciation-related episodes were further identified from all the videos.) From episodes identified in the two lessons, about 5-20 minutes of data from each the two 50-minute lessons were selected. These episodes were chosen to provide a range of different types of instructional activities, including explanations of a pronunciation feature, providing

instructions on how students were to carry out a pronunciation activity, giving feedback on student performance, etc. Some lessons, however, only contained a few minutes of time devoted to pronunciation instruction.

While this process of preparing for the stimulated recall interviews was certainly time-consuming for the researcher, the participants are to be credited for attempting to work within this timeline as well. One participant, Abby, made a special trip to my home to participate in a stimulated recall interview instead of going to the department site where most interviews were conducted. The only time a stimulated recall interview was not conducted within the 48 hour window was the first one with Laura. In this case, the university was closed due to a snowstorm; thus, an interview originally scheduled for the Friday had to be postponed to the following Monday. Table 3.3 provides the dates for all the observations and interviews for the five participants.

In total, the teachers each participated in two, 45-minute, stimulated recall interviews, which involved the viewing of approximately 15-20 minutes of pronunciation-related segments from the video footage taken from two consecutively observed classes (namely observations 2 and 3 for the first interview, and observations 4 and 5 for the second interview). If the individual segments were short (e.g., less than one minute), I stopped the video and asked the instructor to provide comments at the end; however, when individual segments were longer in duration (as in situations where a 10-minute period might be devoted to pronunciation instruction), both the researcher and the interviewee would have the ability to stop the tape with the interviewee commenting on the event (or parts of the event). For each interview, participants were provided with lesson reports that identified where in the lesson a particular pronunciation-related episode took place in order to assist the participants in recall the event.

Table 3.3

Interview and Observation Schedule

	Tanya	Laura	Abby	Ginger	Vala
Interview 1	Sept. 3	Jan. 20	Aug. 28	Sept. 3	Jan. 20
Obs. 1	Sept. 30	Feb. 3	Sept. 11	Sept. 18	Jan. 25
Obs. 2	Oct. 2	Feb. 8	Sept. 14	Sept. 21	Jan. 27
Obs. 3	Oct. 5	Feb. 10	Sept. 16	Sept. 23	Jan. 29
S. Recall 1	Oct. 6	Feb. 15	Sept. 17	Sept. 24	Jan. 29
Obs. 4	Oct. 26	March 14	Oct. 14	Oct. 19	Feb. 19
Obs. 5	Oct. 28	March 17	Oct. 16	Oct. 21	Feb. 22
S. Recall 2	Oct. 29	March 19	Oct. 16	Oct. 23	Feb. 23
Interview 2	Nov. 5	April 2	Nov. 6	Nov. 3	March 19
(Obs. 6)		(April 26)			
Interview 3	Nov. 12	April 28	Nov. 24	Nov. 24	April 8

Note: All interviews and observations took place during the 2009-2010 academic year. Procedures conducted from August-November took place in 2009 whereas those from January-April took place in 2010.

To help participants understand what they needed to do in a stimulated recall interview, I provided them with a set of written instructions and gave them an opportunity to read the instructions and ask any questions about the protocol prior to the start of the interview. (See Appendix F for a copy of these instructions). In addition, I also asked certain guiding questions to assist the teachers in articulating their thought processes while watching a video. As per the guidelines provided in Gass and Mackey (2000), the following are examples of the questions that I asked: "*What were you thinking here/at this point/right then?; Can you tell me what you*

were thinking at that point?; I see you're laughing/looking confused/saying something there, what were you thinking then?" (p. 59).

3.2.2 Student data

The student data consisted of a brief questionnaire about students' beliefs about pronunciation learning and teaching. To date, the inclusion of data about student perceptions has only been collected by a small number of studies focused primarily on L2TC. Appendix G provides a survey of some of these studies. Questionnaires are one of the most widely used research methods to investigate phenomena in language teaching and learning due to a variety of factors. They are inexpensive and economical, requiring the least amount of resources in terms of time and money (J. D. Brown, 2001; Dörnyei, 2003; Gillham, 2000). The collected data is also quick to process, especially with the aid of computer technology (Borg, 2006; Dörnyei, 2003, 2007). Questionnaires can also provide substantial amounts of data (Dörnyei, 2003). Information can be elicited from diverse groups or cross-sections of people from one or more geographical areas (J. D. Brown, 2001; Gass & Mackey, 2007). Another advantage of questionnaires is that participants feel less pressure in answering questions immediately since they can fill out the questionnaire at their own pace (J. D. Brown, 2001; Gillham, 2000). They also offer participant anonymity and the standardization of items in a questionnaire can eliminate interviewer bias (Gillham, 2000).

Questionnaire research, however, also has several limitations. As with interviews, inadequate questionnaire design, such as vague or improper wording of questions can yield invalid or unreliable data (Dörnyei, 2007; Gillham, 2000). Inadequate or no piloting of the questionnaires is another potential weakness (Bartels, 2005; Wagner, 2010). Questionnaires administered without sufficient piloting are likely to result in unreliable or invalid data. Further

concerns with questionnaire research include: the superficiality of items because researchers need to make them as simplistic as possible to avoid misinterpretations (J. D. Brown, 2001; Dörnyei, 2003, 2007; Gillham, 2000); the veracity of responses in that participants may respond either dishonestly (Dörnyei, 2003) or in a way they believe to be socially preferable (Aiken, 1997; Wagner, 2010); or problems with participant motivation in that participants are not always willing to spend sufficient time to complete a questionnaire with a great deal of deliberation (Dörnyei, 2003).

Considering the number of potential weaknesses with questionnaire research, an alternative method would be to interview students in the teachers' classes, which has the potential of providing greater depth of insight into the students' beliefs or thought processes. The advantage of questionnaires is that they will typically be completed by a larger number of students. Students are more likely to complete a brief questionnaire for homework or as an in-class assignment than to participate in interviews with researchers outside of class time. Since the current project seeks to explore teachers' cognitions about their students as a class, using questionnaires appears to be the best choice for obtaining information about the class as a whole.

In the present study, the student questionnaire was designed based on the questions used in the second semi-structured interview with the teachers. This brief, mainly Likert-scale questionnaire was structured to elicit student feedback on their beliefs and observations about pronunciation instruction (see Appendix H for the questionnaire). Before distributing it to the students in the study, I piloted the questionnaire with a class of higher-level ESL students that I was teaching at the time. Based on results of the questionnaire, I made a few minor wording changes. Once the questionnaire was finalized and I received approval to use it from the Institutional Review Board (IRB), I contacted each of the teachers to schedule a time to

distribute the questionnaires to their students. With Ginger's class, I explained the purpose of the questionnaire, distributed it as a take-home assignment, and explained any potentially problematic items they might encounter. The other four teachers - Tanya, Laura, Abby and Vala - gave permission to administer the questionnaire as an in-class activity. With the lower level students in both the classes taught by Tanya and Laura, this approach appeared to be beneficial. Even though the questionnaire was designed for use with low-level students, a level with which I had extensive experience teaching, some students were confused about some of the items. In Tanya's (the lowest level) class, the first to receive the questionnaire of the five classes, students had difficulties understanding the following items: 1) *I like it when my teacher corrects our pronunciation as a group in class. (She does NOT focus on me individually)*; 2) *I want to speak English with a(n) _____ accent*; 3) *What percentage of time does your teacher spend on pronunciation in your class? ____%, and 4) How long have you studied English? _____years_____months*. After clarifying (or rather hopefully clarifying) these items with the students in this class, I made a point of explaining each of these questions with subsequent classes.

3.2.3 Summary of Data Collection Procedures

The teachers participated in three types of data collection processes over the course of one semester: three semi-structured interviews, five classroom observations, and two stimulated recall interviews. Figure 2 provides a general timeline for the procedures. The three semi-structured interviews took place at different points of the semester, roughly corresponding to the beginning, 3/4th through and the end of the semester. The purpose of the semi-structured interviews was to explore teachers' knowledge and beliefs about pronunciation and pronunciation pedagogy. The first set of three observations occurred in the first half of the

semester. The first observation allowed participants to become at least partially accustomed to the video camera. The fourth and fifth observations took place during the second half of the semester for most participants, and were also video-recorded. The stimulated recall interviews involved the participants viewing selected episodes from the recorded observations that showed some aspect of pronunciation teaching (i.e., giving explanations or feedback, teaching a technique, having students participate in a group activity, etc.) and then recounting her thoughts at the time the event took place. In the first stimulated recall interview, participants viewed episodes from the second and third observations and, in the second interviews, they viewed episodes from the fourth and fifth observations. These interviews helped to provide further insight into the teachers' rationale underlying some of the pronunciation related activities that they used or some of the explanations or instructions that they gave during their observed lessons. All of these interviews and observed classes were transcribed. Finally, students completed a questionnaire on issues related to pronunciation and pronunciation teaching.

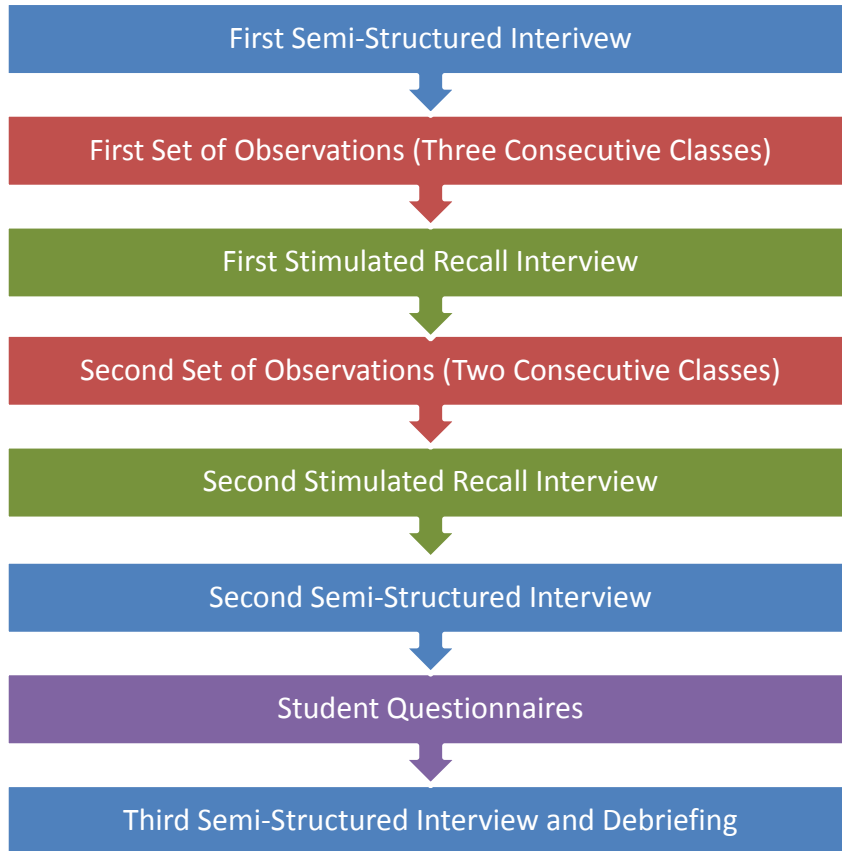


Figure 3.1 Research Timeline

3.3 Data analysis

The analysis of the qualitative data involved a three-stage process. These stages included: 1) transcription of interview and observation data, 2) data segmentation and coding of the interview data, and 3) data segmentation and coding of the observation data. The second and third stages were cyclical in that small portions of the transcripts were coded and the coding revised and/or further clarified before coding of subsequent portions of the transcripts occurred. For the transcription, segmentation and coding of the video and interview data, a qualitative analysis computer program called Transana (Woods & Fassnacht, 2009) was used. The final major source of data, the student questionnaires, was analyzed separately.

3.3.1 Coding

The majority of the data collected in this study is qualitative, and thus, the transcripts from the semi-structured interviews, classroom observations, and stimulated recall interviews as well as the open-ended items on the student questionnaire were all analyzed through mainly qualitative procedures. Cohen, Manion and Morrison (2007) describe this type of analysis as “[involving] organizing, accounting for and explaining the data; in short, making sense of data in terms of the participants’ definitions of the situation, noting patterns, themes, categories and regularities” (p. 461). In particular, thematic analysis will be the main type of qualitative analysis employed by the proposed project. Boyatziz (1998) describes thematic analysis as:

...the process for encoding qualitative information. The encoding requires an explicit “code.” This may be a list of themes; a complex model with themes, indicators, and qualifications that are causally related; or something in between these two forms. A theme is a pattern found in the information that at minimum describes and organizes the possible observations and at maximum interprets aspects of the phenomenon. A theme may be identified at the manifest level (directly observable in the information) or at the latent level (underlying the phenomenon). The themes may be initially generated inductively from the raw information or generated deductively from theory and prior research. The compilation or integration of a number of codes in a study is often called a *codebook* (p. 4).

Considerable research has been conducted into L2TC and, therefore, the research questions posed by the study, which are based on this large body of research, provided an excellent foundation for the creation of a start list of pre-conceived list codes for initial data analysis. By way of further explanation, this “start list of codes”, as Miles and Huberman (1994) note, “comes

from the conceptual framework, list of research questions, hypotheses, problem areas, and/or key variables that the researcher brings to the study” (p. 58), and can be used as a viable source for generating relevant codes. The use of a start list has been employed effectively in other studies of L2TC research (see, for example, Borg, 1998a; Borg, 1998b). The start list of codes employed in the present study were derived deductively from the research and theory discussed earlier in the literature, and in most cases were directly related to each of the research questions. (See Appendix I for the start list of codes.)

3.3.1.1 Coding of Interview Transcripts

The start list of codes was used in the initial analysis of the first two interview transcripts. During this analysis, however, the codes were further revised to better represent the data. Following this revision, I enlisted the aid of a graduate student in the department to serve as second coder. After coding 10% of the interview data (over two separate days), we reached an agreement of 78% prior to discussion of our different interpretations of the data. (According to Geisler (2004), achieving simple agreements even in the 60s is not unusual the first time datasets are coded.) After we discussed the difficulties he encountered in coding the data, the main problem appeared to be in determining the difference between knowledge and beliefs, a distinction that other researchers have also highlighted as problematic in the literature (Pajares, 1992). Based on this discussion, I collapsed the two broad categories of "beliefs" and "knowledge" into the single category of "cognitions". After making these revisions, I enlisted the aid of a third coder, another graduate student, to code the same 10% of the data. Using the revised list of codes, we reached a simple agreement of 92%. According to Geisler (2004) and Miles and Huberman (1994), achieving inter-coder agreements of 90% or higher is the desired goal. Thus, once this agreement of 92% was achieved, I coded the remainder of the interview

data. Appendix J contains a sample of the datasheet that I used with the third coder. In the datasheet, note that the "Coder 1" column is blacked out. Blacking out the column served the purpose of preventing the third coder from seeing codes that I originally assigned to the data. After the third coder finished coding the segmented data, I removed the black highlighting from the text, thus revealing my codes. Then I scanned the entire datasheet for disagreements. Table 3.4 provides the final version of the codebook used for the interview data.

Table 3.4

Codes for Interview Data

Cognitions (Beliefs, Knowledge, and Attitudes)		
Code	Abbreviation	Description: Cognitions "In relation to..."
Subject matter (content)	CSM	In relation to the English sound system. Also includes comments about confidence with subject matter or teaching subject matter, and about the value or importance of possessing knowledge about English pronunciation.
Pedagogical content	CPC	In relation to how to teach pronunciation using appropriate examples, explanations, illustrations, models, techniques, activities, and/or methods.
-- Approaches	CPC - APP	-- Includes a specific discussion of the approach(es) teachers use to teach pronunciation. (E.g., using an integrated or isolated approach or whether teaching pronunciation is planned or incidental.

-- Models	CPC - MOD	-- Includes a specific discussion of the different varieties of English or accents that the students are exposed to in class. Includes teachers' thoughts or beliefs about models used or not used in class. May also include discussion about how teachers explain or talk about different accents in class.
-- Activity	CPC - ACT	-- Includes a specific discussion of a particular activity or technique that the teacher uses.
--Assessment	CPC - AST	-- Includes ways in which teachers assess learners' pronunciation (formal or informal; needs, formative, etc.) as well as how they give feedback on learner pronunciation. May be discussed in relation to learning outcomes for the course.
Curriculum	CCU	In relation to curriculum at the course and/or at overall program level. Also includes discussion about any of the following: expected learning outcomes/objectives for a course; the focus of pronunciation within a course (i.e. taught within a content or non-content course); the elements of pronunciation taught in a particular course; the amount of time the teacher devotes to teaching

		pronunciation; how knowledge of the curriculum affects their teaching.
-- Materials	CCU - MAT	-- includes discussion of the materials and/or textbook that are used in the classroom. Includes descriptions of the course materials and/or textbook that the teacher uses with her students. Also includes the teachers' thoughts on the usefulness of these materials.
Learners	CLE	In relation to the needs, desires, motivations of specific groups of learners. Includes the specific pronunciation needs of a particular L1 group, and the difficulties they may have with English pronunciation. These beliefs or knowledge may be obtained either through a formal needs analysis with students and/or by observations of or conversations with students. (NOTE: if the teacher specifically refers to forming this knowledge in connection to teaching a particular L1 group in a <u>prior</u> semester, use code: DTEX-LE.)
-- Resulting from current study	CLE - CS	-- Specifically refers to teachers' responses to the results of the questionnaires completed by students as part of the current study.
Educational contexts	CEC	In relation to the overarching context of the Intensive English program (as opposed to other programs such

		as community ESL programs, public school ESL programs etc.) in an ESL environment (vs. EFL, etc.).
Attitude	CAT	In relation to teachers overall attitude toward teaching pronunciation or teaching in general. Includes discussions about how much teachers like or enjoy teaching pronunciation.
Development of Cognitions		
Code	Abbreviation	Description
Teaching Experience	DTEX	Past teaching experiences prior to the current semester. Includes discussion of timelines, locations, descriptions of feelings about teaching.
-- Learners	DTEX-LE	-- Includes a specific discussion of how <u>past</u> experiences with specific L1 learner groups has had an impact on current teaching practices.
Language Learning Experience	DLL	Mainly second language learning experiences in relation to pronunciation, but could include first language or bilingual experiences.
Teacher Training	DTT	Includes TESOL or TESOL-related education. (For example, TESOL certification, graduate coursework/degree, conference presentation or workshops attended.)

-- Future	DTT-FT	-- Includes discussion of what teachers believe they <u>will</u> do in terms of teacher training (or professional development) in the <u>future</u> .
Reflective Practices	DRP	Any type of reflective practice that teachers do on their own. This may include journaling, thoughts they have about the class on their way back to the office (after finishing teaching), etc.
-- Resulting from current study	DRP-CS	Any reflections that the teacher expresses about teaching in the future, which may have resulted from participating in the study. Includes responses to questions asked by the researcher about how the study may or may not have affected how the teacher might teach the same course in the future.
Knowledge sharing with colleagues	DCOL	Includes collaboration on classroom-based research projects and discussions about teaching pronunciation with another teacher.
Other academic education	DOAE	Includes other degrees/education not specifically related to TESOL.

3.3.1.2 Coding of Reported and Observed Practices

While the final version of the codes used for the interview transcripts remained relatively similar to the original start list of codes, the codes used for the observation data changed considerably almost immediately upon coding the first observation transcript. I had originally

designed the codes so that they could easily be linked to the "Cognitions" codes, which were based on Shulman's (1986, 1987) model of teacher knowledge. Using these original codes would have worked, but as I read and re-read that first observation transcript, I realized that the initial codes were too broad to give an adequate representation of what was essentially teachers' subject matter content knowledge and pedagogical content knowledge as demonstrated through observations of their pedagogical practice. The coding needed to be more carefully fine-tuned and specific. I then referred to the work of specialists in TESOL methodology and revised the codebook. This revised list of codes is based primarily on the work of Crookes and Chaudron (2001). These authors use the general term *activity* to describe the different parts of a lesson, although acknowledging that more recently terms such as "task" may be used to refer to less controlled activities that are associated with communicative approaches to teaching. However, for the sake of uniformity, the term activity is used in the revised codebook to describe all subsections of a lesson. In addition to using the units of a lesson identified in the work of Crookes and Chaudron, the codes were further revised based on the work of Brown (2007), Richard-Amato (2010) and Wajnryb (1992). To fine-tune the codes even further and to better represent the pronunciation-orientation of this study, the work of Celce-Murcia, Brinton, Goodwin and Griner (2010) was also consulted. The resulting codes presented in Table 3.5 are divided into five main categories: 1) Pronunciation-Oriented Activities: Controlled; 2) Pronunciation-Oriented Activities: Guided; 3) Pronunciation-Oriented Activities: Free; 4) Non Pronunciation Activities or Lesson Phases; and 5) Class Configuration. These revised codes were used for certain portions of the interview and questionnaire data as well. Segments of the interview data that were coded as CPC-ACT (Pedagogical Content Knowledge - Activities), referring to activities that the teachers reported as ones used in their OC class, were further coded

as one of the controlled, guided or free pronunciation-oriented activities in Table 3.5. Open-ended items on the questionnaire that asked students to mention pronunciation activities used by their teacher were also labeled using these codes. To check the reliability of these codes, my second coder examined 10% of the observation data, and we reached an agreement of 95%.

Table 3.5

Codes for Reported and Observed Practices

Pronunciation-Oriented Activities: Controlled			
#	Code	Abbreviation	Description
1	Plan and Purpose	PLAN	Teacher discusses one or more of the following: <ul style="list-style-type: none"> • agenda for the lesson • objectives or goals for the lesson or course
2	Listening Text Presentation	LTP	The teacher has students listen to a passage (poem, film clip, etc.) in order to familiarize them to the text before using the text in a pronunciation-oriented activity. May be used to build student awareness about a feature of English pronunciation.
3	Activity Set-Up	SET	As part of the preparation for an activity or for the next step in an activity, teacher may do one or more of the following: <ul style="list-style-type: none"> • give students instructions on how to do an activity (including homework at the end of class)

			<ul style="list-style-type: none"> • demonstrate or model the procedures involved in an activity (with or without student volunteers) • provide additional explanations in response to student questions about directions or after seeing that students do not understand or are having difficulties with the activity • ask students questions to verify their understanding of the directions for an activity • change seating arrangements for group activities
4	Explanations and Examples of Subject Matter	EX	<p>As part of the <u>current</u> lesson, teacher may do one or more of the following:</p> <ul style="list-style-type: none"> • provide explanations and/or examples for a particular feature(s) of English pronunciation • explain rules/guidelines for the use of these features • provide examples and/or explanations in response to student questions about subject matter.
5	Production Practice	P	Teacher has students practice reading a set of words, phrases or larger chunks of text. (Target pronunciation features are marked on the text or have been previously identified, thus eliminating the

			need for students to identify target feature before producing them).
6	Kinesthetic/Tactile Production Practice	KP	Teacher has students say a phrase or sentence (not repeating after the teacher) accompanied by a specific physical movement (i.e., clapping hands, stomping feet, snapping fingers, stretching a rubber band, etc.). The teacher usually uses a visual or text-based prompt during this activity.
7	Checking Activity	CHEK	<p>As a whole-class activity, the teacher gives feedback on student work (including homework) as an activity and not within another activity. The teacher may do one or more of the following:</p> <ul style="list-style-type: none"> • Have students reproduce their work from the previous activity and the teacher provides feedback on their performance. • Provides feedback based on what she heard/observed during a previous, completed activity. • Ask students to repeat the pronunciation of a word, phrase, etc.

8	Question-Answer Display Activity - Knowledge Verification	QAD-V	As a whole-class activity, teacher asks students knowledge-based questions to which she either already knows the answer or expects an answer from a limited set of possible answers; however, the purpose of these questions is to verify that students have understood the subject matter taught in either the current or a previous lesson.
9	Question-Answer Display Activity - Knowledge Exploration	QAD-E	As a whole-class activity, the teacher asks students knowledge-based questions to which she either already knows the answer or expects an answer from a limited set of possible answers; however, the purpose of these questions is to explore students' knowledge of subject matter prior to explanation of subject matter.
10	Repetition Drill Activity	REP	Teacher has students repeat, either chorally or individually, target form (e.g., sound or phrase)
11	Visual Identification Activity	VID	With the aid of a visual-prompt or text-based material, the teacher has students select and produce (or verbally label) a particular target form, feature, rule or other item related to the content of the lesson. (E.g., the teacher holds up a picture and students might identify a vowel sound associated with the picture). Students respond verbally.

12	Audio Identification Activity	AID	Teacher produces an utterance requiring students to make a choice based on what they hear (listening discrimination). Students respond verbally.
13	Repetition Drill - Audio Identification Activity	REP-AID	Teacher has students repeat a target form and then they identify a particular feature(s) in that target based on what they heard (i.e. number of syllables, placement of word stress). (Note: If a text is also used, the target pronunciation features are not marked on the text.)
14	Visual Recognition Activity	VRC	As with Visual Identification, teacher has students identify a particular target form; however, students do not respond verbally. Instead, they may respond using gestures or in writing (e.g., underlining the word that has focal stress in a sentence).
15	Audio Recognition Activity	ARC	As with Audio Identification, teacher produces an utterance requiring students to make a choice based on what they hear (listening discrimination); however, students do not respond verbally. They may response using gestures or in written form.
16	Review Activity	REV	Teacher reviews content learned in a <u>previous</u> lesson. As a part of the review activity, the teacher may: <ul style="list-style-type: none"> • provide explanations or examples (AEX)

			<ul style="list-style-type: none"> ask display questions (QUAD-V) use one or more specific activities to review subject matter (ALD, AIG, AVID, etc.)
17	Testing Activity	TEST	Teacher has students either do a formal test or quiz or discuss how she will assess an upcoming test or quiz.
Pronunciation-Oriented Activities: Guided			
18	Question-Answer Referential Activity	QAR	Teacher asks students knowledge-based questions to which she does not know the answer beforehand.
19	Production - Student Feedback Practice	P-SF	Teacher has students practice reading a set of words, phrases or larger chunks of text to each other and give feedback. Unlike P-AID or P-ARC, the listener does not need to make a choice or do something in response to what is said aside from providing correction on the speaker's pronunciation if necessary. (For the speaker in each pair, the target pronunciation features are marked on the text or have been previously identified, thus eliminating the need for speaker to identify target feature before producing them).

20	Production - Audio Identification Activity	P-AID	Teacher has a student(s) produce a target form while other students make a choice based on what they hear the first student say. This is a one-way, communication activity (Information gap). Students respond verbally.
21	Production - Audio Recognition Activity	P-ARC	Teacher has a student(s) produce a target form while other students make a choice based on what they hear the first student say. This is a one-way communication activity (Information gap). Students do not respond verbally.
22	Mutual Information Exchange Activity	MIE	Teacher has students exchange information with another student to accomplish a goal (i.e. in a group activity, finding a partner who has a word containing the same sound as the word she has). This is a two-way communication activity where both participants have information that the other needs to complete the task (Information gap). Both spoken production and listening discrimination are practiced by both participants.
23	Preparation	PREP	Teachers have students prepare for a major project such as presentation or dramatic work.

Pronunciation-Oriented Activities: Free			
24	Game	GAM	Teacher has students engage in a language activity that involves an objective, a set of rules and a degree of competition.
25	Drama	DRA	Teacher has students plan, practice and/or perform a play, skit or a piece from a movie or TV show.
26	Presentation	PRES	Teacher has students give an oral exposition or report on a topic prepared by the student.
27	Discussion	DISC	Teacher has students discuss or debate a specific topic in groups.
Non Pronunciation Activities or Lesson Phases			
101	Non-pronunciation-oriented Activity or Activity Set-up.	NON	Teacher has students participate in an activity where pronunciation does not have a focus.
102	Pronunciation-related moment within a non-pronunciation-oriented Activity.	NON-PR	Teacher has students participate in an activity where pronunciation is not the main focus, but an issue related to pronunciation may take place. For example, students may be working on the meanings of words and the teacher has the students repeat the pronunciation of a word; HOWEVER, if as part of this activity, the teacher frequently stresses the pronunciation of a target form, this activity is to be

			classified as one of the above pronunciation oriented activities (i.e. inductive learning).
103	Opening Phase	OPEN	<p>This phase includes the period of time from when the recording starts until the teacher signals that the lesson is beginning. This phase may include one or more of the following:</p> <ul style="list-style-type: none"> • Teacher chats with one or more students • Teacher greets the class • Teacher turns on audio/visual equipment • Teacher hands back homework • Teacher takes attendance • Announcements
104	Closing Phase	CLOSE	<p>This phase includes the period of time from when the last activity ends or from when homework has been explained to the class until the time the recording ends. This phase may include one or more of the following:</p> <ul style="list-style-type: none"> • Brief announcement about homework (i.e. pages in the textbook that the students have to read for next class). (Note: If the teacher has to explain how to do the homework, the explanation would fall under Activity Set-Up) • The teacher says good-bye to the class

			<ul style="list-style-type: none"> • The teacher answers questions from individual students who approach her after announcing the end of the lesson. • Students leaving the room.
105	Classroom management	CM	Teacher deals with an issue related to classroom management, especially in relation to discipline or dealing with other disruptions in class, but may also include managerial duties such as collecting materials at the end of an activity, having students move to different areas in the classroom.
Class Configuration			
111	Configuration: Whole Class	CFG-WC	Whole class activity
112	Configuration: Small Group	CFG-SG	Small group activity (minimum 3 students)
113	Configuration: Pair work	CFG-PW	Pair work activity
114	Configuration: Individual Work	CFG-IW	Individual student work where individuals work by themselves to complete an exercise or task (i.e. completing an exercise in a textbook or handout). Unlike ACFG-WC, students work on exercises at their own pace.

Note 1: Codes are adapted from primarily from the work of Crookes and Chaudron (2001), but also from Brown (2007), Richard-Amato (2010), Wajnryb (1992) and Celce-Murcia, Brinton, Goodwin and Griner (2010).

Note 2: In the coding of the video footage using the software program, Transana (Woods & Fassnacht, 2009), an "A" (representing "Actual Practices") is placed in front of each of the "Practices" codes above.

In addition to the qualitative analysis of the data, the observations and components of the interview and questionnaire data were also analyzed quantitatively. Using the coded data, calculations of the number and types of activities employed by the teachers were made based on both the reported and observed practices. The amount of time spent in pronunciation instruction was also calculated for each of the four observed classes by all teachers.

3.3.2 Analysis of Questionnaire Data

Unlike the interview and observation data, the questionnaire data was analyzed mainly quantitatively. Since most items on the questionnaire were Likert-scale items, the responses were summarized as percentages for each item for each of the five individual classes. For example, for item X in Class X, results could be: 10% strongly agree, 45% agree, 15% maybe, etc. Similar simple calculations were done for other items on the questionnaire. These summary results, including the results from the open-ended questions, were then presented to the teacher in the third semi-structured interview. These numbers were used to determine to what degree teachers' knowledge about students' thoughts about pronunciation instruction and learning reflected those of the students.

3.3.3 Transcripts and Member Checking

The process of transcribing the three semi-structured interviews, two stimulated recall interviews and four observations for each participant took place during the semester following data collection period. Thus, in the spring semester, the data from the first three participants was transcribed, and in the summer semester of 2010, the data from the remaining two participants

was transcribed. Later, I re-listened to each of the audio recordings and verified the accuracy of the transcripts.

As happened with Borg (1999a) during his dissertation work, I also was sidetracked at this point in my research. During the summer of 2010, I struggled with the pressures of knowing that I had to work on my dissertation, but I also knew that my quest to find a job would start in the fall, meaning that having publications on my curriculum vitae would be important. With these two dueling dilemmas in mind, I decided to pursue the publication path. In the end, this decision worked out successfully, at least in terms of producing three forthcoming publications (Baker, in press; Baker & Lee, in press; Baker & Murphy, in press), the third of which began as an earlier version of the literature review presented in this dissertation. Fortune aside, however, that decision also resulted in my falling behind on the schedule I had earlier established for my data analysis. By the time the transcripts were all completed, several months had passed from the time the interviews took place. In my original plan for my dissertation work, I had intended to send copies of the transcripts to the teacher-participants for the purpose of member checking, but the passage of time also meant that the probability that the participants would remember their thoughts at the time of the interviews would have lessened considerably. I was concerned that the time might have altered their perspective of the semester in which the research was conducted.

Nevertheless, member checking is an important component of qualitative research in order to ensure research validity. Member checking refers to obtaining feedback from participants about the interpretations we make based on the data collected (Casanave, 2010; Starfield, 2010). Instead of sending the transcripts to participants with a request to check them for accuracy and/or misinterpretations, I elected to send the participants one of the earliest drafts of my results chapter from the dissertation. For this purpose, I sent the entire results/discussion

chapter of the dissertation. By receiving the draft, participants could see first-hand how I had interpreted the data. I encouraged them to let me know if any misinterpretations were made or if anything that was written about them was unclear. All participants wrote back indicating that they read the chapter, and one participant, Ginger, provided a few additional comments to help clarify some of the points that I made in the chapter. Based on her feedback, I made a few non-substantive changes to the chapter.

3.4 Ethical Issues

One of the most important ethical issues to consider in any research endeavor is respect. As researchers, we need to respect the rights, the anonymity, and, perhaps more importantly, the feelings of our participants. Throughout the semester of research, I worked to build a collegial rapport with each of the five teachers. When conducting interviews, I checked and re-checked with participants to ensure that their emotional needs were being met, and that they felt that their participation was greatly valued. Although they are an integral part of a department in which observations by peers, practicum students, and supervisors are commonplace, being a key person of interest in a study has as certain intrinsic factor of uncertainty. While I made every attempt to be upfront and clear about the overall nature of the study and reassured them that the intention of the study was exploratory, and not evaluative, participants might still have felt as though they were being assessed in some way. At the same time, at least in the case of one teacher who expressed this desire, they might have wanted to receive feedback on their teaching. Throughout the study, I politely declined requests to provide feedback on their teaching, but I explained that I would give them a summary of my findings, which would include descriptions of observations of their teaching. By adopting this approach, I hoped to convey to the teachers that I respected and

appreciated their role both as teachers in a department that encourages professional development and as participants in a study investigating the dynamics between cognitions and practices.

On the more technical side of the research endeavor, the university in which the study took place has its own rules and regulations for ensuring that participants are protected. The Institutional Review Board (IRB) at the university carefully reviews research proposals and how informed consent is acquired from participants. In the current study, I prepared three informed consent forms for the participants. As the main participants in the study, the five teachers each signed an informed consent before beginning the study, agreeing to participate in audio-recorded interviews and video-taped observations (see Appendix K for a copy of the consent form).

The remaining two consent forms were signed by the students. The first one was to obtain permission to conduct the video-taped observations and the second was for the questionnaires (see Appendix L and M). I attempted to word the consent forms in such a way that would be understandable to the high-beginning students as well. As an experienced teacher of beginning level students, I knew that despite this wording, the consent form would still likely be difficult to understand for low level students and with a study involving students from nine L1 backgrounds, obtaining translations was not feasible. To compensate for the language barrier, I spent about 5-10 minutes (more time was spent with the lower level classes) explaining the content of the informed consent form. I made a point of telling students that, if they were uncomfortable with being video-taped, they could either tell me or sit at the back of the room. All students signed the consent forms, but one student was very uncomfortable with the idea of being video recorded. She let me know, and I made a point of never pointing the camera at her during the entire study. If the teacher walked over to the student during any of the lessons, I made sure that the camera only captured the teacher.

CHAPTER FOUR

RESULTS AND DISCUSSION

The study of teacher cognition is a complex undertaking involving an in-depth look at a vast array of dynamic and fluid relationships that change over time. This chapter begins by first exploring the earliest developments of the five teachers' knowledge of English pronunciation and the teaching of L2 pronunciation, and how this knowledge has surfaced in their current teaching of pronunciation to ESL learners. The second part of the chapter explores in greater depth several categories of teachers' cognitions as they relate to English pronunciation and instruction. Specifically, these categories include: attitudes toward teaching English pronunciation; cognitions about pronunciation; cognitions about how to teach pronunciation using particular approaches, models and activities; cognitions about how to assess pronunciation; cognitions about curriculum and materials; and cognitions about learners. The chapter ends by probing potential future developmental paths of these teachers based on their reflections as teachers of English pronunciation and on their own participation in the research endeavor.

4.1 Development of Teachers' Cognitions about Pronunciation Pedagogy

The exploration of the development of experienced teachers' cognitions requires an intricate combination of interviews and classroom observations. Unlike investigations into the cognitions of novice teachers where a given study can start during or immediately after the period of teacher training, and consequently end in the first semester or two of the novice teacher's career, thus taking advantage of direct observations of both learning and teaching contexts (Burns, 1992), investigations into the cognitions of experienced teachers typically must rely on the experienced teachers' self-reports of their learning experiences as teachers. Coupled with teacher education as a potential source of influence on teachers' current practices are other

sources of knowledge including L2 learning experience, teaching experience as either a novice or pre-service teacher, dialogue with colleagues and other forms of reflective practice. Using the teachers' self-reports as the foundation for discussion, this section examines how the five teachers' knowledge of L2 pronunciation pedagogy has developed over the course of their lives. The section's final part examines how this knowledge has culminated in their current practices, as evinced by classroom observation.

4.1.1 Prior L2 Learning Experiences

One of the first steps in trying to determine the source of the teachers' knowledge of pronunciation pedagogy involved asking the teachers to describe their most prominent memories pertaining to learning the pronunciation of a second language. The influence of prior language learning on teachers' cognitions and practices has been an issue of interest in other studies as well (Borg, 1999c; Eisenstein-Ebsworth & Schweers, 1997; Ellis, 2006).

Each of the five participants has experience learning at least one L2 as part of their secondary school and/or tertiary educations. Of the five participants, only one was bilingual, Abby, who grew up learning both English and Portuguese as a child. In the first part of the first interview, I asked the participants to describe their most memorable moments learning pronunciation in an L2. The instructors' responses were, for the most part, very similar. In every case, repetition drills were the primary, if not the only, pedagogical practices employed by their L2 teachers. Vala's experience learning Spanish as a second language seemed reflective of most of the other teachers' reported experiences. She noted,

I don't remember about junior high or high school. I don't ever really remember us articulating the language at all. But when I was in college, we just did a lot of drilling and repeating. [...] Then like many speakers, I found myself in Mexico having a huge

vocabulary list in my head that I had memorized and that I could say, but I wasn't very comprehensible. [...] Really all we did in that college class was just like repeat these vocabulary lists and grammar. [...] We would just repeat after the teacher.

For Vala as well as Tanya, the repetition of individual sounds and words was highly prevalent. For Abby, her only memories of pronunciation instruction consisted of some repetition of isolated words, but for the most part, mimicry of other Norwegian speakers outside of the classroom context appeared to be the most typical type of "instruction" she received, at least when learning Norwegian. She referred to her experience with Norwegian pronunciation as a process of "asking people, looking at their mouths and trying to produce it." She was living in Norway at the time. For another participant, Ginger, repetition practice included drills with both words and phrases. The only participant who differed was Laura who, as part of her bachelor's degree in Spanish, took a course in Spanish phonology, where she learned about the articulation of sounds using picture diagrams. Overall, the repetition of sounds, words and sometimes phrases represented the essence of learning pronunciation in an L2 for these five teachers.

Aside from this focus on repetition, the teachers had very little to add about their experience learning L2 pronunciation. The only exception was Ginger's experience as a language learner. This particular topic seemed to open a floodgate of memories, particularly several negative memories of learning French as a second language in college. She explained,

When I went to college, we had language labs with French teaching assistants, and so we'd get together in a booth in the language lab, and we would talk. And I remember thinking at the time, "Wow! My French is so bad. My accent is terrible!" and they'd be always correcting me and things. And then I went to France, my roommate was French, and I remember her telling me that my "French accent is terrible. You Americans speak

French so poorly." I was just really hurt by it. I didn't know, I guess, how bad it was, and so then I actually said something to her, "Yeah, but you know, when French people speak French, we think the accent sounds kinda cool" or something. And she's like, "Not American people speaking French." I was like wow! So, my level of self esteem was so low. It was just really low.

As is apparent by her admission of having low self-esteem in the above quotation, the learning of L2 pronunciation, at least in French, involved some emotionally rough experiences for Ginger.

4.1.2 Teacher Education

A second factor that is frequently discussed in the literature as having a strong influence on teachers' cognitions and practices is teacher training (Bigelow & Ranney, 2005; Borg, 1998b, 1999c; Burns & Knox, 2005; Farrell, 1999; Meijer, et al., 1999; Popko, 2005; Tercanlioglu, 2001). Later in the first interview, I asked teachers to describe their most prominent memories of pursuing a graduate degree in TESOL (or a TESOL related field). Specific training in pronunciation pedagogy differed among the five instructors. Altogether, they received MA degrees from three different institutions. Tanya, Laura and Abby earned an MA from institution A, Ginger from institution B and Vala from institution C. The graduate curriculum at institution A included a course that was entirely devoted to pronunciation pedagogy. Tanya took the course with instructor W while Laura and Abby took it with instructor X. At institution B, Ginger took a course on teaching listening and speaking which included an emphasis on pronunciation instruction. At both of these two institutions, the three graduate course instructors, all of whom are well-known specialists in pronunciation instruction, used Celce-Murcia, Brinton, and Goodwin's (1996) book in their respective courses. Instructor X also used Grant (2001). Vala,

unlike the other four IEP instructors, received little or no education in pronunciation pedagogy. The closest training she reported to receive was the small amount that was covered in a course on TESOL methodology. As far as she could remember, that course used Ur (1991), a general TESOL methodology book.

The recollections of the participants in terms of what was the most memorable component of this pronunciation-oriented course varied considerably even though three of the participants received their education from the same program. When asked what she remembered the most from her pronunciation pedagogy course, Tanya responded that the introduction of phonetic symbols and the production of individual sounds had the largest impact on her:

Definitely just like learning the phonetic symbols. That was completely new to me. I had never learned about that before. I remember being a little frustrated in the beginning because it was like God I have to memorize all of this. I haven't memorized anything in a couple of years. But once I had it, it was such a different way of looking at language. I really thought that was cool.

She also mentioned learning about intonation and rhythm. In Laura's situation, she attached more importance to classroom practices in general and how to design specific pronunciation-oriented activities for students. However, she also highlighted that the graduate course instructor placed a great deal of emphasis on suprasegmentals and also on the notion that "you can't pronounce a word that you can't hear," meaning that listening discrimination is more important than production in the beginning stages of language learning. She later listed a number of "gadgets" for teaching a variety of aspects of English pronunciation, especially for teaching suprasegmentals, such as using kazoos, Chinese finger puzzles and rubber bands (see Gilbert, 1994, for an explanation of how to use some of these gadgets). In the case of Abby, who also had

the same instructor as Laura, she best recalled the introduction of specific techniques for teaching word stress and rhythm; however, Abby also mentioned a video that her professor showed the class that, for her, was a powerful instructional device for demonstrating the importance of suprasegmentals in intelligible speech. She said:

[Instructor X] showed a video of a PhD student at [a different university] because [Instructor X] was hired to help with his pronunciation because he was a graduate assistant, TA, and no one could understand him. [Instructor X] played this video and I was struggling to hear him, to understand anything and nothing. And then [Instructor X] showed the after instruction, intervention video, and it was amazing the before and the after, and [Instructor X] kept emphasizing that it's more suprasegmentals that make the most difference, not so much the individual sounds, and so that really stuck.

The finding that Abby, Tanya and Laura, all graduates of the same pronunciation pedagogy course, each considered different aspects of their graduate course to be more memorable than other components is reflective of the findings of Popko (2005) that, despite similar graduate education in which participants perused the same textbooks, attended the same courses, and passed the same comprehensive exam, thus suggesting similar a similar exposure to knowledge about language, they differed greatly in teaching and applying that knowledge to the ESL classroom.

Unlike the other three participants, Ginger, who took a course on teaching listening/speaking, was only able to remember one, albeit major, component related to pronunciation pedagogy in that course. For her, she remembered a tutoring project where she had to analyze the speech of her student, identify three features of English pronunciation that he had the most difficulty with (done in consultation with course instructor Y), and work with the

student to improve his pronunciation in those three areas. In addition to this project, she also recalled learning how to do phonetic transcription. Finally, Vala's situation differed the most from the other four instructors. According to what she was able to recall, the Methods course only once had a focus on pronunciation instruction. In this course, which involved student microteaching, one of the groups taught a mini-lesson on Chinese pronunciation. Nothing else was devoted to teaching pronunciation as far as she was able to remember.

4.1.3 Teaching Experience

The next major factor that is frequently cited in the literature as having a significant impact on teachers' knowledge about language teaching is their experience as teachers (Borg, 1999c; Farrell, 1999; Gatbonton, 2008). All five instructors are experienced teachers of ESL, having taught for a minimum of six years. In addition, each instructor has prior experience teaching the specific OC course that served as the focus for the present study, thus through teaching the required content of this course, they have either learned about or enhanced their previous understanding of different elements of English pronunciation. Tanya had taught her high beginning OC course once before in a previous semester. During that semester, she closely followed the curriculum as presented in Grant's (2001) *Well Said Intro*, which included teaching about the following features: syllables, word endings, consonants, vowels, word stress, rhythm, intonation, and connected speech. She covered a lot of conceptual ground with her students. In Laura's low intermediate OC course, which she also had taught once before in a previous semester, she presented and practiced several features, including vowels, consonants, syllables, word endings, and word stress. Unlike Tanya and Laura, Abby has taught the intermediate course six or seven different times. Syllables, rhythm, vowels and word stress were the four main features of pronunciation taught in this course. Ginger has taught the intermediate level course

three times and Vala has taught the high intermediate course four times. All of the features of pronunciation listed in each of the courses above are required elements of the IEP program, either as outlined in the program-designed course syllabi or as components addressed in the required course textbooks. For some of the teachers, they only learned about some features of English pronunciation as a result of teaching the course and following the curriculum. For example, during her first stimulated recall interview, Ginger explained that learning the concept of placing stress on action words in sentences was "new" to her when she starting teaching this intermediate OC class. In many respects, the five teachers' current cognitions about English pronunciation and how to teach it have developed, in part, based on their knowledge of the IEP curriculum.

4.1.4 Reflective Practices, Knowledge Sharing, and Collaboration

A final factor to consider that is related to teaching experience is time spent in reflection. Reflection on practice can be a powerful factor in the professional development of teachers. Richards and Lockhart (1996, p. 202) explain,

The process of reflecting upon one's own practice is viewed as an essential component in developing knowledge and theories of teaching, and is hence a key element in one's professional development. This process is one which continues throughout a teacher's career. Formal programs of teacher education represent only an initial, though essential, first phase in teacher development.

Reflective practice can take form in many different ways. Richards and Lockhart list teaching journals, lesson reports, surveys/questionnaires, audio and video recordings, observations, and action research as ways in which reflective practice, and consequently teacher learning, may take place. Collaborative peer dialogues (F. Bailey, 1996), conversations with a supervisor (K. M.

Bailey, 2006) and even time spent in self-reflection while sitting on a bus on the way home from work (Murphy, 2001a) are additional forms of reflective learning. And the list goes on (see Murphy, 2001a, for further discussion). In investigations of L2TC, the impact of personal time spent in reflection (Meijer, et al., 1999) and collaboration/knowledge sharing with other teachers on teachers' cognitions and/or practices (Sengupta & Xiao, 2002) has been investigated.

In the present study, the type of reflective practices and the amount of time spent on reflecting about their teaching varied considerably among the five teachers. For Vala, Tanya and Laura, most of their reflection on practice happened informally, involving reflection on practice during class time, on the way back to office or during lesson preparations, not all that dissimilar from Murphy's (2001a) reflection about teaching returning home after work. Laura said,

I would have these students give presentations and I would sit there and think I cannot understand a single word that you just said in that presentation. You know like...how can I make this more useful to everyone involved? So just trying to think about that more. And thinking about the pronunciation issue? I mean that's what it was. And really forcing them to stick to one minute presentations so they had a short amount of time to worry about and then really making it much more controlled as far as here are five vocabulary words I want to really focus on in my one minute presentation and going over the pronunciation of those. You know...reflecting on how things weren't going well really did help me make things go well in that class better.

In addition, Tanya mentioned she liked to "take advantage of practicum students", confessing that "that's really the only time [she] does that", but then she also remembered that she might reflect through conversation with colleagues. In the case of Vala, although she admitted to not setting aside time for reflection, she reported that it was an essential part of her lesson planning,

saying "I think you can't get better unless you think about what you did that worked and didn't work and why. It's important." Finally, on a more formal side of reflective practices, Laura also described her use of writing comments at the bottom of her electronic lesson plans after teaching a given lesson. Although she was not engaged in this particular form of reflective practice during the semester of the study, she stated that she found the practice helpful in her teaching. In reference to one low intermediate class she had taught in a previous semester, Laura explained,

I was having trouble with the high level speakers and the low level speakers. [And] I was doing a journaling activity at the time and it was very helpful for me to just journal through the frustrations that I was feeling as far as trying to figure out what to do with these students.

In comparison with the reflective practices of the other three teachers, Abby's and Ginger's took on a more time-intensive part of their daily teaching schedules, involving a combination of peer debriefing and collaborative classroom-based research. Referring to the time when she taught the intermediate OC course for the first time, Ginger said, "I went out of my way to bug Abby. Abby, what's this? What's that? Why? Why do you use the kazoo? We were very collaborative." She further explained that "debriefing" with Abby after class helped her in teaching the OC class. Ginger explained:

We talked all the time. And it's like oh, this happened. What would you do? What's going on? And she would say, oh you know this person, this happened, whatever, what should I do? And, so that to me was just kind of that ideal collaboration they always talk about. I know we talked a little about it in our teacher education class too. What a meaningful relationship that was for me and it was kind of like the apprentice approach too that she'd taught it and she had this experience, and she took [the pronunciation pedagogy course]

with [Instructor Y]. And "Instructor Y said this or that or like well, I remember in the class." So I was like sucking up her knowledge and expertise. We got together every Friday that first semester and we talked about what we'd done and what we'd do the next week, and it was a really fun time for me, and I hope for Abby too. It was kind of like validating the concerns that we had because there are concerns when you're teaching pronunciation. It's like is this giving the students what they need? How should I be addressing this? It was very helpful.

Both Ginger and Abby highlighted how beneficial their collaboration was during the interviews. In addition to their debriefing, part of their reflection on practice also revolved around a project that both Abby and Ginger collaborated on in an earlier semester. This project originated as a problem that Abby was experiencing in trying to understand learners from one particular language background. She explained:

It was a language background I hadn't worked with before. And I thought, "Whoa! Is it just me? Is it just me? Like whoa, am I just having a hard time understanding?" And to me, I've had so many different experiences with so many different language backgrounds that it struck me as more challenging than any other background. And I just thought, it must just like be my own experience. I've never been exposed to this variety. But then it became that everybody was talking about it. All people, they'd be like you know my Vietnamese students? Oh yeah, the Vietnamese. And it was just like what is it? I didn't know.

Abby later figured out that the difficulties with intelligibility resulted, at least in part, from the deletion of word endings and additional problems with consonant clusters. In reference to her first semester teaching this group of L1 students, Abby said:

First time I taught the group was spring 2007, so I'd taught it already two-three semesters, and they were just...they baffled me...I didn't know what to do and they're getting frustrated and I was getting frustrated ... I couldn't get them to say *street* or *democracy*. It would be *democrase* or something...completely you couldn't understand.

Then, once Ginger started teaching the same OC course, Abby approached her and told her of the difficulties she had been experiencing with this group of Vietnamese learners of English.

Together, they worked together with another professor in the department to devise a way to improve the intelligibility of these students using computer software. In the end, they continued to work on this project until, ultimately, they presented their findings at an international conference. Table 4.1 summarizes all of the factors that have contributed to teachers' cognitions about pronunciation pedagogy up until this point in the discussion.

Table 4.1

Factors contributing to teachers' knowledge base of pronunciation pedagogy

	Tanya	Laura	Abby	Ginger	Vala
Language learning experience	French; Spanish	Spanish, Latin	Bilingual (English & Port); Norwegian	French, Spanish, Japanese, Turkish	Spanish
--Most memorable component related to pronunciation	Repetition: sounds/words	Spanish phonology course (sound formation)	Repetition: Words	Repetition: Words and Phrases	Repetition Words and Sounds
MA course that focused the most on pronunciation pedagogy	Pronunciation	Pronunciation	Pronunciation	Listening/Speaking	Methods
--Textbook	Celce-Murcia et al. (1996); Grant (2001)	Celce-Murcia et al. (1996)	Celce-Murcia et al. (1996)	Celce-Murcia et al. (1996)	possibly Ur (1991)
--Most Memorable Component	Phonetic symbols/ individual sounds	Classroom practices – design activities for students	Techniques: Word stress & Rhythm	Analyzing learner language (tutoring)	Listen to Group micro-teaching (Chinese)
--Instructor	W	X	X	Y	Z
Current OC course	High Beginning	Low Intermediate	Intermediate	Intermediate	High Intermediate
--Times Taught	1	1	6-7	3	4
--Features Taught in this Course	Syllables, word endings, consonants, vowels, word stress, rhythm, intonation, connected speech	Vowels, consonants, syllables, word endings, word stress	Syllables, rhythm, vowels, word stress	Syllables, rhythm, vowels, word stress	Syllables, word stress, word endings
Reflective Practices	Informally, during classroom preparation or dialoguing with colleagues or practicum students	Informally, while teaching; in past semesters, journaling on lesson plans	Self-reflection on way back to office; Debriefing with Ginger; Project Collaboration	Debriefing with Abby; Project Collaboration	Informally, during lesson preparation

4.1.5 Strongest Influence on Current Practice

Tracing the development of the teachers' cognitions based solely on data collected from interviews is a relatively easy process (as demonstrated above). Despite its ease, this process is nevertheless a crucial first step in trying to determine what teachers know and believe about their own development as teachers. How all of those cognitions finally transform into classroom practice – the place where students actually interact with teachers' cognitions – requires greater investigation than self-reports alone can reveal. Therefore, this next section builds on the foundation established in the previous section on the development of teachers' knowledge about pronunciation pedagogy, by focusing on one specific question that was asked in the interviews:

What has had the greatest influence on how you teach pronunciation? To give greater depth, and potentially more insight, into the participants' responses, this next section examines not only the teachers' responses to this question but also the teachers' pedagogical practices as witnessed during the classroom observations. We will look at each participant in turn.

4.1.5.1 Tanya

According to Tanya, the factors that have had the greatest influence on how she teaches pronunciation today are her graduate education, her experience of learning through “trial and error” as a pre-service and novice teacher, and “having a good textbook to follow”. Each of these final two factors that she identified can be directly linked to her graduate education. As part of her pronunciation pedagogy course and during her MA practicum placement, she used Linda Grant's (2001) *Well Said*; thus, she received a “double dose” of sorts of the material covered in this one ESL textbook.

Her current classroom practice in many ways reflects this feature of her graduate education. The combination of learning about English pronunciation and pronunciation pedagogy and applying this knowledge directly (while using the same textbook) in the classroom has had a noticeable impact on her classroom activities and explanations. The observations revealed that the teacher regularly uses Linda Grant's (2007) book (in this case, the high-beginning class uses the Introduction version). Many of the explanations that Tanya gives about rules or guidelines related to elements of pronunciation come from the *Well Said* text as do the majority of activities that she uses in the classroom. She explained that she “really like[s]” the activities in the book and that the book is “the basic standard”. Considering her experience as a graduate student, her attachment to this required course book is unsurprising. Using the textbook,

however, does not represent the entirety of her lessons. She also occasionally supplements materials or techniques that she acquired in her graduate course in pronunciation pedagogy.

4.1.5.2 Laura

Also having received her education at the same institution as Tanya, but with a different instructor, Laura identified her graduate education as having the greatest impact on how she teaches pronunciation in her low-intermediate OC course. She noted that:

I think if I wouldn't have had that [pronunciation pedagogy] course, I think I would feel very uncomfortable teaching pronunciation. So I think that's probably had the most effect as far as me actually teaching pronunciation and how I teach it. I sort of once in a while learn something works out in my class that makes me figure out like "Oh, probably it would be more helpful if I did this or ...", so that affects it. And I think I can't even imagine teaching pronunciation without having a pronunciation-focused course in my MA.

My observations of her lessons corroborated Laura's belief that her graduated education played a key role in how she taught pronunciation to her student. During these observations, Laura used several techniques that she mentioned having learned as part of her pronunciation pedagogy course. One of these included stretching a rubber band when saying the stressed part of a word (to demonstrate word stress). She also supplemented her lessons with exercises from a pronunciation textbook.

4.1.5.3 Abby

Similar to the previous two teachers, Abby also considered her graduate education to have the most influence in her teaching of English pronunciation. She stated, "I think the biggest

influence is [Instructor Y], and that is where I get most of my ideas, knowledge.” She further explained that learning that there are rules for stress in English was “quite eye-opening.” The observed classes reflected her previous training. Many of the techniques that she reported learning in the MA course surfaced in the observed classes. These techniques included, but were not limited to, Acton’s syllablettes for teaching word stress, rubber bands for also teaching word stress, and an activity called “Lions, tigers and bears, oh my!” for teaching rhythm.

4.1.5.4 Ginger

Unlike the previous three participants, Ginger considered her experience of learning multiple foreign languages as having the greatest influence on her pronunciation teaching. In particular, she discussed the importance of not singling students out in class, especially when working on pronunciation. Avoiding putting students in situations where they might feel embarrassed was a principle that she highlighted as having priority in her classes. When asked how her experience as an L2 learner has affected her teaching of ESL pronunciation, she responded that:

I think just my negative experiences with learning French made me realize it is personal...I mean it can hurt the students' motivation and confidence and all that stuff if I continually say, "No, that's wrong. Repeat. No. Wrong." So I try to find different ways that I can give feedback...or maybe I feel I give feedback in gentler way or something [...]
I try not to make people feel embarrassed in front of the class.

Furthermore, she reported remembering only a limited amount from her graduate coursework. As mentioned earlier, her main memory of that course centered on the tutoring project she did. She explained that the focus of the MA course was on listening and speaking, so less time was devoted to pronunciation. In addition, she furthered identified collaboration with

Abby as having an impact on how she teaches. As mentioned earlier, Abby and Ginger spent a lot of time debriefing about their respective intermediate-level OC classes and well as collaborating on a research project together.

Ginger's observed practice mirrored her discussion of what has had the greatest impact on her pronunciation teaching. Observations showed the impact that her earlier language learning experiences had on her teaching: she rarely singled out students in front of the class to give them feedback on their pronunciation. However, while Ginger emphasized the impact of her experiences as a second language learner when asked what had the greatest influence on her teaching, what seemed to have an even greater impact was her collaboration with Abby. As I observed both Abby and Ginger teach pronunciation, many of the activities I saw in Abby's classes, ones that Abby had pinpointed as activities or techniques she had learned in her graduate course on pronunciation pedagogy, also appeared in Ginger's lessons. In fact, several of these techniques Ginger mentioned as having learned from Abby. Thus, in many ways, the graduate education received by Abby also benefited Ginger's teaching of L2 pronunciation. Ginger's collaboration with Abby has had considerable influence on how Ginger teaches pronunciation to her students.

4.1.5.5 Vala

The development of Vala's knowledge of pronunciation pedagogy is considerably different from the other instructors. When asked about what has had the most influence on her teaching of pronunciation, she responded with "I don't know. That's hard to say. I think all of that experience of "just winging it" taught me a lot [...] All of those crazy experiences I've had of playing teacher without any guidance were pretty influential." In this quote, she is referring, at least in part, to her experience as an MA student trying to complete an unsupervised practicum

that she did in a volunteer ESL program. Without any training in how to teach pronunciation and having no guidance from a practicum supervisor, she felt as though she had to learn everything on her own. Later, however, in her first semester of teaching after finishing her MA, she learned more about English pronunciation from a pronunciation textbook she used in that course.

During the observations, Vala showed a strong dependence on the course textbook, a book which was not devoted to pronunciation, but rather to oral communication skills in general. For the most part, she adhered to the limited number of activities in that book; however, she made the activities more interactive. She had the students work in groups and she encouraged them to use each other as models and teachers of pronunciation, explaining to them that she “will not always be [their] teacher”, thus they needed to become more independent in making themselves understood to other speakers of English.

4.1.5.6 All instructors

An additional point to mention is that prior L2 learning experience still played a larger role than indicated in most of the teachers' self-reports of their current practice. Observations revealed that prior L2 learning experience also had a noticeable part in their classroom practices. Specifically, the observations demonstrated one type of pronunciation activity, employed by all but one teacher, could be traced back to their individual experiences as L2 learners. During the interviews, they all identified repetition work as the most memorable activity, or the only activity, that they recalled of learning L2 pronunciation. The role of repetition work was equally evident in most of the observed OC courses. These general results reflect in part the findings of Ellis (2006) although Ellis's study focused more on teachers' self-reports of how they believed their experiences as L2 learners influenced their teaching practice, rather than examining their actual practices. The one exception to the use of repetition drills in the observed classes was the

case of Abby. Although Abby reported using repetition drills a great deal in her classes, I never observed their use. Instead, what I observed was the use of visual identification and audio recognition techniques (refer to Table 3.5 for a description of these techniques). Abby's use of audio recognition techniques (listening discrimination activities in which students do not verbalize a response) can be linked to her graduate coursework. One audio recognition technique that she used in class, which required students to indicate through the use of gestures whether the teacher, or another student, was saying either "Don't sleep on the floor" or "Don't slip on the floor", can be found in the textbook used in her pronunciation pedagogy course (Celce-Murcia, et al., 1996, p. 119).

4.1.5.7 Summary

The stories described above show that graduate education, collaboration with colleagues, textbooks, teaching experience (including knowledge of the IEP curriculum) and prior L2 learning have had an impact on the five teachers to varying degrees. For Tanya, Laura and Abby, the interviews and observations revealed that graduate education had the strongest influence on how they taught pronunciation to ESL learners, whereas for Ginger, who had less training, and for Vala, who had no training, formal education seemed to play a minimal role, if at all. These results are similar to the findings of Borg (1998b) who also found that teacher training seemed to override one teacher-participant's prior beliefs about teaching grammar. In the present study, for teachers with limited or no teacher training in pronunciation pedagogy, the textbook or collaboration with a colleague highly impacted their classroom teaching. Ginger learned more from working with a colleague both on course-related issues as well as on a research project than she seemed to have learned from her graduate program, at least in terms of teaching English pronunciation. In other research (Sengupta & Xiao, 2002), this notion of knowledge sharing has

also been found to aid teachers in reflecting on their teaching and in learning from their teaching experiences. In the case of Vala, she appeared to learn how to teach pronunciation mainly from ESL textbooks and from teaching experience. Finally, all teachers, either as evinced through observed practices or the teachers' self-reports, drew on their past experiences as L2 language learners by using repetition drills as a technique for teaching English pronunciation.

4.2 Teachers' Cognitions and Pronunciation Pedagogy

Having examined the development of the teachers' cognitions and how some of these cognitions are represented in their current teaching practices, this section provides a more in-depth look into specific categories of the teachers' cognitions. These categories are derived from Shulman's (1986, 1987) model of teacher knowledge, but they have been adapted to include both beliefs and knowledge, and thus re-named as cognitions instead of only knowledge. In addition, only those cognitions that may specifically relate to some aspect of pronunciation or pronunciation teaching are examined here. To this network of cognitions, one further category has been added, namely attitudes, as our emotions can strongly affect how we teach (Zembylas, 2005); thus our attitude toward teaching pronunciation, or other skill areas, can have an effect on other categories of teachers' cognitions. In all, the categories of teachers' cognitions that are examined in this section include: attitudes toward teaching English pronunciation; cognitions about pronunciation; cognitions about how to teach pronunciation; cognitions about curriculum and materials; and cognitions about learners.

4.2.1 Attitude Toward Teaching ESL Pronunciation

One area of interest in examining teachers' attitudes is their passion for teaching pronunciation. To gain an overall sense of how the teachers felt about teaching pronunciation, I asked them "*How much do you like teaching pronunciation?*" Table 4.2 provides their responses.

Table 4.2

Passion for Teaching Pronunciation

Participant	Comments
Tanya:	I like it. Yeah. How much? I certainly don't dislike it. I kind of just do it. If I don't get it one semester, I'm certainly not upset. But I enjoy it
Laura:	I like it. I like to teach pronunciation. Like I said, it goes very well with the students usually. They sort of latch on to it.
Abby:	I feel like it's my niche. [...] I really like it. We get into it.
Ginger:	I love it. I do. Yeah, I do. I think that it's...well, first of all, there's something that's just fun about it for me. [...]I feel like it's fun. It's like the most fun aspect of the course. [...]And it allows for creativity and fun in teaching it. I enjoy it a lot.
Vala:	I like it. I think because I let myself become a little silly when we're talking about articulation. The students see a different side of me and then they relax and do what they think is wrong and silly."

As is normal with any group of teachers, the teachers differed to a certain extent in their feelings toward teaching pronunciation. Based on their claims, Abby and Ginger appear passionate about teaching this specific skill area, with Abby considering it to be her "niche" and Ginger reporting that "love[s] it". Taking into account the amount of time these two instructors have spent in reflection on their teaching of the intermediate-level OC course and the effort they put into conducting their own research project in this course, their enthusiasm for teaching pronunciation is to be expected. For the other three participants, they also describe their feelings toward teaching pronunciation as something they "like" to do, particularly for Vala and Laura who believe their students seem to enjoy it as well. Of the five, Tanya does not appear to be as invested in this skill area as she candidly admits that she is "not upset" if she does not get the opportunity to teach pronunciation in a given semester.

4.2.2 Cognitions about English Pronunciation

One of the areas of Shulman's (1986, 1987) model of teacher knowledge that has particular importance in a study of teachers' cognitions about teaching pronunciation is subject

matter content knowledge. Subject matter content knowledge is one of the cornerstones of the knowledge base of language teachers as it pertains to the knowledge that L2 teachers have about language. In the case of the current study, knowledge about language, specifically knowledge about the English phonological system, is a basic skill area that comprises a part of the teachers' knowledge base. Thus, the question "what do teachers know about features of English pronunciation?" has certain relevance here. With that being said, however, testing teachers' knowledge about the structural elements of English pronunciation was not a part of the current study; thus no claims will be made concerning the relative completeness of teachers' knowledge about different features of pronunciation. Without extensive testing of teachers' knowledge of the English phonological system and all the rules and guidelines associated with it, an approach used in others studies of teachers' declarative knowledge about language structure (e.g., Andrews & McNeil, 2005; Hislam & Cajkler, 2005), such knowledge cannot be thoroughly explored. As the purpose of the present study was not to gain a detailed picture of the full extent of teachers' declarative knowledge about English pronunciation, but rather to examine certain aspects of this knowledge as it relates to classroom practice, tests were not employed in the study. Instead, understanding the connection between teachers' knowledge, beliefs and practices as they relate to the subject of English pronunciation has a more central role here. Therefore, in looking at teachers' cognitions related to pronunciation, teachers' knowledge about pronunciation as well as their thoughts and beliefs in relation to that aspect of the English language are all key elements to explore. Essentially, what do teachers know about the features of English pronunciation? What do teachers believe about possessing knowledge about English pronunciation? How much confidence do teachers have in this knowledge? This is a skill area in which some teachers,

perhaps even many teachers, experience a great deal of anxiety when teaching (S. Macdonald, 2002).

To begin, this section explores the topic of teachers' confidence in teaching pronunciation. This topic, however, does not fall neatly into any one category of teachers' cognitions since their confidence levels in teaching this subject matter are influenced by a combination of different factors, including their developments as English language teachers (as discussed earlier in this chapter). At the same time, when discussing their confidence in teaching English pronunciation, their answers relate not only to their knowledge of the English pronunciation system (subject matter content knowledge), but also to how to teach it (pedagogical content knowledge). Despite these difficulties with placing discussions about teacher confidence, I have chosen to discuss the topic here because confidence is a major theme throughout this discussion of teachers' cognitions about pronunciation. Based on this line of reasoning, I start by developing a general picture of the teachers' confidence levels. I asked each of the teachers: *How confident are you in teaching pronunciation?* Their responses are presented in Table 4.3.

Table 4.3

Confidence in Teaching Pronunciation

Participant	Confidence in teaching pronunciation
Tanya:	"Some days I feel more confident than others. Probably has more to do with my personal feelings versus my ability to teach pronunciation...But generally, especially if I've taught the class before, I feel pretty certain I can answer any questions that come up or figure out the answer, make up an answer to a question."
Laura:	"I think I am confident, fairly confident teaching it, maybe 7 out of 10, 7 or 8 out of 10, but sometimes I worry what are the students getting out of this. I am not sure I guess that my instruction is really making a difference down the line."
Abby:	"Teaching level 3 yes. And actually I think if I were to go down now, if I were to go down to level 2 or level 1, after this project, you know, we were really working on segmentals [in reference to her research project with Ginger] yeah. Yeah, now I feel like I could handle level one and level two." <ul style="list-style-type: none"> • Amanda: "That project really helped you along there?" • Abby: "Yeah, yeah, it did."
Ginger:	"I'm much more confident now. If you asked me spring of 2008, I would have been like I'm just a disaster...But now that I've done it a few times and I know the subject matter of the course really well, I guess I should say in the context of my course, I feel really confident [...] but I don't know if I would go so far as to say, yeah, I feel like I'm a pretty good pronunciation teacher period."
Vala:	"I don't have enough experience. I feel that I could be better at it. I would be better at it if we had a pronunciation class, because I'd get the experience. But then, the classes that we teach don't really incorporate that much, so outside of the stuff that gets covered in our classes and like extemporaneous stuff that happens, I don't feel so confident with it. I don't feel that I was exposed enough to it, to how to teach it different ways and have to get them to practice it different ways. Beyond what I do, not so confident. New territory, a little scary!"

The thoughts expressed by each of the participants indicate that graduate training in pronunciation pedagogy and experience teaching a specific course appear to have had a direct impact on their confidence in teaching pronunciation and understanding particular features of pronunciation. The four teachers with graduate training in pronunciation pedagogy all expressed having confidence in teaching pronunciation, at least in the OC course in which they have experience teaching. For Vala, however, the story is different. Even though she has taught the

course four times in the past, she remains insecure in her teaching of pronunciation. Beyond the few techniques that she has learned for teaching pronunciation features in her course, she keenly feels the gaps in her knowledge base as a result of her lack of training. At least three times during the two stimulated recall interviews, Vala expressed concern over her lack of "qualifications" in helping students to improve their pronunciation. At one point while watching herself interact with a small group of learners, she admitted her inability to understand one of the students. Not able to handle the situation at the time, she confessed that her reaction was to flee from the situation. She explained, "Yeah, he's really hard for me to understand, and when there's all these other people talking, it's even harder. So I'm like, 'Ahh! Run away! Deal with him later!'" These words are reminiscent of those of Fraser (2000) who, based on a combination of relevant literature on the subject and informal interviews with teachers in Australia, found that "widespread lack of confidence among teachers regarding pronunciation teaching [meant] it [was] often avoided" (p. 12). Furthermore, Borg (2001), in his study of the impact of teachers' perceptions about their knowledge of subject matter on their classroom practices and decision-making, determined that confidence can affect six elements of grammar teaching:

the extent to which teachers teach grammar; their willingness to engage in spontaneous grammar work; the manner in which they respond to students' questions about grammar; the extent to which they promote class discussion about grammar; the way they react when their explanations are questioned; the nature of the grammatical information they provide to students (p. 27).

Unlike grammar teaching, with pronunciation, the issue of learner intelligibility coupled with insufficient knowledge of how to diagnose, let alone address, problematic pronunciation can be especially stressful for teachers, as was shown in the case of Vala.

In addition, although Vala's concern over her qualifications in addressing pronunciation issues was very apparent, at least in the interviews, she was not alone in her insecurity. As was also found in Baker (in press), even the teachers with training in pronunciation pedagogy were uncertain in their ability to teach new features of pronunciation not covered in their courses. During her second stimulated recall interview, Abby admitted to getting "a little panicky" in class when they start to discuss phonics and rules for spelling. She said:

I'm thinking, "Ok, I'm going to tell them this but what is the exception? I know there's going to be an exception right off the bat. So, it's always for me, when it comes to spelling, it gets to be a little panicky. [...] There are so many variations.

Unlike the findings of MacDonald (2002), however, neither the observations nor the interviews indicated that the teachers were at all reluctant to teach pronunciation. In fact, Vala expressed a desire to teach a course dedicated to pronunciation in the future in order to expand her knowledge base of pronunciation pedagogy.

One of the next questions I asked the participants was whether they considered knowledge about English phonetics/phonology important in teaching pronunciation to their ESL students. All of the teachers indicated that they all believed this knowledge to be important.

Laura stated:

I think it is pretty important. I feel I rely on that information. I forget a lot of the terminology but...it makes me feel like I know what I am talking about [...]. I think I would feel very insecure if I didn't have that background.

As with Laura, Vala's response also seemed to mirror a similar placement of importance on having knowledge about English pronunciation:

I think a little bit of knowledge for the teacher, or a lot really, can help. I think the more we know about how it really works, the better we can answer our students' questions when they're struggling with something. The better we can give them a reason for why it is the way it is. I think it's important.

In her response to the question, Tanya seemed to highlight, even more so, the value of possessing knowledge about English pronunciation. She posited,

Without a doubt, I think it's VERY important to have knowledge about phonetics to teach pronunciation. Without this knowledge, I feel like there would be a lot of gaps in what is possible to explain to the students. It would also be difficult to break down the information into digestible parts to explain to the students. I would also feel unprepared as a teacher in an oral comm. or pronunciation class without this knowledge.

In Abby's response, she emphasized how essential her graduate education was in instilling an awareness of the benefits of understanding the structure on the English pronunciation system. She explained, "Before I did my masters, I thought, 'phew [pronunciation] is easy', but really once I started knowing about it, I realized that you really need to know what you're talking about in order to explain to students." She further remarked that:

You need to know that for yourself the knowledge [of pronunciation]...and also need to be able to pass that on to the students, to explain to them more specifically what they're doing, what their language is like, and how to modify that just a little for pronunciation of English.

Finally, Ginger's response also seemed to highlight the key role that an awareness of the English pronunciation system plays in teaching, especially for monolingual English speakers. She explained:

I think it's very important. In the beginning, I didn't realize what I didn't know and what I didn't know is how English is actually realized or how I'm actually saying it. [...] I think it's really important, especially if English is your first language, there's so much unconscious that's going on in there that unless you kind of study it, I think you don't know, or you just take it for granted. So for me, it is important.

One of the themes that is also apparent in the quotes above, at least as articulated by Abby, Tanya, and Ginger, is the importance of understanding the English sound system in order to "explain" it to students. These teachers directly connected having knowledge of English pronunciation to their ability to successfully explain this subject matter to students.

In essence, the teachers realize that English pronunciation is a complex system. In many ways, pronunciation is as intricate as the grammar system, but with an added complexity linked to subtleties of meaning that can be difficult to systematize for learners. In fact, challenges in systematizing the pronunciation system can lead to a point where certain aspects of this system are considered "unteachable", and in English as a Lingua Franca (ELF) contexts, unnecessary to learn by some specialists (Jenkins, 2000, 2002). To illustrate this point, Walker (2010) states: "Neurolinguistically inaccessible, pedagogically unteachable, possibly meaningless - even though they are not damaging to intelligibility in ELF, the teaching of tones is not a good investment of classroom time" (p. 39). Regardless of this viewpoint, many aspects of English pronunciation are still considered teachable by most specialists; yet, training or further study is required in order to gain an awareness of these aspects and to learn how to teach them. It was as a result of their coursework that the teachers in this study learned about previously unknown features of English pronunciation. Through graduate coursework, Ginger noted that she learned about aspiration and linking, and Abby mentioned sentence stress, rhythm, and rules for word

stress. Both Ginger and Abby, and possibly Tanya, Laura and Vala as well, in becoming aware of English pronunciation as a complex system came to understand how important this knowledge was in teaching pronunciation to their students.

One of the problems associated with teaching aspects of a complex system is that it is highly unlikely, if not impossible, for teachers to understand all the different features of English that play a part. Coupled with the difficulty of trying to gain a deeper understanding of the English pronunciation system is that teachers must also be able to hear and diagnose learner difficulties based on what they hear. This is a challenging task, especially for teachers who have learners from diverse L1 backgrounds in their classes. At least once for each teacher I observed, some event or interaction with students challenged the teacher's knowledge of English pronunciation, and the teacher was unable to provide an explanation. Figure 4.1 provides a transcript of a visual identification activity in which students had to attribute appropriate stress to words in the following sentence: *Pick me up after soccer*. In this interaction, Tanya tried to figure out the word on which the students were placing stress. As part of the analysis of this episode, I reviewed it with Tanya during the second stimulated recall interviews to gain a better understanding of what she was thinking at the time. The first three lines show the beginning of the classroom interaction, after which Tanya stopped the video during the interview, and discussed her confusion about which word the students were stressing. Near the end of the transcript, a second challenge arises in that Tanya cannot remember the "rule" for stress placement in phrasal verbs but, nonetheless, identifies *PICK* as the focal word instead of the more appropriate choice of *UP*. What is of interest in this scenario is that Tanya knew this "rule" but, as can happen when any teacher or person is put on the spot, the particular piece of information eluded her. As chance would have it, a few weeks prior, I had observed the class in

which Tanya taught the rule that prepositions found in phrasal verbs typically are stressed, as presented in Grant (2007). Given the number of features that are covered in this high-beginning class, it is not surprising that Tanya, or any teacher, would not remember all of them, especially since she had only taught the class once before. She was just unfortunate enough to have it captured on camera. The other four teachers all experienced similar difficulties with their subject matter content knowledge at some point in the observed lessons; yet, this confusion only happened occasionally in the observed classes. The majority of the time the teachers seemed comfortable and did not appear to have any difficulty explaining features of pronunciation to their learners. The teachers' knowledge about language or language awareness is crucial in their efforts to be effective language teachers. In the words of Andrews (2007, p. 200) "the language-aware L2 teacher is more likely to be effective in promoting student learning than the teacher who is not language-aware".

Tanya: What about this word?
 Students: PICK ME UP.
 Tanya: PICK ME UP? ...

((Stimulated Recall Interview Comment)) Tanya: I was confused ... like I was I don't know...I mean I didn't know, I really didn't know, if all of it was stressed or if... I'm like I don't know. That was what I was thinking at that moment. I don't know.

Tanya: PICK me UP after SOccer. PICK me UP? All of it?
 Student 1: Yeah.
 Tanya: PICK me UP. I don't know. What do you think? Pick me UP.
 Student 2: Pick UP me.
 Student 1: PICK me up.
 Tanya: PICK me UP.
 Student 1: PICK. I think.
 Student 3: All.
 Tanya: All? PICK ME UP
 Student 1: after SOccer.
 Tanya: after SOccer. PICK me UP.
 Student: I think ((unclear)) up. Pick.
 Tanya: Pick. Definitely pick.

Student 1:	PICK me UP.
Tanya:	PICK me UP.
Student 1:	I think all ((unclear))
Tanya:	Yeah, it's all sorta, I mean yeah. Pick is probably the strongest. It's a kind of a phrase, so pick me up. PICK UP. Yeah, that's a tricky one.

Figure 4.1: Confusion with Subject Matter Content Knowledge

4.2.3 Cognitions about How to Teach ESL Pronunciation

This section examines several sub-components of teachers' cognitions about pedagogical content. Based on Shulman's (1986, 1987) category of pedagogical content knowledge, the findings discussed here center on the following four areas of pronunciation pedagogy: approaches, techniques, models, and assessment and feedback.

4.2.3.1 Approach to Teaching Pronunciation

The inclusion of form-focused instruction in this era of communicative language teaching has been a topic of interest over the past few decades (Nassaji & Fotos, 2004; Williams, 1995), including with regards to L2 pronunciation instruction (Isaacs, 2009; Trofimovich & Gatbonton, 2006). The question of how the teachers in the present study focused on form in the OC classroom, specifically with teaching English pronunciation, is a central focus throughout this section. The main theme surfacing from the interview and classroom data is the integration of pronunciation in the curriculum. This theme has been a continuing issue of concern among scholars since at least the emergence of the communicative era (Chela-Flores, 2001; Levis & Grant, 2003; Murphy, 1991).

The integration of pronunciation with other oral communication skills is easily recognized in all but one of the OC courses. Based on summary results from both the interviews and the observations, pronunciation appears to be integrated, to varying degrees, in the lower

through to higher-intermediate level OC courses. The only course in which pronunciation is not necessarily integrated, but rather dominant, is in the higher beginning OC course. According to the teachers, this overall integration of pronunciation with other OC skills is intentional. They all report to follow the curriculum as developed by the IEP, and in this curriculum, pronunciation and other OC skills share a partnership to varying degrees. To provide a representation of what this integration looks like, I have mapped out all of the pronunciation-oriented activities in each of the four observed lessons for each of the five teachers. The following figures demonstrate specifically where and when teachers involved their students in activities focused mainly on pronunciation. Each figure shows a timeline from the beginning to the end of a given lesson. These figures were created using Transana (Woods & Fassnacht, 2009), which can generate a visual representation of a timeline containing all of the codes that are present in a selected transcript. The codes to the left of the timeline indicate what type of activity took place at any given time (see table 3.5 for a description of each individual code³). The topmost of these codes, and frequently the vast majority of codes, indicate what type of pronunciation-oriented activity took place. For example, Activity Set-Up (ASET), Explanation (AEX), Checking Activity (ACHEK), etc. Following the short or long list of codes are codes for non-pronunciation-related activities. The two codes, Non-pronunciation-oriented activity (ANON) and Pronunciation-related moment within a non-pronunciation-oriented activity (ANON-PR), if present, show all other activities that do not have a focus on pronunciation. The next two codes, Opening Phase (AOPEN) and Closing Phase (ACLOSE), show non-instructional periods at the beginning and end of class, including teacher preparation, casual conversations with students, and class announcements. Finally, the last set of codes starting with indicate the type of classroom

³ In Table 3.5, the A at the beginning of each code abbreviation here is not present. The A indicates the actual, observed practices of teachers, as opposed to the teachers self-reports of their practice.

configuration for each of the above pronunciation-oriented activities, whether whole class (ACFG-WC), small group (ACFG-SG), pair work (ACFG-PW), or individual work (ACFG-IW). At this point in the discussion, it is not important to understand what each of the pronunciation-related codes refers to in the figures. Instead, the focus is on the overall integration of pronunciation activities with non-pronunciation activities in the lessons.

As noted above, in the high-beginning OC class, Tanya spent the majority of her time using a variety of pronunciation-oriented activities throughout the four observed classes. Figures 4.2 - 4.5 reveal that only two out of the four observed classes contained any activities focused on other OC skills.

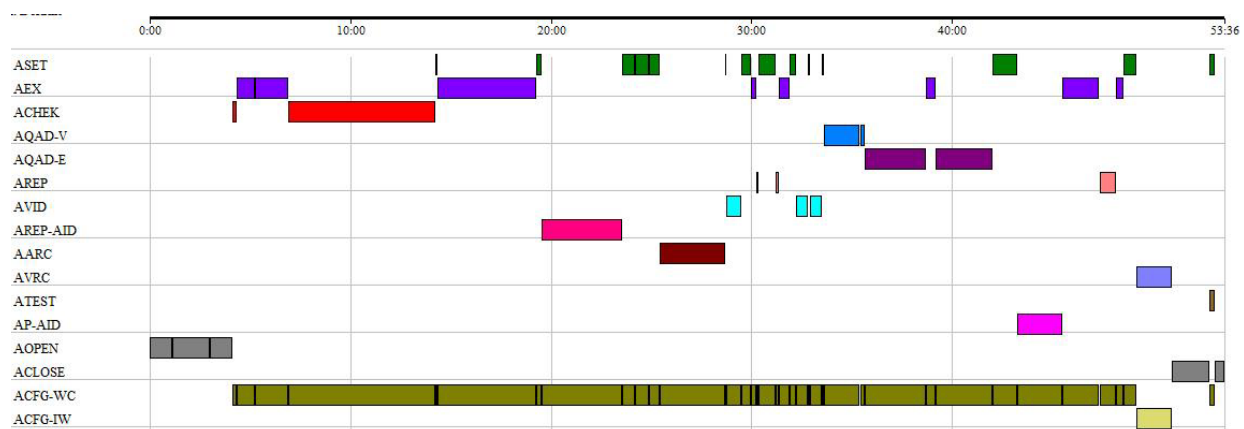


Figure 4.2 Tanya - Lesson 2 Timeline

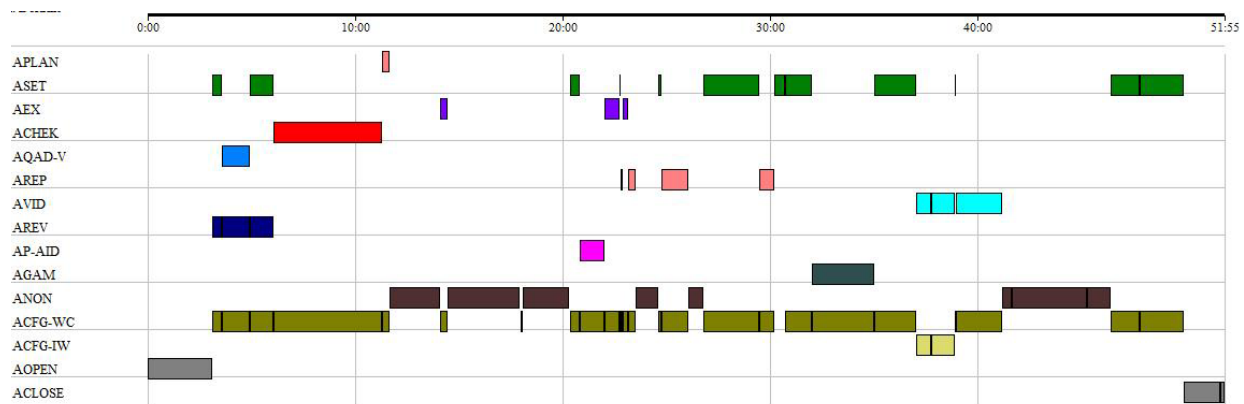


Figure 4.3 Tanya - Lesson 3 Timeline

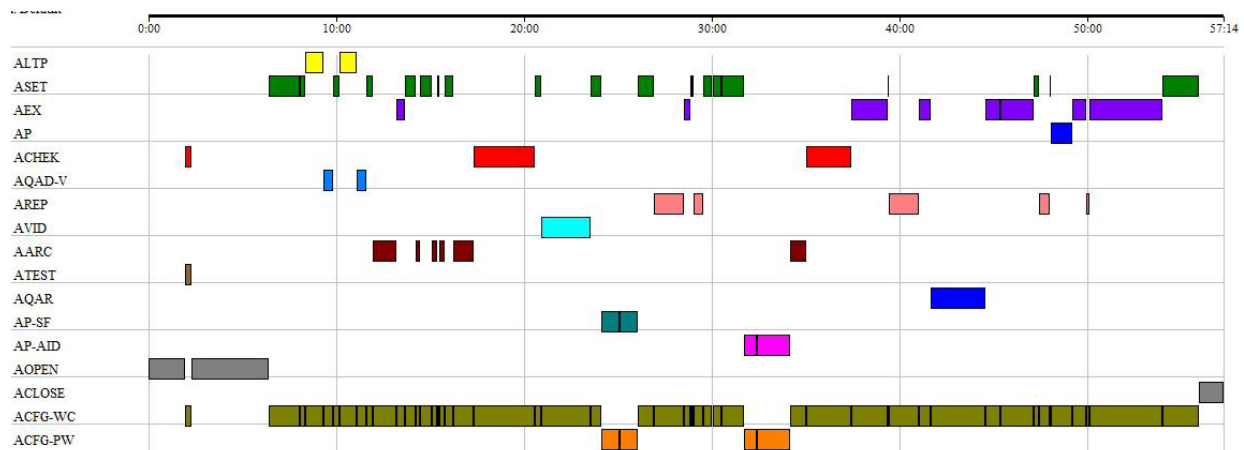


Figure 4.4 Tanya - Lesson 4 Timeline

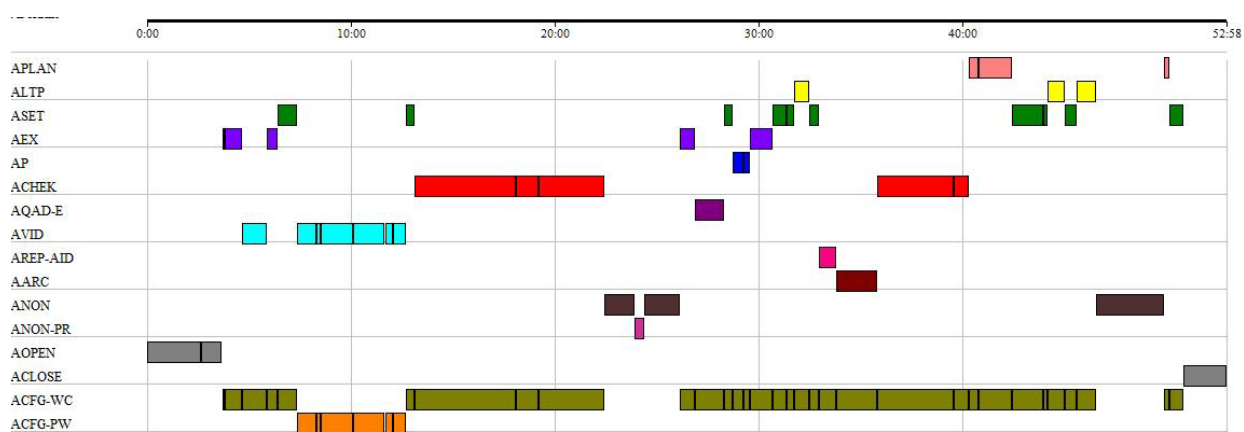


Figure 4.5 Tanya - Lesson 5 Timeline

In Laura's low-intermediate OC course, the four observed classes showed a greater integration of pronunciation with other OC skills (see Figures 4.6 - 4.9). In the first set of observations, observations 2 and 3, Laura spent most of the class time with pronunciation-oriented activities, with only one activity in lesson 3 that did not focus on this skill area. In the second set of observations, there appeared to be a more balanced amount of time spent on pronunciation- and other OC-oriented activities.

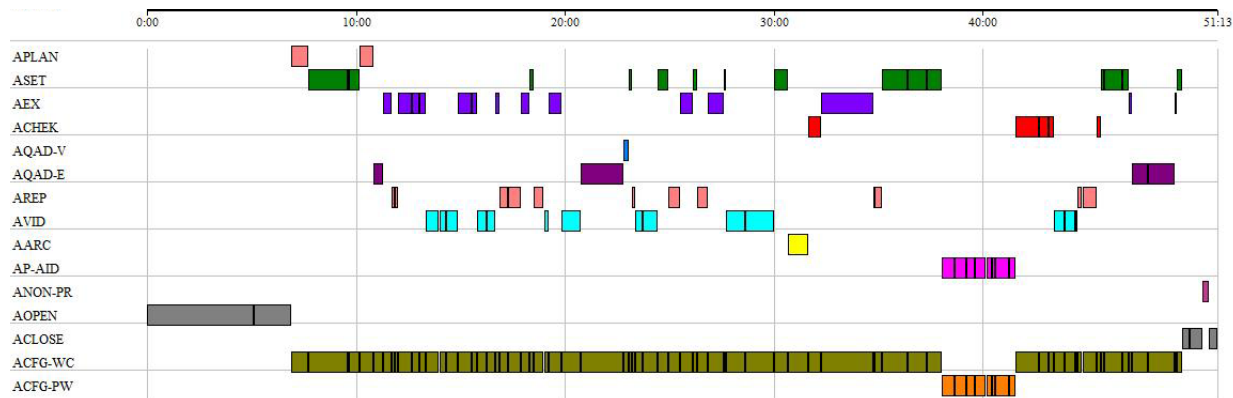


Figure 4.6 Laura - Lesson 2 Timeline

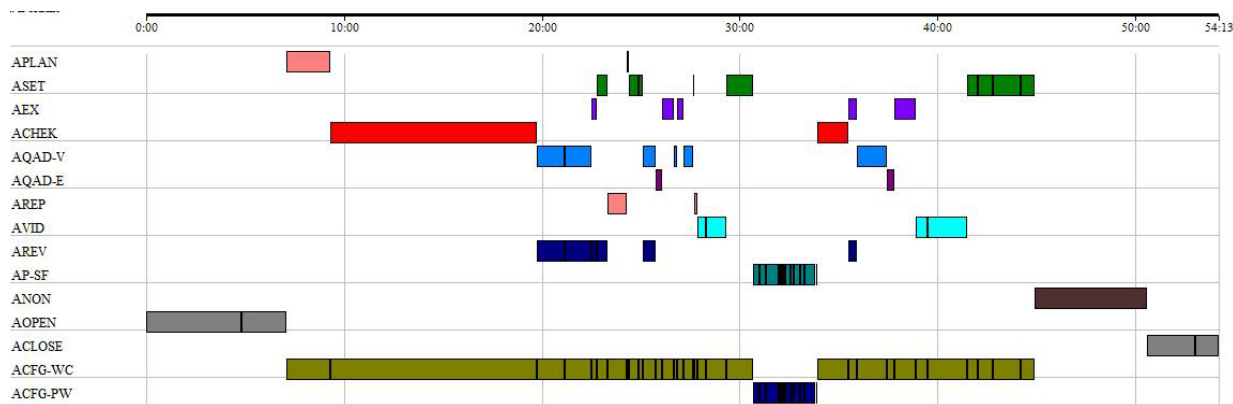


Figure 4.7 Laura - Lesson 3 Timeline

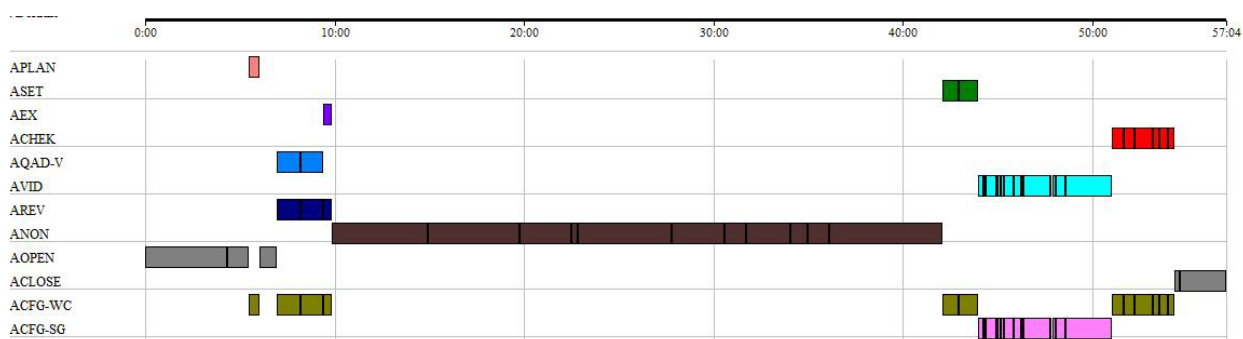


Figure 4.8 Laura - Lesson 4 Timeline

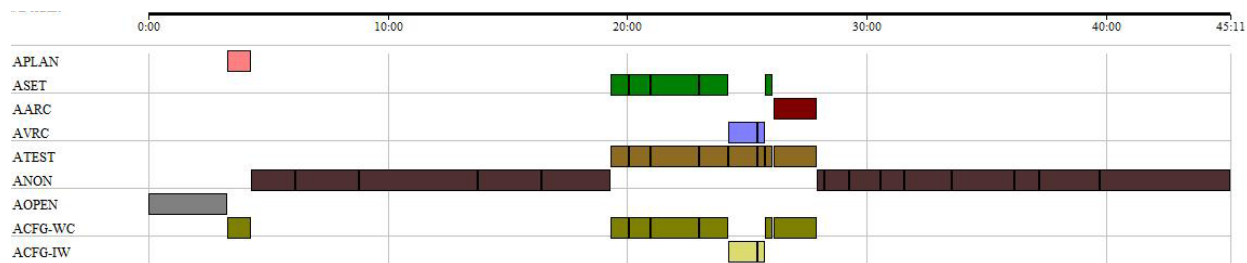


Figure 4.9 Laura - Lesson 5 Timeline

In Abby's intermediate OC class, the situation was similar to that of Laura's classes (see Figures 4.10 - 4.13). As with Laura's observed classes, Abby's classes showed an integrated approach to teaching pronunciation (see Figures 4.10 - 4.11); yet, in the second set of observations, lesson 4 was entirely devoted to pronunciation whereas lesson 5 focused solely on other OC skills.

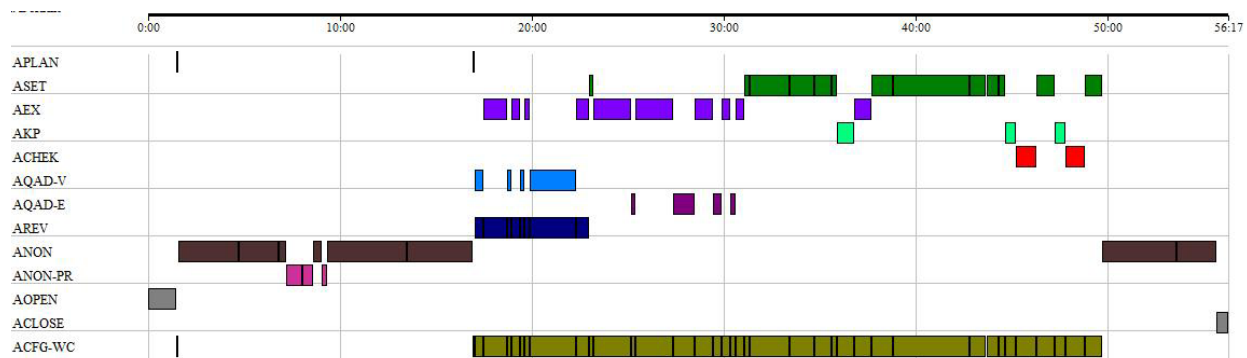


Figure 4.10 Abby - Lesson 2 Timeline

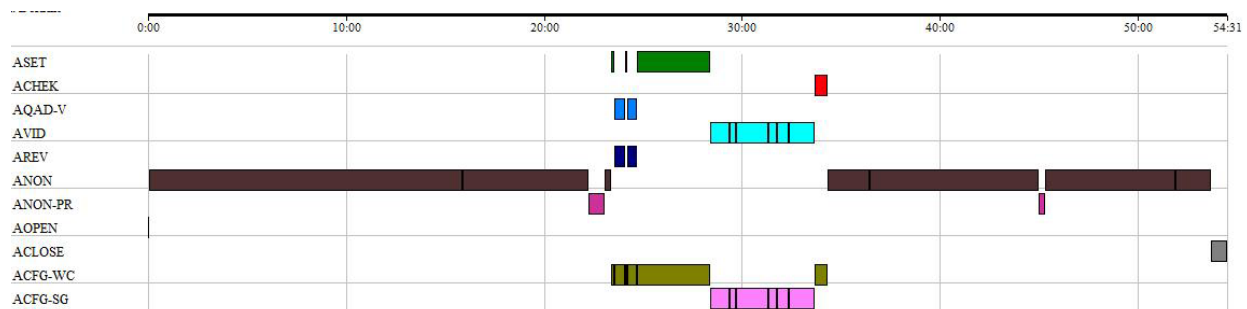


Figure 4.11 Abby - Lesson 3 Timeline

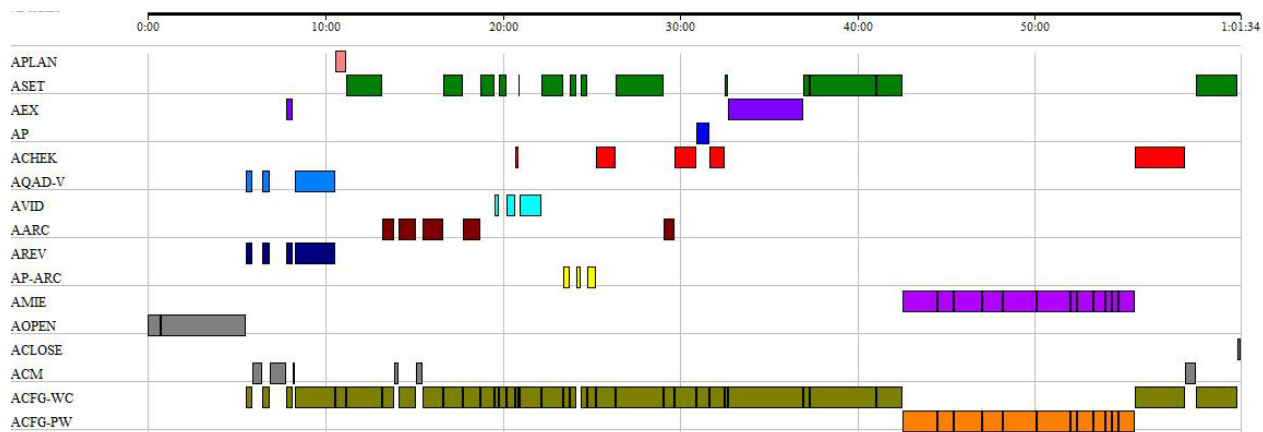


Figure 4.12 Abby - Lesson 4 Timeline

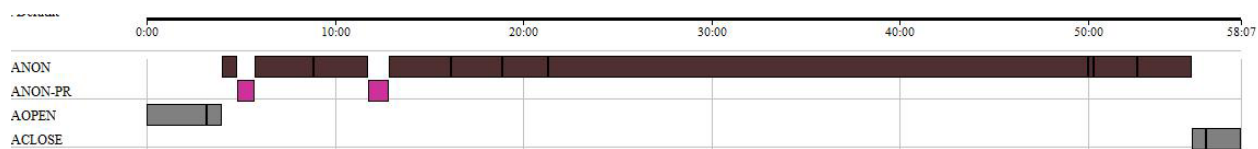


Figure 4.13 Abby - Lesson 5 Timeline

In comparison with the other teachers, Ginger spent less time teaching pronunciation; however, her lesson still reflected an integrated approach to teaching OC skills (see Figures 4.14 - 4.17). In all but the last observed class, Ginger dedicated some time to pronunciation in each lesson.

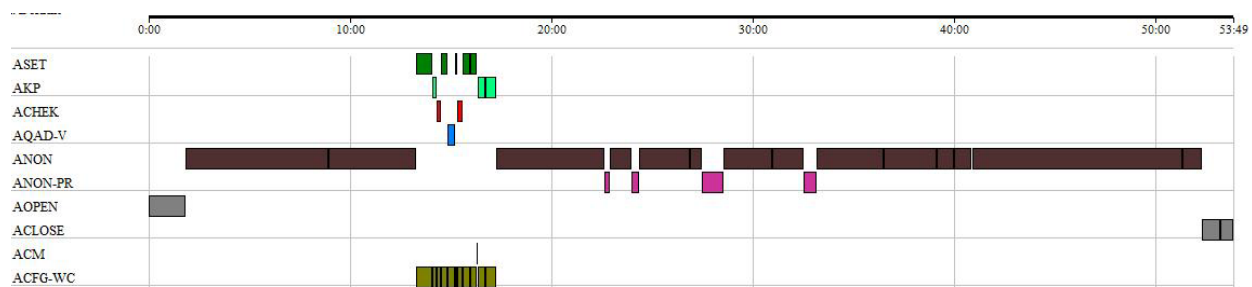


Figure 4.14 Ginger - Lesson 2 Timeline

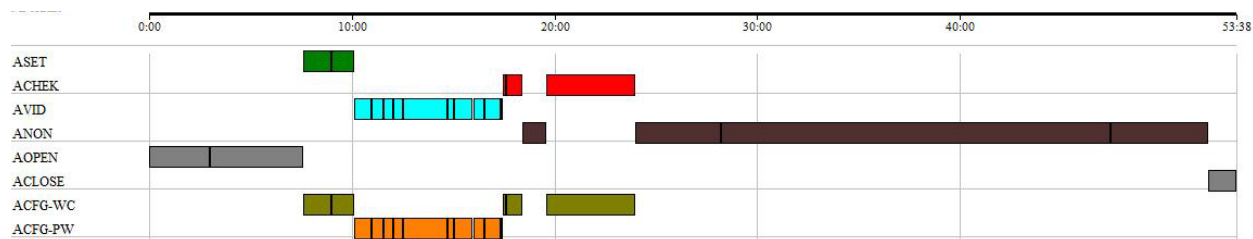


Figure 4.15 Ginger - Lesson 3 Timeline

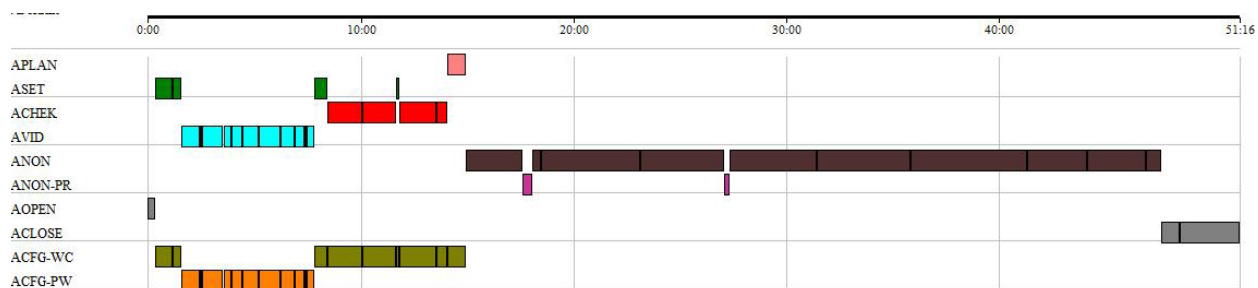


Figure 4.16 Ginger - Lesson 4 Timeline

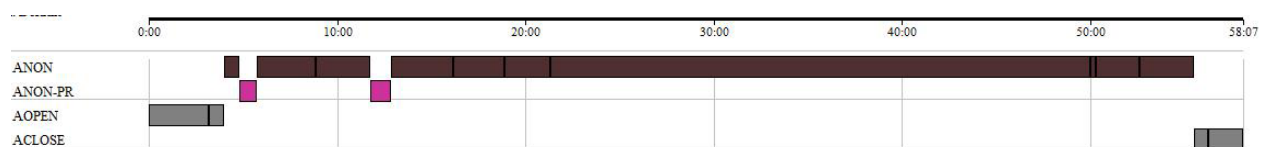


Figure 4.17 Ginger - Lesson 5 Timeline

As with the four observed lessons taught by Ginger, Vala's lessons also contained noticeably less pronunciation-oriented activities than the first three teachers (see Figures 4.18 - 4.21) The first set of observations did not include a pronunciation component, but both of the lessons in the second set had at least a partial focus on pronunciation.

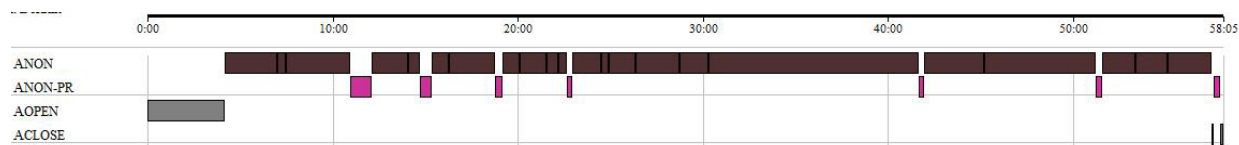


Figure 4.18 Vala - Lesson 2 Timeline

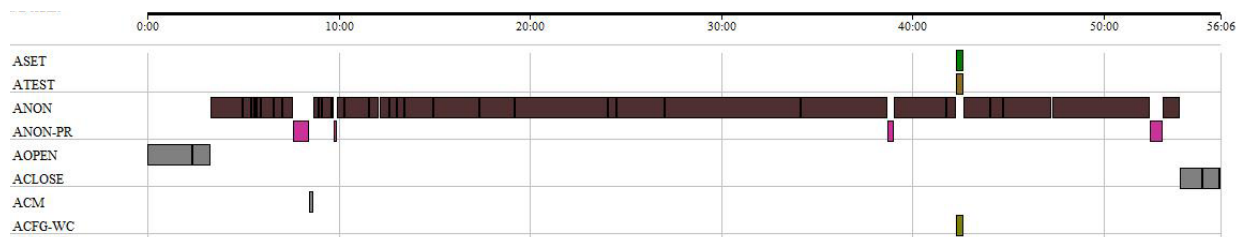


Figure 4.19 Vala - Lesson 3 Timeline

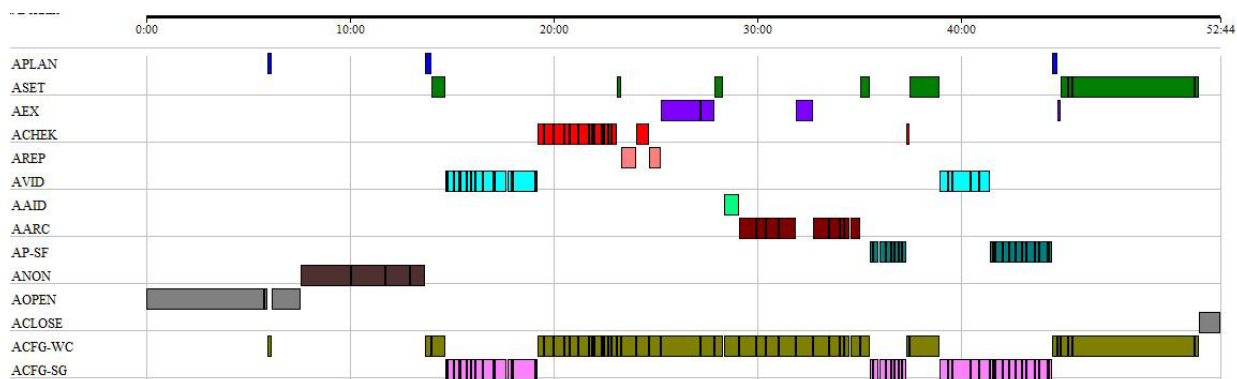


Figure 4.20 Vala - Lesson 4 Timeline

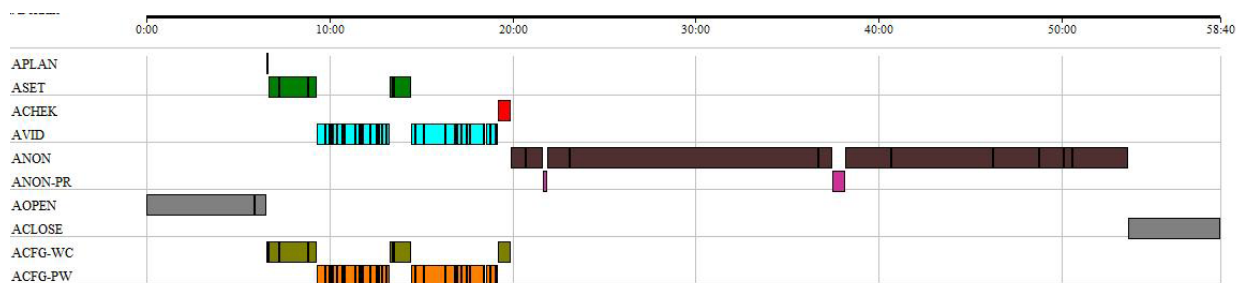


Figure 4.21: Vala - Lesson 5 Timeline

One of the difficulties with only observing four lessons out of semester's worth of class time is that you cannot capture more than a small snapshot of how much, or to what extent, any particular skill is integrated with others on a regular bases. In addition, the accuracy of the time spent on pronunciation in these classes cannot be necessarily considered representative of their

typical teaching of pronunciation because all of the participants knew that the purpose of my study was to look at their beliefs and practices in relation to teaching pronunciation. In some cases, the teachers informed me when they expected to teach pronunciation and we scheduled my classroom visits for those times. Therefore, to gain a better representation of how pronunciation-focused instruction was a part of the overall course, I asked each teacher to give her best estimation as to how much time she typically spent teaching this skill. To gain a different perspective on the time spent on pronunciation, I then asked students, with the aid of the questionnaires, to estimate how much time their teacher spent on pronunciation in their class. Finally, I compared these two perspectives with calculations of the time spent on pronunciation in the four classes. Table 4.4 provides the results.

Table 4.4

Different Perspectives on the Average Time Spent in Pronunciation Instruction

	Tanya (High Beg)	Laura (Low Inter)	Abby (Inter)	Ginger (Inter)	Vala (High Inter)
Observation of four lessons	88.3%	60.1%	69.7%	17.4%	26.5%
Teacher's Perception	90%	33%	60-70%	20% in-class Much higher % outside class time	20%
Students' Perceptions (range)	92% (80-100%)	72% (50-100%)	83% (70-95%)	61% (10-90%)	50% (10-85%)
Total Average	90.1%	50%	72.5%	26.8%	32.2%

The three perspectives on the average time spent in pronunciation varied across the five classes. In Tanya's class, the perspectives were almost exactly the same, showing that Tanya's classroom practices matched her beliefs. During the first interview, Tanya had remarked that pronunciation was the "main focus every class" and these results confirmed the primacy of this one skill. Given the high priority of pronunciation in the class, an integrated approach to teaching pronunciation does not appear to be a clear course goal. That said, at both the high-beginning and low-intermediate levels in the IEP, there is a second course devoted to Oral Fluency in which other OC skills are covered. Tanya explained:

We do other little activities like try to incorporate pronunciation into fluent speech, but the fluent speech is limited to a sentence or two, so it's not extended speaking that they're focusing on. So I think for our purposes at this level, that's perfect.

In Laura's class, there was some variation in the scores in that the observations and the perspectives of the students were a closer match than the teacher's perspective. Laura believed that she spent considerably less time on pronunciation than either the students believed of the observations showed. One possible reason for this difference may be that the students attributed more time to working on their pronunciation in the language laboratory or to preparing for their drama presentations. Even with this sizable difference between the three perspectives, the course nonetheless still appears to reflect an integrative approach to pronunciation teaching with other OC skills. Laura noted she felt that:

those are the two main goals: pronunciation and listening to lectures and that kind of skill, so even in the schedule, I have it so the students can see, ok, here are the

pronunciation things that we are going to work on for this chapter, and here are the lectures. Sort of simultaneously they can see that those are the two main priorities.

In the case of Abby, the three perspectives were fairly similar although most students believed that Abby spent a little more time on pronunciation than either the teacher believed or the observations showed. As with Laura's class, these results indicate that pronunciation is integrated with other OC skills, albeit to a greater degree. In her first interview, Abby explained how she integrated pronunciation with other course content:

Well, what I try to do is part of the class...coz it's the content..we use American government as the basis, so I try to do something with the content. Half the class content and half the class with pronunciation. There's only 50 minutes, so sometimes it really doesn't work. But I try to stick in some kind of pronunciation aspect even syllables. Either we're practicing syllables or we're counting syllables. [...] And so all the time I try to do something pronunciation and then something content based.

In regards to Ginger's class, the differences between the students' views and those of the teacher's and classroom observations were considerable. Both the observations and Ginger indicated a much lower percentage of time spent on pronunciation than the students' believed. However, as noted in the table, this difference may be attributable to the students counting the time they spent in the language laboratory or in completing online assignments. Ginger also acknowledged spending more time giving feedback on the work the students completed online, which involved student voice-recordings. Finally, in the case of Vala, despite the discrepancy in results between the perspectives generated by the teacher and the observations and those of the students', Vala's class also seems to adopt an integrated approach to pronunciation teaching. In reference to the

teaching of pronunciation, she reports that she most likely spends only part of a class on pronunciation because "it's exhausting and tedious and boring for me and for them and because we have so many other bits. Very rarely, do we spend an entire class on pronunciation, an entire 50 minute session."

Overall, the teachers' and students' combined perspectives indicate that all the classes except for one, Tanya's, follow an integrated approach to teaching pronunciation. There are discrepancies between the views in some of the classes about how much time is devoted to pronunciation in a particular course, which may reflect the extent to which pronunciation is integrated into a course. Based on results from at least two of the data sources collected, the position of pronunciation as integrated with other OC skills seems to have high priority in the classes taught by Tanya, Laura and Abby. This finding is congruent with the beliefs of Tanya and Abby, but not with those of Laura. In the case of Laura, it appears that she actually spends more time on pronunciation than she believes. Conversely, also based on the results from at least two of the data sources, the prioritization of pronunciation in the classes taught by Ginger and Vala is considerably less than the other teachers, at least in terms of time spent on pronunciation in class, a finding that appears congruent with the two teachers' articulated beliefs. Ginger, however, further articulated a belief that pronunciation is better taught individually, as demonstrated by the time spent on giving feedback on student voice recordings, than as a whole class.

Another finding of interest, as shown in Table 4.4, is that most students believe that their teachers spend more time on pronunciation than either the teachers believed or the observations indicated. One reason for this difference may be due to students attributing greater emphasis to their individual work in the language lab on to working on voice recordings. Another reason may

be that, regardless of the activity teachers may have students engage in at any particular time, the students might focus more of their attention on pronunciation. Since numerous research studies have indicated that students want either to receive instruction in English pronunciation (Couper, 2003; Derwing & Rossiter, 2002) or to acquire native-like accents (Kang, 2010; Scales, et al., 2006), the students may use as many opportunities as they can get to focus on their pronunciation even if their teachers do not emphasize this skill during activities not specifically devoted to pronunciation.

Whether the focus of pronunciation has either a large or small focus in the teachers' courses, it is apparent that the five teachers feel pronunciation is important in their classes. By combining all of the averages, pronunciation appears to be integrated with other OC skills from as little as 26.8% (Ginger) and 32.2% (Vala) to as high as 50% (Laura), 72.5% (Abby) and 90.1% (Tanya) of the time. (It is also important to note here that the amount of time dedicated to pronunciation is also dependent on the learning outcomes established by the IEP curriculum for each course. As indicated in the course syllabi, the teaching of general presentation skills combined with the development of speaking and listening skills for use in academic settings has greater emphasis than pronunciation skills in the intermediate and high-intermediate courses). With respect to research that has been conducted on pronunciation acquisition of L2 adult learners, the amount of time that the teachers spend on pronunciation features in their respective courses would likely increase the potential for their students to acquire these forms in their own speech, especially if these adult students take these courses soon after arriving in the country. Munro and Derwing (2008) found, in their longitudinal study of newcomers to Canada, that the acquisition of intelligible vowels tends to occur during their first few months in an English-speaking context. Furthermore, in a study on the influence of L2 experience on suprasegmentals

in L2 speech, Trofimovich and Baker (2006) found that suprasegmentals may be acquired more slowly over time, and that the acquisition of different features occurs at varying rates. Therefore, if the results of these studies can be generalized to the group of learners in the current study, then the integration of pronunciation found in the courses in the present study would likely have a positive impact on the intelligibility of the learners' pronunciation.

4.2.3.2 Techniques in Teaching Pronunciation

Having established that an integrative approach to teaching pronunciation was reflected in both the beliefs and practices of most of the teachers, the next step was to explore the teachers' cognitions and pedagogical practices in relation to different types of techniques for teaching pronunciation. This section examines the breadth of the teachers' knowledge in terms of the variety and types of techniques they use, their beliefs about these techniques and, finally, the degree to which each technique is used in the four observed lessons.

4.2.3.2.1 What techniques do teachers use?

To provide as complete a picture as possible of the entire range of pronunciation-related techniques contributing to the teachers' pedagogical content knowledge for the current OC courses they teach, I analyzed each section of class time to determine what specific techniques the teachers used to teach or practice pronunciation. As with the analysis of the teachers' overall integration of pronunciation with other OC skills, the second part of the data triangle involved discussing with teachers some of the different types of activities typically used in their classes. Thus, in the interviews, I asked teachers to describe some of the techniques they used, including those they believed to be most helpful for improving their students' pronunciation. As a third source of data (the questionnaires), I asked students to describe an activity used by their teachers

that they believed to be the most helpful for improving their pronunciation. Table 4.5 provides the results of all the different activities the teachers used categorized by each of the three viewpoints: teacher's self-reports (TR), classroom observations (A), and students' opinions (SR). Essentially, any technique that was either mentioned in the self-reported data or observed during the four lessons is represented in the table. One limitation concerning the student data, however, is that many students referred to their work in the language lab (called the LARC for Language Acquisition Resource Center) as a beneficial tool for improving their English. Since the students did not describe the activities they completed in the lab, I asked the teachers to describe what they typically asked their students to do in the lab. Thus, the student results reported in Table 4.6 are, in part, based on the teachers' interpretations of the student data (as collected in the third semi-structured interview with each teacher). To help understand the activity codes, Table 4.5 provides a brief summary of all the codes used to describe the pronunciation activities used by the five teachers. For a more detailed description of the activities, refer to Table 3.5 in the previous chapter.

Table 4.5

Summary of Pronunciation Activities

#	Abbreviation	Code	Brief Description
Controlled Activity			
1	PLAN	Plan and Purpose	Teacher discusses agenda, objectives or goals.
2	LTP	Listening Text Presentation	Students listen to a text. No additional work is required.
3	SET	Activity Set-Up	Teacher models, explains or gives instructions on how to do an activity.
4	EX	Explanations and Examples	Teacher explains and gives examples of a feature of pronunciation and how to use it.
5	P	Production Practice	Students read a set of words or sentences, focusing on specific features of pronunciation that have been previously identified.
6	KP	Kinesthetic/Tactile Production Practice	Accompanied by a specific physical movement (e.g., clapping), students read target words or sentences, focusing on specific features of pronunciation that have been previously identified.
7	CHEK	Checking Activity	Teacher checks student performance and gives feedback on the students' work from a previous pronunciation activity.
8	QAD-V	Question-Answer Display Activity - Knowledge Verification	To verify that students have understood previously taught material, the teacher asks students knowledge-based questions to which she already knows the answer.
9	QAD-E	Question-Answer Display Activity - Knowledge Exploration	To find out whether students already know or understand content not already taught in class, the teacher asks students knowledge-based questions to which she already knows the answer.
10	REP	Repetition Drill Activity	Students repeat a target form.
11	VID	Visual Identification Activity	With the aid of a visual prompt or text-based material, students select a particular target form, feature or rule. Students respond verbally.
12	AID	Audio Identification Activity	(Listening Discrimination Activity). Students make a choice based on what they hear. Students respond verbally.
13	REP-AID	Repetition Drill - Audio Identification Activity	The teacher first has students repeat a target form, then asks them to make a choice based on what they hear. Students respond verbally.
14	VRC	Visual Recognition Activity	As with Visual Identification, teacher has students identify a particular target form; however, students do not respond verbally.
15	ARC	Audio Recognition Activity	(Listening Discrimination Activity). As with Audio Identification, Students make a choice based on what they hear; however, students do not respond verbally.
16	REV	Review Activity	Teacher reviews content learned in a previous lesson.

17	TEST	Testing Activity	Students either do a formal test or quiz or the teacher discusses how she will assess students in an upcoming test or quiz.
Guided Activity			
18	QAR	Question-Answer Referential Activity	Teacher asks students knowledge-based questions to which she does not know the answer beforehand.
19	P-SF	Production - Student Feedback Practice	In pairs one student produces a target form while a second student gives feedback on his/her pronunciation if necessary.
20	P-AID	Production - Audio Identification Activity	One student produces a target form while a second student (or the whole class) makes a choice based on what he/she hears. The second student (or other students) responds verbally.
21	P-ARC	Production - Audio Recognition Activity	One student produces a target form while a second student (or the whole class) makes a choice based on what he/she hears. The second student (or whole class) does not respond verbally.
22	MIE	Mutual Exchange Activity	In pairs, both students exchange information to accomplish a task. Requires both listening discriminate and appropriate production by both students to accomplish successfully.
23	PREP	Preparation	In pairs or groups, students prepare for a major project such as a presentation or dramatic work.
Free Activity			
24	GAM	Game	Students engage in a language activity that involves an objective, a set of rules and a degree of competition.
25	DRA	Drama	Students plan, practice and/or perform a play, skit or a scene from a movie or TV show.
26	PRES	Presentation	Students give an oral exposition or report on a topic prepared by the student.
27	DISC	Discussion	Students discuss or debate a specific topic in groups.

Table 4.6

All Activities - Categorized by Data Source

Activity	Tanya			Laura			Abby			Ginger			Vala		
	TR	A	SR	TR	A	SR	TR	A	SR	TR	A	SR	TR	A	SR
Plan and Purpose		X			X			X			X			X	
Listening Text Presentation		X				X		X							
Activity Set-Up		X			X			X			X			X	
Explanation and Examples		X		X	X		X	X		X			X	X	
Production Practice		X	X	X		X	X	X	X	X		X		X	
Kinesthetic/Tactile Practice				X			X	X	X	X	X				
Checking	X	X			X			X			X			X	X
Question-Answer Display - Knowledge Verification		X			X			X			X				
Question-Answer Display - Knowledge Exploration		X		X	X			X							
Repetition Drill	X	X	X	X	X	X	X		X		X			X	X
Visual Identification	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Audio Identification							X			X			X	X	
Repetition Drill - Audio Identification	X	X													
Visual Recognition		X			X										
Audio Recognition	X	X	X	X	X			X						X	X
Review	X	X	X		X		X	X							
Testing		X	X	X	X		X			X				X	
Question-Answer Referential Production - Student Feedback Practice		X			X									X	X
Production - Audio Identification	X	X		X	X	X									
Production - Audio Recognition				X		X	X	X							
Mutual Exchange							X	X							
Preparation	X			X			X			X				X	
Game		X				X			X						
Drama				X											
Presentation	X							X		X			X		X
Discussion							X	X				X		X	X
Total	8	19	5	11	14	7	12	13	7	8	6	3	10	10	4

One of the most striking findings the table demonstrates is that, in almost every case, the data gathered by the teachers' self-reports and the classroom observations retrieved complementary information: What was observed in the classroom was not necessarily seen in the interviews and vice-versa. For Tanya, the observations revealed 12 additional activities that were not mentioned in the interviews whereas the interviews revealed two activities that were not observed in the four lessons. For Laura, seven additional techniques surfaced in the observations while the interviews highlighted four additional techniques. Similarly, for Abby, the observations uncovered an additional six techniques and the interviews a further six techniques. For Ginger, the observations showed an additional four techniques and the interviews another seven techniques. Finally, for Vala, the observations revealed an additional three techniques and the interviews another four techniques. With respect to the student reports, the data did not generate any new information except for the inclusion of Listening Text Presentation techniques (LTP) in Laura's course. Nevertheless, the student data is useful as a tool in confirming what was either reported or observed through the teacher interviews or classroom observations. Table 4.7 provides the results of the combined data from these three sources.

Table 4.7

All Activities Used Based on Combined Research Methods

	Tanya	Laura	Abby	Ginger	Vala
Plan and Purpose	X	X	X	X	X
Listening Text Presentation	X	X	X		
Activity Set-Up	X	X	X	X	X
Explanation and Examples	X	X	X	X	X
Production Practice	X	X	X	X	X
Kinesthetic/Tactile Practice		X	X	X	
Checking	X	X	X	X	X
Question-Answer Display - Knowledge Verification	X	X	X	X	
Question-Answer Display - Knowledge Exploration	X	X	X		
Repetition Drill	X	X	X	X	X
Visual Identification	X	X	X	X	X
Audio Identification			X	X	X
Repetition Drill - Audio Identification	X				
Visual Recognition	X	X			
Audio Recognition	X	X	X		X
Review	X	X	X		
Testing	X	X	X	X	X
Question-Answer Referential	X				
Production - Student Feedback Practice	X	X			X
Production - Audio Identification	X	X			
Production - Audio Recognition		X	X		
Mutual Exchange			X		
Preparation	X	X	X	X	X
Game	X	X	X		
Drama		X			
Presentation	X		X	X	X
Discussion			X	X	X
TOTAL	20	22	21	14	14

With these combined data sources, we obtain a detailed picture of the teachers' pedagogical content knowledge in terms of the different types of techniques they use in the OC

courses they taught in the semester of the study. Although it is certainly possible that some techniques never surfaced in any of the data collected, the above table provides a strong representation of the teachers' knowledge of techniques for use with their current OC course. An interesting point here is the three teachers who have taken a graduate course devoted entirely to pronunciation pedagogy (Tanya, Laura and Abby) appeared to use a much wider repertoire of techniques than the other two teachers.

The table also shows the distribution of controlled, guided and free techniques used by the teachers. The controlled techniques are clearly dominant in all the classes. The controlled activities start with Plan and Purpose (PLAN) and end with Testing Activity (TEST) and several are utilized by all five teachers. At some point during their lessons, usually at the beginning of class, the teachers provide an agenda or objectives for their lesson, and pronunciation is included at least once in that discussion during the four observed lessons (Plan and Purpose).

Unsurprisingly, Explanations and Examples (EX), Activity Set-Up (SET), and Checking Activities (CHEK) are also an integral part of their pronunciation work in the class. At some point over the four classes, the teachers spent time explaining some feature of English pronunciation (Explanation and Examples), giving instructions for an activity involving either listening to or producing that feature (Activity Set-Up), and checking the students' work and giving feedback on it (Checking Activity). The only instructor who was never observed explaining a new point about pronunciation was Ginger; however, during the interviews she talked about explaining new pronunciation features. In addition to the activities mentioned above, based on the three data sources, all five teachers used the following activities: Production Practice (P) where students practiced readings a set of words, phrases or larger chunks of text that contained target pronunciation features; Repetition Drills (REP); Visual Identification

Activities (VID), in which the teacher uses a visual or text-based prompt and students have to select and produce either a particular feature of pronunciation or an item related to pronunciation; and Testing Activities (TEST).

Other controlled techniques utilized by the teachers varied to some degree. Most notably, the Kinesthetic/Tactile Production (KP) techniques were highlighted during both the interviews and the observations conducted with Abby, Ginger and Laura. Collectively, they used whole body movements (standing/sitting), kazoos, rubber bands, clapping, and banging on desks when teaching different features of pronunciation. Display questions, both those meant to explore students' prior knowledge of a feature (Question-Answer Display - Knowledge Exploration Activities or QAD-E) and those to determine whether students had learned previously taught information (Question-Answer Display - Knowledge Verification Activities or QAD-V) played a role in the classes taught by Tanya, Laura and Abby and, to some extent, Ginger as well. The last set of activities that warrants further comment are the Identification (Visual Identification and Audio Identification) and Recognition activities (Visual Recognition and Audio Recognition). These four techniques are essentially very similar and, in the literature (H. D. Brown, 2007; Crookes & Chaudron, 2001), no distinction is made between techniques using either audio or visual stimuli. However, since listening comprehension and pronunciation are interconnected in speech (Gilbert, 1987), particularly in authentic communicative contexts, categorizing the two separately has pedagogical importance in pronunciation instruction. Listening plays an integral role in authentic communication between a listener and a speaker whereas visual aids typically do not. While all teachers use Visual Identification Activities in their classes, only three teachers, Abby, Ginger and Vala, seem to use Audio Identification Activities, which required learners to respond verbally to audio stimuli. In Tanya's and Laura's

classes, however, this activity did not appear to be used even though the focus of their respective courses was on perception to a greater degree than on production. Nevertheless, they both use Audio Recognition activities (ARC) as well Visual Recognition (VRC) activities, in which students may respond using gestures or in written form.

Unlike the controlled techniques that the teachers use, the variety of guided techniques is considerably more limited. In fact, there is a noticeable lack of guided activities when looking at the higher level OC courses. Based on the reported and observed data, all five of the teachers use these types of activities although Ginger only seems to use Preparation (PREP) in the planning of projects such as Presentations. Aside from the Preparation techniques that are used by all teachers and the referential questions (Question-Answer Referential Activity or QAR) that appear to be used by Tanya on occasion, most of the guided techniques are all forms of information gap activities: Production - Student Feedback Practice (P-SF), Production - Audio Identification Activity (P-AID), Production - Audio Recognition Activity (P-ARC), or Mutual Exchange Activity (MIE). However, Production - Student Feedback (P-SF) is not a true information gap since the listener does not need to complete a task based on information provided by the speaker, but rather give feedback on the speaker's pronunciation if necessary. Thus, only Tanya, Laura and Abby appear to use information gap activities involving either one-way communication tasks (P-AID and P-ARC), where the listener must complete a task based on the information provided, and/or two-way communication tasks (MIE), in which both partners have information required by the other to complete a task. However, of all the teachers, only Abby appears to use an information gap type activity that required a mutual exchange of information (MIE) to complete a task.

Finally, for the free techniques with a pronunciation-orientation, all the teachers use them to varying extents. It is worth noting here that making the distinction between free techniques with a pronunciation orientation and free techniques without such an orientation is not always discernable. Not all forms of speaking practice are related to pronunciation (Levis & Grant, 2003). Thus, in making the distinction between the two, the teachers' description of a particular activity was the key deciding factor. If the teacher mentioned some aspect of pronunciation (e.g., rhythm or focal stress) in relation to a particular activity in the interview or in the set-up or checking of an activity during the observed classes, then the activity was classified as pronunciation-oriented. Based on this classification, all the teachers use free techniques with a pronunciation orientation. At the lower levels, and even in Abby's class, Games (GAM) appear to have a role in the classes. At the higher levels, Presentations (PRES) and Discussions (DISC) are integral components of the course curriculum; thus Abby, Ginger and Vala spend time using these types of activities. Tanya also had students present a memorized poem as the final project in her class. In Laura's case, Drama (DRA) in the form of a play took the place of presentations in her course.

Based on these findings, most of the teachers appear to use an overall variety of controlled, guided, and free techniques although the controlled techniques play a more prominent role in the teaching of pronunciation in all the classes, at least according to the types of techniques that teachers reported to use or that were observed in the four observed. Furthermore, it appears that guided techniques may be the most underutilized techniques in some of the OC courses, at least in terms of activities involving one- or two-way communications between students.

4.2.3.2.2 What do teachers believe about these techniques?

While the discussion above provides a window into the breadth of the teachers' knowledge of pronunciation techniques, what teachers believe about the techniques they use is another component of teachers' cognitions that needs to be considered. To learn more about the teachers' beliefs and the techniques employed in teaching pronunciation, I asked what techniques they believed to be particularly beneficial in helping students to improve their pronunciation.

For use with their lower-level OC courses, Tanya and Laura placed a strong emphasis on techniques aimed at developing students' listening comprehension in relation to pronunciation. Laura explained that they "really do try to focus on...levels one and two...focus on hearing the sounds. And then there is a focus on really controlled pronunciation, actual pronunciation of the sounds, just because if [the students] can't hear it, they can't say it." Thus, techniques designed to enable students to identify specified features of English pronunciation in listening tasks was important in their classes. Laura highlighted two listening discrimination activities features in a spoken text as either a whole class (Audio Recognition) or pair work activity (Production - Audio Recognition). To illustrate, in the second interview, she explained that

In the class I had on Wednesday, we talked about voicing - what it means -, and we talked about how to vocalize sounds, kind of like whole class doing [s] [z] with vocal cords, and then I sort of read words, and they repeated them. Kind of like listening discrimination. So I would read the [s] sounds and the [z] sounds and there were similar words *sip* and *zip*. So I read all of the [s], all of the [z], and then I asked them to hear what I was saying. Was I saying *sip* or *zip* and they would hold up fingers to sort of indicate. So that kind of like whole class listening to me and then doing it in pairs. I think

I probably follow that format most of the time I guess. I can't think of another way I have done it.

In Tanya's case, she had difficulty pinpointing any specific activities as being particularly helpful for students because of the number of activities she used in each lesson. As many of the activities she used came from the course textbook and they typically covered several activities every class, choosing two or three was challenging. Nevertheless, as a whole, she felt the language lab work and the textbook exercises were especially helpful. In addition, Tanya emphasized three techniques in the teaching of certain features of pronunciation. For teaching reductions, she felt that an Audio Recognition Activity (ARC) was a beneficial activity. In this activity, she would say a sentence and then students would hold up a word card that indicated the word that was reduced in the spoken sentence. For teaching rhythm, she also thought Audio Recognition activities to be helpful. In this case, poetry was a key activity for her as well as having students listen to poetry and identify words with focal stress. One final activity she considered beneficial was the presentation of rules (Explanations and Examples Activity) when teaching word stress. She remarked that her students "seemed to really soak up the rules." Despite the numerous activities that Tanya used and the benefits that Tanya attributed to them, she expressed one particular concern. While on the one hand, she attached strong value to the textbook she used, she was also concerned that her course may be too "textbook-driven". To remedy this, she explained that, whenever possible, she would incorporate additional activities or materials (e.g., poetry). During the second stimulated recall interview, she explained that "that was kind of [her] goal behind bringing the poems or going outside of the book a little, just because it can be a little bit boring to go from exercise to exercise. But at the same time, the book is very good, and has a lot of good explanations and activities." In her words, the book "guides the way [she teaches]."

In the contexts of the classes taught by Abby and Ginger, the two teachers seemed to share similar opinions as to which activities were most beneficial for students. While Laura and Tanya emphasized the listening component of pronunciation teaching, Abby and Ginger stressed the importance of kinesthetic and tactile techniques. Housed under the broader classification of either Kinesthetic/Tactile (KP) or Repetition (REP) techniques, several variations of these techniques can be found throughout the interview and observation transcripts. Among the variations mentioned were clapping, standing/sitting, gestures, and using lollipops, kazoos and rubber bands to name a few either done as a part of choral repetition (Repetition Drill) activities or when prompted (Kinesthetic/Tactile Production Activities). For teaching syllables, both teachers used an adapted version of Acton's (1998) "syllablettes." Their adapted version involved groups of students acting out syllables in a word using a kind of whole-body wave, clapping or something more "creative" as Ginger put it. From Ginger's description of this technique, it appeared to me to be somewhat reminiscent of a cheerleading routine, especially since she had the groups compete with each other in terms of their "creativity" in representing syllables. Likewise, when teaching about word stress, both Ginger and Abby highlighted kinesthetic/tactile techniques. In this case, Abby considered Acton's original "syllablettes" routine as one of the most beneficial techniques to use. In the original version, students form a line and, with each student representing a syllable in the word, each student moves his body either up or down, depending on the degree of stress in a given syllable in a word, while saying his syllable only. For Ginger, she considered kazoos to be useful gadgets for teaching word stress. With this technique, students would try to imitate the various degrees of stress in a word (e.g., primary stress, secondary stress, reduced syllable) by blowing on the kazoo (Gilbert, 1994). Not all of the techniques highlighted by Ginger and Abby, however, were necessarily kinesthetically-oriented;

they found a great deal of benefit in using visual devices as well. When teaching vowels, both teachers pinpointed a Visual Recognition Activity (VRC) involving an animal vowel chart. The chart contained symbols from the International Phonetic Alphabet (IPA), and associated with each symbol was a picture of an animal (e.g. bee for /i/). The teachers would point to symbols on the chart and ask students to either say the vowel sound alone, the animal word associated with that sound, or the syllable in the animal word containing the target sound. In addition, when teaching rhythm, Ginger mentioned using a visual that depicted adults and children as representatives of words in a sentence, and each word had different degrees of stress that correlated with the relative height of the adult or child. In Abby's case, she felt that having students listen to successful peer models (Listening Text Presentation Activity) producing English rhythm was the most helpful technique.

Finally, Vala's situation was somewhat unique in comparison with the other instructors. She had difficulty selecting a few examples of beneficial activities, not because she used so many, but rather because of her self-reported lack of knowledge in teaching English pronunciation. In response to my question, she confessed:

I don't know. In the classroom setting that we have, I don't know. What I'm doing, I think it's OK. Could it be better? Yes. Could it be worse? Yeah. So I don't know, and I don't feel I know enough about different types of activities, honestly, as someone who never focused on phonetics, phonology and pronunciation, I don't think I know enough to add in other activities.

With respect to the techniques she did use, she characterized them as "boring" since they mainly consisted of choral repetition drills (Repetition Drill) or having students work with a partner

modeling words or sentences and giving feedback on each other's partner's pronunciation (Production - Student Feedback). This feeling of boredom, however, is also shared by Tanya. In referring to the textbook-centeredness of her high beginning course, Tanya attributed this feeling to her frequent use of the course textbook. On the one hand, she believes that using the activities in the textbook is "the best way" to teach the material, but at the same time she feels that "sometimes it may seem boring."

Table 4.8 provides a summary of the teachers' reported beliefs about useful techniques for improving students' pronunciation. Overall, the teachers' stated beliefs about techniques they consider most beneficial for improving the pronunciation of their students appears to match, at least in part, their desire to hone their students skills at either hearing features of English pronunciation or feeling them as discussed above. Taken together, these findings are dissimilar from those of other English language teachers. Hismanoglu and Hismanoglu (2010) found that language teachers working in North Cyprus preferred using "traditional" instructional techniques such as dialogues, dictionaries and reading aloud when teaching pronunciation. In an interview with Tanya, she mentioned using dictionaries with her students, but she did not highlight this as a preferred technique. In addition, neither dialogues nor reading aloud were mentioned by any of the teachers in the current study; however, determining exactly how the teachers viewed "reading aloud" techniques is difficult since the questionnaire used by Hismanoglu and Hismanoglu neither elaborated on how this technique was defined, nor did the teacher respondents describe how they used this technique. Traditionally, reading aloud refers to "reading directly from a given text" (H. D. Brown, 2007, p. 185), but how similar the teachers in Hismanoglu and Hismanoglu study might perceive "reading aloud" to the other production-oriented techniques classified in the current study (e.g., Visual Identification, Kinesthetic/Tactile Production,

Production) cannot be determined. If the teachers in the 2010 study did in fact only have their students read from a text, then there are no major similarities between the five participants in the current study and the more "traditional" techniques in the questionnaire study.

Table 4.8

Beneficial Techniques for Improving Student Pronunciation

	Tanya (High Beg)	Laura (Low Inter)	Abby (Inter)	Ginger (Inter)	Vala (High Inter)
Vowels			Animal IPA Vowel Chart (Visual Recognition)	Animal IPA Vowel Chart (Visual Recognition)	
Reductions	Holding up Word Cards (Audio Recognition)				
Syllables			Adapted Cheerleading "Syllablettes" (Kinesthetic/ Tactile Production)	Adapted Cheerleading "Syllablettes" (Kinesthetic/ Tactile Production)	
Word Stress	Rules (Explanations & Examples)		"Syllablettes" (Kinesthetic/ Tactile Production)	Kazoo (Kinesthetic/ Tactile Production)	
Rhythm	Poetry (Audio Recognition; Presentation)		Peer Models (Listening Test Presentation)	Visual of Adult/Child Words (Visual Recognition)	
General	Language lab (e.g., Repetition; Production); textbook exercises (various)	Listening discrimination (Audio Recognition) & Information gap (Production - Audio Recognition)			"I don't know" - possibly REP & peer practice (Production- Student Feedback)

4.2.3.2.3 Classroom Snapshot: A Closer Examination of the Observed Classes

This section examines to what extent the teachers' beliefs are reflected in the four observed lessons. One caveat, however, is that the observation of four classes alone can only provide a small glimpse into the lives of participants' lives over the course of a semester. With that limitation in mind, this section explores the types of pronunciation techniques used by the teachers in greater detail, examining in particular the amount of time any one particular technique or type of technique is used. Looking first at the broader categories of controlled, guided, and free pronunciation-oriented techniques, the most frequently occurring throughout the observations are controlled techniques. As demonstrated in Table 4.9, for Tanya, 92% of the techniques used during 88.3% of class time devoted to pronunciation instruction consisted of controlled techniques; for Laura, 94% of 60.1% of class time involved controlled techniques; for Abby, 84% of 69.7% utilized controlled techniques; for Ginger, 100% of 17.4% of class time comprised controlled techniques; and for Vala, 91% of 26.5% of class time consisted of controlled techniques. These findings serve to further support the earlier findings that controlled techniques have a primary role in the teaching of pronunciation in these five classes.

Table 4.9

Frequency of Types of Pronunciation Techniques Used Over Four Lessons

Type of Technique	Tanya (High Beg)	Laura (Low Inter)	Abby (Inter)	Ginger (Inter)	Vala (High Inter)
Controlled	92%	94%	84%	100%	91%
Guided	6%	6%	16%	0%	9%
Free	2%	0%	0%	0%	0.0%

Examining the overall use of guided and free techniques in teaching pronunciation is somewhat tricky since, in most cases, the percentages are very low. In particular, none of the four observed classes included large-scale activities such as the presentations, discussions or plays that formulated sizeable portions of the students' assessment in the course (to be discussed later); therefore, this type of data is clearly unrepresentative of the courses at least in terms of the use of free techniques, especially for higher level classes where students spend time both preparing for and participating in several presentations and discussions. In the case of the guided technique data, however, the results may be more reflective of the overall patterns discussed earlier. The combined findings from the teacher interviews, student questionnaires and initial tabulations of types of techniques utilized by teachers during the observed lessons suggested that the use of guided techniques was limited in comparison with the other technique-types. Aside from Abby, who used guided techniques 16% of the time, the remaining teachers spent less than 10% of their pronunciation time using guided techniques. Based on these results, the analysis of the four observed lessons appears to be representative of the teachers' use of guided techniques in that they show that these guided techniques received less class time than other techniques.

Next, looking deeper into the three categories can provide a more detailed picture of how the teachers utilize the individual techniques that make up the broader categories. Table 4.10 provides a breakdown of each pronunciation technique and the percentage of time (in comparison with other pronunciation techniques) that the teacher used each of them in class. In the table, techniques highlighted in dark grey indicate the top five used by each teacher; those in lighter grey were less frequently used. Overall, the table demonstrates that Activity Set-up (SET), Checking (CHEK) and Visual Identification (VID) are the three most widely used techniques by the five teachers as a group. Three of the teachers, Tanya, Laura, and Abby, also

frequently used Explanations and Examples (EX). Neither Ginger nor Vala used this technique, but none of the lessons I observed involved the teaching of new features of English pronunciation. The remaining techniques varied among the five teachers.

At first, in looking at the numbers represented in Table 4.10, it can be difficult to immediately discern how the teachers' beliefs discussed earlier are reflected here. The sequence of first setting up an activity (Activity Set-Up), which involves giving instructions or examples and/or modeling an activity, and later following up after an activity to verify that students completed the activity successfully (Checking Activity) is a regular sequence in many of the activities throughout the lessons, regardless of the skill targeted. Thus, when it comes to comparing the teachers' beliefs with their practices, it is necessary to examine the other, less frequently used techniques.

Table 4.10

Pronunciation Activities Used in the Observed Lessons

Activity	Tanya (High Beg)	Laura (Low Inter)	Abby (Inter)	Ginger (Inter)	Vala (High Inter)
Plan and Purpose	1.6%	5.1%	0.6%	2.6%	1.7%
Listening Text Presentation	2.6%	0.0%	0.0%	0.0%	0.0%
Activity Set-Up	21.3%	20.6%	36.8%	19.0%	27.6%
Explanations and Examples	15.5%	10.5%	14.5%	0.0%	7.1%
Production Practice	1.2%	0.0%	0.7%	0.0%	0.0%
Kinesthetic/Tactile Practice	0.0%	0.0%	1.4%	3.3%	0.0%
Checking	19.5%	17.0%	11.2%	33.6%	10.3%
Question-Answer Display - Knowledge Verification	2.6%	7.7%	5.3%	1.1%	0.0%
Question-Answer Display - Knowledge Exploration	4.4%	5.0%	1.4%	0.0%	0.0%
Repetition Drill	4.7%	5.2%	0.0%	0.0%	2.6%
Visual Identification	9.0%	18.0%	7.3%	40.3%	30.2%
Audio Identification	0.0%	0.0%	0.0%	0.0%	1.4%
Repetition Drill - Audio Identification	2.9%	0.0%	0.0%	0.0%	0.0%
Visual Recognition	1.0%	1.4%	0.0%	0.0%	0.0%
Audio Recognition	5.5%	3.1%	5.2%	0.0%	9.9%
Question-Answer Referential	1.7%	0.0%	0.0%	0.0%	0.0%
Production - Student Feedback Practice	1.1%	3.0%	0.0%	0.0%	9.2%
Production - Audio Identification	3.5%	3.3%	0.0%	0.0%	0.0%
Production - Audio Recognition	0.0%	0.0%	2.3%	0.0%	0.0%
Mutual Exchange	0.0%	0.0%	13.3%	0.0%	0.0%
Game	1.8%	0.0%	0.0%	0.0%	0.0%

Note: Refer to Table 4.5 for a brief summary of all the codes used to describe the pronunciation activities/lesson components used by the five teachers.

In the case of Tanya and Laura, they emphasized the overall importance of using listening discrimination techniques with their lower level learners, believing that students need to be able to perceive an element of English pronunciation before they can produce it. The analysis of their observed classes revealed that both teachers used a variety of listening discrimination techniques. Tanya used both Production - Student Feedback (P-SF) and Production - Audio Identification activities (P-AID) in pair work situations and both Audio Recognition (ARC) and Repetition - Audio Identification (REP-AID) activities with the whole class. With this last activity, students repeat an utterance after their teacher and then identify a particular feature in that word. Figure 4.22 provides an example of Tanya using this technique with her class. When all the techniques are considered as a whole, listening discrimination activities (Audio Recognition and Audio Identification activities) constituted about 13% of the time spent teaching pronunciation.

Tanya:	PersonNEL.
Students:	personNEL.
Tanya:	How many syllables are there in this word? PersonNEL.
Students:	Three.
Tanya:	Three. And which syllable do you stress?
Student 1:	Last.
Tanya:	Last. PersonNEL. Yeah. Ok, this word is ELeMent.
Students:	ELeMent.
Tanya:	So, how many syllables are in this word?
Students:	ELeMent.
Tanya:	EL LE MENT ((claps hands on each syllable and then hold up three fingers)).
Students:	Three.
Tanya:	Three. ELeMent. Which syllable is stressed?
Student 2:	First.
Tanya:	The first syllable.

Figure 4.22 Classroom Snapshot of a Repetition Drill - Audio Identification Activity

Like Tanya, Laura also used several listening discrimination techniques, including Audio Recognition (ARC) as a whole class activity and both Production - Student Feedback (P-SF) and Production - Audio Identification (P-AID) as pair work activities, which totaled about 9.4% of her focus on pronunciation in class. These totals still appear small in consideration of the teachers' stated intention to focus on listening discrimination in these courses. In fact, based on the classroom observations alone, an observer might conclude that the teachers are not meeting their goals for this course; however, the interviews and especially the statements made by students in the questionnaires (to be discussed later) indicate that the students in Laura's and Tanya's classes also do a lot of work in the language lab on listening discrimination as well as production. Thus, the combined data demonstrates that Tanya's and Laura's beliefs are reflected in their practices. They both believe that listening discrimination is an important step to achieving successful production, a belief supported by pronunciation specialists (Celce-Murcia, et al., 2010; Strevens, 1974). This finding is significant in light of research connecting the quality of students' knowledge about pronunciation to ratings of their comprehensibility. Kennedy and Trofimovich (in press) found that students who had the greatest "language awareness" in L2 listening in terms of their ability to describe language as a vehicle for conveying meaning and how different aspects of pronunciation (e.g. rhythm or intonation) are a part of this process, were also the same students who had the strongest comprehensibility ratings. Although the "quality" of the language awareness of Tanya's and Laura's students is not known, the teachers appear to be providing them with the initial building blocks required to gain a level of language awareness necessary for comprehensible speech.

Unlike Laura and Tanya whose beliefs and practices centered on instilling an awareness of language through listening perception to later produce intelligible speech with their lower

level learners, Ginger and Abby focused instead on the production-side of pronunciation practice with their intermediate level learners, as facilitated through the use of movement. Overall, the observed lessons revealed that the use of movement was present in both classes. Both teachers used activities involving movement at various points throughout their lessons. In terms of class time, activities that involved the combination of kinesthetic/tactile senses during speech production (Kinesthetic/Tactile Production activities) only constituted 1.4% and 3.3% of Abby's and Ginger's used of pronunciation techniques, respectively, over the four classes. These figures are deceptive if used as representative of their teaching. First, in Ginger's case, the figure of 3.3% represents one small part of one class where she reviewed a couple of techniques that she had previously taught her class (though in a lesson I did not observe). As a review activity, the amount of time Ginger spent using the previously taught Kinesthetic/Tactile Production (KP) techniques would have been shorter than the amount of time she actually spent with these techniques in the previous lessons. Also, based on my personal observation of the review activity, most of the students appeared able to do the activity without requiring the teacher to provide extra explanation; no students asked any questions while the teacher gave brief instructions on how to complete the review activity. In this activity, Ginger had students use three Kinesthetic/Tactile Production (KP) techniques, one of which was new and the other two were introduced in a previous lesson, while reading a couple of sentences from their text on American history. Figure 4.23 provides the classroom transcript for this activity. Words in bold indicate the physical movements/descriptions of the teacher and students. The words that are capitalized indicate the words on which the students and teacher carried out a physical movement, either by banging on their desks, standing up or sitting down, or stretching their rubber bands (that the teacher gave to students in a previous lesson).

Ginger:	What I want us to do is a little bit of all of our activities, so the first thing that I would like us to do is this sentence. We'll read it and we're going to ((pauses and makes a two-handed downward motion)) BANG ((same motion)) the KEY ((same motion)) words ((same motion two more times)) on our desktops. Ok? The content words, right? Am I going to do this one? ((points to the word "The" in sentence))
Students:	No.
Ginger:	No. ((Then she points to the "first"))
Students:	Yes.
Ginger:	Ok? Alright, we're gonna try this. We haven't practiced it ((referring to the motion)) or anything but we're just gonna try it ok? So is everybody ready? [...] Ok. Ready? Go!
All:	The FIRST ENGLISH SETtlers to arRIVE in the NEW WORLD LANDED in JAMEStown VirGINia in SIXteen o SEVen ((On each stressed word, the students hit their desks with their hands)) .
Ginger:	Good. [...] Ok. next one. Next one I think we're gonna do our EXercises ((puts hands on hips and bends knees on "exercises")) where we stand. [...] We are standing for the stressed words here. [...] Let's give it a try. Here we go. Ready...go!
All:	The PILgrims SAILED ((Student move from a sitting position to standing on PHIL, and remain standing for SAIL)) from ENGLand ((stand)) to the NEW WORLD ((Stand and remain standing for NEW and WORLD)) in SIXteen TWENTy ((Stand and remain standing for both words)) on the SHIP MAYflower ((Stand and remain standing for both words)) .
Ginger:	Very good. ((claps hands)) [...] Ok guys, now we're gonna do, not just bigger, louder, we're gonna do longer ((pulls her arms apart)) , we're gonna stretch it out ((pulls her arms apart)) . Remember how we had the rubber bands last time? ((pulls arms apart)) . Ok, if you have your rubber band, you can use it. If you don't, no big deal. We're gonna stretch them out ((stretches her arms apart)) . [...]Let's stretch out those content words ((stretches arms apart)) . Ready, go!
All:	The MassaCHUsetts COLonists CAME to the NEW WORLD to be FREE to form their OWN CHURCH ((on each stressed word, they stretch their rubber bands apart)) .
T:	Nice, excellent.

Figure 4.23 Review Activity: Bang, Stand and Stretch for Stress

The remainder of Ginger's four observed classes did not involve any activities requiring physical movement on behalf of the students. The opposite, however, was true in the case of Abby's four observed classes. Many of her activities required physical movements. With the Kinesthetic/Tactile Production technique, she had students engage in a fugue, or musical round similar to the singing of the "Row, row, row your boat", while maintaining a beat through clapping. According to Abby, this activity was called "There's a fire in the kitchen". However, in this case, the groups of students would only chant their one designated piece. For example, while clapping to a beat, the first group of students would chant "FIRE, KITchen"; the second group would chant "FIRE in the KITchen"; the third would chant "a FIRE in the KITchen"; and the fourth and final group would chant "There's a FIRE in the KITchen". These phrases would be repeated several times in a row and all the students in the class had to say FIRE and KIT at the same time, regardless of how many syllables/words they had to say between each beat of FIRE and KIT. In addition to this one KP technique, Abby also employed physical movement in both the audio recognition techniques (Audio Recognition and Production - Audio Recognition) and the Mutual Information Exchange (MIE) activities. With the Audio Recognition activities, either the teacher or a student would say a word (e.g., slip or sleep) and the other students would have to indicate which word they heard using a particular gesture (e.g., using their hand to indicate a slipping motion for "slip" or resting their head on their hand to indicate "sleep"). With the Mutual Exchange activity (MIE), the students did not have to perform any gestures; instead, they had to move around the classroom trying to find a classmate who had a word containing the same vowel sound as they had. This activity involved both trying to discern the vowel sound in a word uttered by one student while at the same time trying to figure out whether the vowel sound in their word sounded the same. This two-way information gap activity is particularly

challenging, requiring intelligible pronunciation and sharp listening discrimination abilities by both students to complete the activity successfully. Overall, the observed classes appeared to mirror Abby's and Ginger's belief that the use of physical movement (e.g., gesture) is helpful in the learning of English pronunciation. Although the four observed classes with Abby demonstrated this belief to a greater extent than in Ginger's, the complexity of the review KP activity in Ginger's observed lessons indicates that Ginger had used several kinesthetic/tactile-oriented activities in previous lessons. The beliefs and practices of Ginger and Abby follow the beliefs of other specialists in the field who also advocate for or support the use of the body, movement and gesture in pronunciation work (Acton, 1984, 2001; Acton, Baker, & Burri, 2009; Bell, 1997; Celce-Murcia, et al., 2010; Gilbert, 1991; Graham, 1978, 1986; Murphy, 2004). Although empirical research has yet to be conducted on the influence of kinesthetic/tactile techniques on pronunciation learning, at least as far as I am aware, the use of these techniques has frequently been employed not only in ESL education (e.g., Total Physical Response method developed by James Asher, 2000), but also in voice and speech training in general (e.g., the work of Arthur Lessac, 1997).

As mentioned earlier, both Tanya and Vala expressed a similar concern about their classes, feeling that perhaps the focus on pronunciation may be "boring" for their students. In speaking about the techniques used in her class, Vala explained that she "[knows] it can be really boring, just the drilling work, it always feels like drilling, no matter if it's a true drill activity or not." With respect to Vala's class, this sentiment is understandable in light of the fact that she acknowledges her lack of knowledge of techniques for teaching pronunciation, a fact that appears supported by the relatively few types of techniques that she uses in her class, 14 techniques altogether (see Table 4.7). (In comparison, Tanya, Laura and Abby used 20, 22 and

21 techniques respectively.) Aside from Plan and Purpose (PLAN), Activity Set-Up (SET), Explanation and Example (EX) and Checking (CHEK) techniques that typically form the backbone of most pronunciation lessons or activities, the only techniques that Vala used with her students are Repetition Drills (REP), Visual Identification (VID), Audio Identification (AID), Audio Recognition (ARC), and Production - Student Feedback (P-SF). Two of these, Repetition Drills (REP) and Production - Student Feedback (P-SF) were the same two that Vala highlighted as ones commonly used with her students. However, the most frequently used technique over the four lessons was Visual Identification (VID). With 30.2% of all her pronunciation techniques comprising visual identification techniques, more than Repetition Drills (REP) and Production - Student Feedback (P-SF) activities combined, the influence of the textbook on Vala's teaching becomes apparent. As Vala noted in the interviews, she followed the textbook when teaching pronunciation, and the textbook usually employed Visual Identification (VID) techniques, which involved students identifying syllables and word stress in key words. In comparison with the situation with Vala, Tanya's belief that her class might be considered "boring" is less understandable considering that she incorporates a variety of textbook and additional activities into her lessons, altogether at least 20 techniques (see Table 4.7). Essentially, Tanya used a wide range of techniques whereas Vala's pronunciation toolkit comprised considerably fewer techniques. From an outsider's perspective looking in to their respective classroom lives, the problem, if indeed there is one, may be what Prabhu refers to as "overroutinisation" or Acton (1992) refers to as "technique entropy" or the overuse of a technique. Prabhu (1992) wrote that our teaching can result in "overroutinization to the point where lessons become merely the performance of routines" (p. 239). In Vala's situation, only a small percentage of time is devoted to pronunciation instruction, but she, and she freely acknowledges this, uses only a small handful

of techniques. Tanya, with the aid of the textbook, uses a large assortment of techniques; however, textbooks tend to use most of the same types of techniques from one unit to another, and over time, students and teachers alike may become "bored" with the routine. Furthermore, since a large majority of her course is devoted to pronunciation instruction, even if the textbook contains a vast variety of techniques, these techniques can quickly become tiresome. To help alleviate this sense of boredom, Tanya searched the internet as well as perused other resources to bring in poetry, dictionary and other non-textbook resources into her pronunciation lessons. Despite the number and variety of techniques that Tanya integrated into her lesson plans, she still could not eliminate this feeling that her lessons might occasionally be boring. Both Tanya and Vala, albeit for different reasons, may need to address the challenge of "technique entropy" in their classes. Greater incorporation of guided activities such as Production - Audio Recognition (P-ARC) and Mutual Information Exchange (MIE) as well as free techniques such as Drama (DRAM) and role play may assist them in their efforts, techniques that neither teacher appeared to use in their respective courses.

In summary, the closer examination of the practices of the five teachers in the four observed lessons confirmed several of the findings based on overall tabulations of the teachers' use of certain techniques, and the teachers' beliefs about these techniques. First, on the continuum of controlled to free techniques, controlled techniques were clearly dominant when teaching pronunciation throughout the four lessons, ranging from 84% to 100% of all the time the teachers taught pronunciation to their students in these observations. Second, Activity Set-Up (SET), Checking (CHECK) and Visual Identification (VID) were the three most frequently used techniques by the five teachers as a group. Activity Set-Up naturally took place prior to the main pronunciation activity, and once the main pronunciation was completed, teachers frequently used

a Checking Activity to determine how successful the students were in completing the activity. Third, Laura and Tanya's belief that learners need to first be able to hear a feature of pronunciation before they can produce it was reflected in their use of listening discrimination activities (Audio Recognition, Repetition - Audio Identification, Production - Audio Identification) throughout the observed lessons, although not as frequently as might be expected considering their beliefs. Fourth, Ginger and Abby's belief that kinesthetic/tactile practice is important in the learning of pronunciation was also represented in their observed classroom practices. Especially in the case of Abby, both teachers engaged students in kinesthetic/tactile techniques. Finally, the observations served to expand upon the earlier discussion that both Tanya and Vala felt that their lessons might sometimes be boring. Although Tanya took advantage of a larger range of techniques than Vala, both classes appeared to use a regular routine of techniques, particularly in the case of Vala, which may have resulted in "overroutinization" (Prabhu, 1992), thus explaining the boredom experienced by both teachers.

4.2.3.3 Models in Teaching Pronunciation

A third sub-component of teachers' cognitions about pedagogical content includes the use of models when teaching English pronunciation. Unlike most areas pertaining to teachers' beliefs and the teaching of pronunciation where few studies, if any, have focused on components of teachers' cognitions about pedagogical content, the issue of what types of speaker models or accents that teachers expose their students to has been a topic of interest in several studies. In addition, the topic of World Englishes or English as an International language is one of the most widely-discussed issues and has received increasingly more attention over the past few decades. Since the participants in the current study are teachers who work within an IEP housed in a larger university department, they regularly interact with faculty and graduate students who

contemplate such critical areas as interactions between speakers of different varieties of English. Being members of a specialized community, the five teachers are all at least aware of this contemporary "hot" topic in the field of Applied Linguistics, which in turn influences their cognitions and classroom practices in various ways. To determine to what extent the growing awareness of World Englishes may or may not influence their classroom practices directly, I asked each of the teachers: *What pronunciation models do you typically use in your classes?* Their responses highlighted three main types of models: teacher models, published materials, and student models.

For all of the teachers, the main model used in their OC courses was their own voice (e.g., their own dialect of spoken English. Both the teachers' responses to the interview question and the classroom observations revealed that the voice (e.g. dialect) of the teacher was the primary model to which their students were exposed. In an ESL context, these findings are not surprising. All of the teachers, whether bilingual or monolingual speakers of English, spoke English since early childhood and appeared confident in their ability to speak intelligible English. In studies involving English teachers who grew up and taught in EFL contexts, the reverse has been true. Jenkins (2007) and Sifakis and Sougari (2005) found that teachers preferred using NS speech models in their own classes instead of their own speech. However, both the current participants and those in Jenkins (2007) expressed a similar desire. The participants in Jenkins study favored the idea of using NNS models even though they still used NS models in class. Likewise, the participants in the current study expressed a preference for exposing students to NNS dialects of English. As with the participants in Jenkins' study, the current participants referred to issues related to practicality in providing models other than what

Celce-Murcia et al. (2010, p. 41) generally refer to as North American English (NAE)⁴. In the intermediate and high intermediate classes taught by Abby, Ginger and Vala, their students are required to develop listening and note-taking abilities when listening to academic lectures. Part of this requirement is that students are taught and are expected to interact with the lecturer by asking questions whenever they have difficulties understanding what is said. Ginger explained "That's what they're supposed to learn at this level. A lecture is not just them sitting there and taking notes. It's asking the questions they need to understand." The interactive nature of the lectures, thus, limits possibilities for exposing students to other dialects of English. In response to the question about the models she uses in her classes, Ginger answered:

[The models] would be just mine at this point because, for the lecture, I do it on the spot because one of the goals that we're working toward is an interactive lecture, so that idea is introduced in unit 3 and then continued in unit 4. What are the expectations of the student during the lecture? When can you ask a question? How should you ask a question? Those kinds of things. And so unless I had a guest speaker come to the class and basically take over my job, then I can't really do that [bring in other models of English] for the lectures. For the pronunciation again, I'm the one who's doing the on the spot...you say, I say, you say. You know that sort of in the moment sort of work. Again it falls back on me.

With the focus on creating a more communicative type of lecture environment, where students learn how to survive the undergraduate or graduate classroom in a North American university, students need opportunities to interact with lecturers from whom they ask for clarification or

⁴ Celce-Murcia et al (2010) use the standard term, North American English (NAE), because differences between the English spoken in the U.S. and Canada typically cannot be distinguished by people outside of North America.

more explanation. For Abby, Ginger, and Vala, using recordings of NNS models to replace these particular lectures would not help students to participate successfully in university classrooms.

In addition to their own speech as models of spoken English, the five teachers also used the recorded materials provided by the course textbook or curriculum materials. When asked about these resources and the types of dialects that students might listen to on these CDs or computer-based language learning programs, each of the teachers felt that the only dialects available on these resources were NAE models. Laura said:

I think on the CDs that we use as far as the listening, it's pretty Americanized I would say. I can't remember [computer program], if they have any variety in the accents that they produce. I don't remember. [...] That's really all they get.

In fact, in reference to some of the dialects her students listen to on the CDs, Tanya expressed how ironic it was that even when international speakers were included on CDs, they still had an NAE accent. Tanya explained that:

Even when they had to listen to these conversations or lectures, more the conversations, there's this one girl who's supposed to be an international student and she had a completely standard North American dialect.

Despite the primacy of NAE accents prevalent throughout the textbook or computer program materials that they use with their classes, the teachers still expressed a desire to include international dialects of English in their teaching. The problem they encountered, however, was available time. Spending time to look for models of international dialects of English, whether of monolingual or bilingual speakers, that were appropriate for the level of language learner in their classes was a challenge. In reference to the low advanced OC course that she has taught in the past, Vala has found short lectures on YouTube given by proficient bilingual speakers of

English, but she has not had time to find suitable lectures for use in her high intermediate OC (level 4) course. Vala commented:

Everything in the materials that we have for level four, it has what I think are native English speakers, American English speakers on the CDs. But in the Level 5 book, it's the same thing. But I've tried to find other [models] like highly proficient non-native speakers, speaking English in their lectures for the Level 5 oral comm. class. So in a chapter on Intercultural Business Communication, I'll try to find a highly proficient non-native speaker giving a short lecture on YouTube, so that the students are listening to not just mid-west [accent], you know somebody else. Again the materials don't have a whole lot of diversity in them. And it's a lot of work to find it yourself. But I do try, where I can, to push the highly proficient non-native person, where I can. I try.

Not having the time to look for resources is a common concern among language teachers, not solely for the participants in this study. Based on her study of teachers' beliefs about internationally-published materials made available in Indonesia, Zacharias (2005) found that one of the reasons that teachers appeared to favor internationally-published materials over locally-published materials was related to availability. It was easier for teachers to use the more widely available internationally-published materials than to try to find limited copies of locally-published materials, most of which they believed to be incomplete, not providing sufficient explanations or examples. Furthermore, if they did find them, Zacharias reported that "the teachers needed to fill in the gaps themselves, thereby adding to their workload" (p. 30). In the same way, the participants in the current study have heavy workloads, teaching multiple courses or undertaking graduate (doctoral) coursework.

Although NS NAE accents are the primary source of English speaker models in the classroom, some of the teachers have nonetheless made an effort to incorporate student NNS models into their teaching, either through recordings of former students or through highlighting the wealth of model diversity already present in the classroom. In relation to this first model type, Abby utilized recordings of students from past OC courses she had taught. To help her students realize that achieving "standard" English rhythm is an obtainable goal, Abby played audio recordings of former students who had successfully demonstrated target-like rhythm during speaking tests. Along a similar line of thinking, Laura explained that it is beneficial for students to realize that NNSs can be successful speakers of the English language. What Laura was referring to was her past experience in teaching an oral fluency class in which she invited Korean undergraduate speakers of English to talk with her IEP students. She said, "I was glad that they could see that you don't have to be an American to speak English." In fact, both Laura and Ginger explicitly stated that the more accents they can expose their students to, particularly to "successful communicants in the language" (Ginger), the better, although in their current OC courses, they were not able to provide such exposure. With regard to the second model type - the diversity of models already present in the classroom -, Laura, Abby, Ginger, Vala all emphasized the position of students as excellent sources of NNS models, especially during pair work and group activities. According to Laura, using student models can be beneficial even for lower level students who typically encounter more communication problems when conversing with other people. She remarked that communication breakdowns may be the result of unfamiliarity with other accents and are not necessarily due to other difficulties with the language, thus "it is really important for them [...] to get used to different varieties" of English. In Vala's classes, she appeared to place a strong emphasis on her higher-level students looking to each other as models

and sources for feedback on their pronunciation. During the four observed classes, she encouraged students to ask other students for assistance, especially during Production - Student Feedback (P-SF) activities. In the stimulated recall interview that involved the viewing of the Production - Student Feedback activity, Vala stopped the video playback and commented on the group activity:

I'm thinking that, I know I need to be there, like modeling; but I'm thinking we've also done, I've done so much modeling of [this feature] the week before and with their activities, their voice recording, that now I don't want them to be relying on me to do it. I want them to help each other. And they can hear when people are making mistakes. I want them to like speak out and say "No, that didn't sound right" or help them to [pronounce it correctly]. I want them to learn [that] they're not always going to have the teacher to help them. You know, they've got to help each other. And I don't know that if I'm thinking that right in this second, but it's one of those things that I think about when I'm not in the group. It's just like a philosophy that I have. It's always there. It's like they need to be doing this autonomously, and succeeding in failing.

Thus, for Vala, learner autonomy at this stage in the language learning process is important. She valued having students using each as models and receiving feedback from each other in their efforts to become more intelligible to other speakers of English. Finally, in the case of Tanya, she never discussed how students might take advantage of other students in the class as potential models of English; however, since her class is comprised of the lowest level of students, most of whom spoke the same language, she may not have considered them to be potential models of NNS English, at least not when the topic of models was discussed during the interviews.

Overall, these findings demonstrate that the teachers have a desire to expose students to a variety of successful speakers of the English language from diverse L1 backgrounds; yet, insufficient time and resources prevents them from acquiring suitable NNS models for their language learners. This lack of appropriate resources for teaching pronunciation has also been noted in other studies of teachers' beliefs about pronunciation teaching (S. Macdonald, 2002; Zacharias, 2005). As a result, the teachers' own speech patterns as well as additional recordings of L1 NAE speech serve as the primary models of English speech in the five classes; however, at the same time, in consideration of the L1 diversity in most of their classes, the teachers appear to value the role of student peers as potential models of successful target-like speech.

4.2.3.4 Cognitions about Assessment and Feedback

The final sub-component of teachers' cognitions about how to teach pronunciation focuses on ways in which the teachers assess and give feedback on learner pronunciation. Specifically, this section outlines the instruments used to assess student pronunciation, what teachers focused on when assessing pronunciation, and how feedback was given to students. Examining first the instruments for assessing pronunciation, the teachers described both diagnostic and summative assessment tools. At the beginning of the semester, most of the teachers utilized informal or formal assessment instruments to determine students' communicative abilities. In class, Abby and Vala arranged students into small groups or pairs where they interview each other about their backgrounds and interests. Later, each learner introduced her or his partner to the entire class. During the peer introductions, Abby and Vala made informal assessments as to individual students' general language abilities. Alternatively, Ginger engaged students in a whole-class discussion concerning the students' perceived needs about their speaking and listening abilities. In addition to these informal diagnostics, Abby as

well as Tanya both had students produce audio recordings in which they read from an assigned text. Using a copy of the written text, the teacher indicated areas in which the students demonstrated difficulties with English pronunciation. In Tanya's case, she gave students a copy of the problematic features and, throughout the semester, the students worked on these features in the language laboratory. The students chose which particular features they wanted to focus on each week. As for Laura, she mentioned that the only diagnostic she used in the course was focused solely on the students' listening discrimination abilities in discerning various features of pronunciation. In terms of spoken assessment, Laura admitted that she was "intimidated" by the sheer number of students in her class. With 17 students, she felt that there was insufficient time to listen to all the recordings and to diagnose the individual needs of each student.

In relation to on-going assessment that occurred throughout the semester, the five teachers had students produce audio recordings in the language lab as well as participate in whole class activities such as presentations, plays and/or discussion quizzes in which their pronunciation was assessed to a certain extent. All of the teachers had students record either words or full sentences in the lab, after which they gave the students a grade for completing the assignment as well as some feedback on their pronunciation. Usually four to six recordings were done per course. In the higher-level courses, Abby, Ginger and Abby had students give presentations and participate in discussions quizzes; in Tanya's high-beginning course, the students read a poem instead of giving a presentation; in Laura's low-intermediate class, she had the student do several listening discrimination exercises as part of unit tests and, instead of doing presentations, the students had to perform a short segment from a television sitcom (in this case, *Seinfeld*). Of all the interviews conducted with the teachers, Laura appeared the most enthusiastic when discussing how she worked with students' pronunciation. During the second

interview, she used the words "fun", "amazing", "impressed" and "excited" in describing her thoughts about students' work on imitating the actors' voices from the video clip. Laura said:

...final project, like in the 700s we don't have final exams. In the upper levels, they do presentations, [but the Seinfeld performance is] their presentation for this class. Gives them something fun to work on at the end of the semester and I swear it's amazing how, I feel that with their pronunciation, they do very well with that, you know and [...] they turn out pretty well. That last semester, I was pretty impressed last semester with how accurate they were, and they were speaking quickly and I think it does sort of give them some kind of confidence.

Laura ended by saying how "excited" she was "to be starting it again."

In the assessment of the students' spoken language, two common themes surfaced in the teachers' descriptions of how they evaluated the students' speech. The first was the issue of comprehensibility. Ginger, Tanya and Laura all stressed that the purpose of their evaluations was not to determine the degree to which students sounded like native speakers, but rather how comprehensible they considered their students' speech to be overall. Tanya felt that "it is more important to be comprehensible than to get everything correct" and Laura added that "students need to be comprehensible, especially [those] in our program who want to go to university and need to make presentations and need to be able to communicate with their peers." During the second stimulated recall interview with Ginger, in which we watched two students discuss the pronunciation of a word, Ginger remarked,

That's a productive situation when they're just actually trying to figure out how you say it as opposed to "you're wrong and you're right", which sometimes happens with [these two particular students]. And that's why I say that it's not a "you're wrong, I'm right". It's a

"Are we saying this in a way that we're going to be understood by other speakers of the language?"

Ginger's satisfaction with the students' efforts to negotiate the meaning of the pronunciation of a word was similar to Vala's strongly held belief that students should be encouraged to work with other students to address difficulties with pronunciation, and not to always rely on the teacher for help. Vala and Ginger's preference for student-negotiated pronunciation work reveals that the field of English language learning has, at least with these teachers, transcended the period in time in which providing "correct" models (as opposed to student self-discovery) was the norm in some ESL classrooms. In the late 1970s, for example, Cathcart and Olsen found that 21 teachers in the USA favored the "correct" model approach to pronunciation instruction. Based on the teachers' self-reports and cognitions and the classroom observations, the five teachers appeared to encourage student self-discovery of comprehensible speech instead of only resorting to teacher-directed corrections.

Accomplishing this goal of comprehensibility also involved problems related to feasibility. Vala explained that "There's so much that goes on within a single speech sample that there's so much to assess", a comment similar to the one expressed by Laura earlier in this section. With classes made up of learners from multiple L1 backgrounds, addressing even the common-most needs of specific L1 groups, let alone the needs of individual learners, is a challenging task. Nevertheless, the five teachers utilized the same strategy to manage learners' needs. Their approach was simply to focus on the target feature for a given task. Thus, if the focal feature for a unit was word stress, the teacher would typically only give feedback on that feature. In the case of Ginger and Abby, assessment was cumulative, meaning that features of

pronunciation addressed in earlier units were also assessed in the current unit. Abby explained how this process worked in her class:

Well, in this first unit I did, I just had them give me seven words and they were supposed to give me how many syllables there were. And then I told them that in their recording I would listen to see if [they] said three syllables. I wanna hear those three syllables, so I'm not worrying about word stress. I just want to hear those syllables. So that's really targeting those who want to add a syllable and those who want to take out a syllable. So, they can identify the syllable [when they hear it], but when they produce it, is it there? And then next, a voice recording homework. I'll have them do the same thing again. The same little story that they told me. Take the same words, identify the stress patterns and then tell me the story again, making sure they have added the stress to those words. I would target those words coz there's no way they could correctly stress all the words in there. So, it's just starting to add on. When we get to unit three, then I'll have them [do] the sentence-level stress. Identify those words, correctly stress those words in the sentence, reducing the other words, making sure they have all the syllables, just building on that.

Furthermore, Ginger expressed a belief in following a "mastery approach" to student achievement of targeted features of English pronunciation. She was the only teacher who reported allowing students the opportunity to "re-do" their work if they were unhappy with their grades. She reiterated that by "mastery" she did not expect them to obtain native speaker-like speech, but rather achieve an "acceptable pronunciation" which she defined as spoken language that was comprehensible to other English speakers. One of the disadvantages with the approach of focusing on target features, however, as Laura points out, is that these features do not always

correspond to those that may cause the most issues with comprehensibility. She described a time when she was listening to students' pronunciation at home and her husband said, "What are they saying?" and, after his comment, she thought "I know sometimes it's hard to understand."

Occasionally with her class, however, Tanya identified non-target sounds that were mispronounced on their feedback sheets in order to give students a different feature of pronunciation to work on during their next session in the language lab. As her students had the freedom to choose which features they wanted to work on, her method helped to guide them on where to focus their efforts next. Conversely, Vala appeared reluctant to go beyond the features targeted in her class. She admitted that "the only thing [she] looks for is syllable stress" because that is the only element of pronunciation that receives attention in the course objectives.

Nevertheless, she also mentioned that she "make notes about individual consonants or vowel sounds, or blends or anything that's an articulation problem." Overall, these findings indicate that both the teachers' desire for improving students' general levels of comprehensibility in addition to curriculum-determined target features of pronunciation served as the underlying criteria behind the teachers' assessment of their learners' speech. In comparison with the study by Cohen and Fass (2001), the current study's findings are more specific. While Cohen and Fass found that teachers prioritized the role of pronunciation and grammatical accuracy in assessing the spoken language of EFL learners in Colombia, my findings indicate that comprehensibility, and not native-speaker accuracy, appear to be the principal factors in the assessment of ESL learners' speech and that only the production of specific features appeared to be graded in their spoken language.

The final stage in the assessment process that warrants attention is how teachers provided feedback to learners. Essentially, feedback was provided both in class and on the students' voice

recordings. In terms of the voice recordings, feedback was provided either in written form or as a teacher-produced audio recording. Vala, Abby and Laura all used a written-based method for conveying feedback, typically in the form of a rubric or as comments written on a printed transcript of the students' speech. Only Ginger and Tanya used the online system (called Wimba) to provide oral feedback on the students' pronunciation. In either case, the teachers would comment primarily on target features. The reason for this difference appears to be directly related to the time commitment involved in providing oral feedback. Laura, with a class of 17 students, explained:

The reason I said that is because, I know like my officemate is doing oral feedback, and I'm like that's a good idea. But I've tried it and it's time-consuming, so I've given up. I need to figure out a way to make it less so but I haven't yet.

Tanya, however, with a class of only four students, found that the oral feedback was easier, feeling it would be less time-consuming to explain her feedback orally than to provide written descriptions for her high beginning students. Ginger, who also provides oral feedback, nonetheless appeared to agree with Laura. Even though Ginger provided feedback using voice recordings with each of her individual 13 students, she commented that she spent "a lot of time giving feedback" and that she worried that some of her students failed to listen to it. The issues of time, and teachers not using computer or online technology to their full potential, have been observed in other studies of teachers' cognitions (Lam, 2000; Shin & Son, 2007). Shin and Son (2007) and Lam (2000), for example, that found that almost half of their teacher participants did not use computer or internet resources. In contrast, all of the teachers in the current study utilized such technologies as part of their normal instructional routines, even if these resources were not being used to provide oral feedback on student pronunciation.

In addition to the feedback provided on the video recordings, the teachers also gave feedback in class. During the checking activities (CHEK) that immediately followed other pronunciation-oriented lesson phases, all of the teachers frequently gave whole-class, typically positive feedback on their performance using words such as "excellent", "very good" or "good". Abby noted that most of her feedback "comes from when [they]'re practicing in class", usually as feedback for the whole group, but occasionally "one-on-one" as well. One of the concerns that Ginger expressed in relation to whole-group feedback is that, as a group, their pronunciation seems more than adequate, but individually, their pronunciation may be less intelligible. During one stimulated recall interview, Ginger remarked that:

I remember thinking at the time that as a collective group that it sounded really nice compared to previously...like in the first unit. I remember thinking oh, that's some nice English rhythm going on here. Individually, not so sure. But I remember thinking at the time wow, that sounds really like some nice English rhythm.

For Ginger, as well as Vala, feedback on pronunciation was most effective when done on an individual basis since the pronunciation problems of individual students may remain unheard amidst the voices of the whole class. Despite this concern, all five teachers regularly provided whole-class feedback. One specific technique type they mention using on occasion was recasting. In the interviews, either semi-structured or stimulated recall, the five teachers mentioned using the technique of repeating a word back to the student while hoping to increase student awareness of the desired pronunciation. However, both Ginger and Abby acknowledged that that using repetition drills does not always succeed with learners, and sometimes a more direct approach is necessary. When watching herself in a video during the second stimulated recall interview, Abby commented on her brusque-seeming manner with her class:

I watch myself and I say, "Wow, Abby. You could really say it a little more politely or something. But, polite doesn't work. You really do have to cut to the chase because, like I said, I was trying to point on the chart so I'm not confronting them you know in that way, but if it doesn't click, it really has to be cut and dry.

Abby had attempted to enable the students to figure out the pronunciation of the word "Libya" for themselves by pointing to a picture of a fish on the animal vowel chart, but in this instance, that approach was unsuccessful, resulting in Abby telling her class "No" and that a different pronunciation was needed for the problematic vowel. Unlike the other four teachers, Vala expressed a distinct preference for avoiding recasts in class, but particularly in cases where she considered the information to not be important for the rest of the class. While watching one teacher-student interaction during a stimulated recall session in which she decided not to recast an item for a student, she explained:

I try not to do too many recasts, because I feel that it could be a little patronizing to students who are like "why is she always repeating what I say" especially when her question, I don't think I thought her question was relevant for everyone, you know. And if I recast everything, I'm never going to get anywhere, you know. Also it goes back to that idea, they have to listen to one another, don't always just listen to the teacher, listen to your classmates too. [...] So I try to pick my recasts carefully, as a teacher, so that's why I didn't [recast it].

In summary, the five teachers employed a variety of techniques to assess the pronunciation of their ESL students. Of the teachers who used diagnostic assessment tools, only Abby and Tanya included voice recordings as part of their initial evaluation of their students' patterns of pronunciation. As part of the teachers' assessment practices, voice recordings as well

as listening comprehension discussion quizzes, presentations and/or plays comprised central roles. An integral component of the assessment process, according to all five teachers, was the desire to enable students to achieve comprehensibility, and not necessarily native-speaker accuracy. Whenever possible, the teachers, particularly Vala and Ginger, encouraged peer negotiated comprehensibility among students - an indication that these ESL teachers are moving away from the "correct" model approach favored in previous decades (Cathcart & Olsen, 1976). Furthermore, to handle the difficulty of deciding which features of pronunciation to assess in students' spoken language, all five teachers focused mainly on specific target features that served as the focal points of classroom instruction. Those target features were also specified in the course syllabi (as established by the IEP curriculum committee). Ginger, in following a self-reported "mastery" approach to enhanced pronunciation, permitted students to re-do any voice recordings they wished, if they wanted, to improve their grades. In terms of feedback, teachers provided either written or oral feedback on voice recordings. Only Ginger and Tanya gave oral feedback on the recordings. In class situations, feedback appeared to be provided as a whole-class activity although feedback to individuals during small group activities also occurred. Recasting was the main type of feedback mentioned by the five teachers. In the case of Vala, however, she avoided using this technique whenever possible, believing it to be "patronizing" to students.

4.2.4 Cognitions about Curriculum and Materials

Another area of Shulman's (1986, 1987) model of teacher knowledge that has a central role in a study of teachers' cognitions about teaching pronunciation is knowledge about curriculum, thus the teachers' cognitions about curriculum, specifically course curriculum, is this section's focus. For the most part, the teachers' knowledge and beliefs about the curriculum of individual IEP courses has been examined to varying degrees throughout the chapter. All five

teachers have taught their particular OC course at least once in a previous semester; thus, each instructor is cognizant of the learning outcomes or objectives that they are expected to meet for their respective OC courses. Table 4.1 provides a listing of the pronunciation features they are supposed to teach. In fact, both Tanya and Laura, along with other IEP teachers, worked together to establish the learning outcomes for all the OC courses a few years prior. In the interviews, they explained that in consultation with instructor W (who is one of the teachers of the graduate-department's MA Pronunciation Pedagogy course), they developed the learning outcomes. Through conversations with instructor W, they decided to focus mainly on listening skills in relation to several elements of English pronunciation for both the high beginning and low intermediate-level OC courses. The intermediate and high intermediate-level courses concentrate mainly on production-oriented pronunciation skills. The low advanced OC course, which is not taught by any of the five instructors in the current semester, has no learning outcomes pertaining to pronunciation. According to each of the five instructors, the learning outcomes determine how much time should be dedicated to pronunciation instruction, which elements of pronunciation they teach in their courses and how students' awareness and production of English pronunciation is assessed. When asked how the learning outcomes affect her way of teaching, Abby replied:

Well, in the IEP, I like it because it's very structured, and I like it because the IEP is just kinda in there with the Masters' program, with the PhD program. There's theory involved, there's you're putting the theory into practice, so I think it's very objective, so all of these learning outcomes, you have veteran teachers who have looked at this, what is practical, what do they really need to know, I think they had a good eye. They're very aware of what the students are going to need in the future - their educational career. So the learning objectives go right along with pronunciation I think. It's nothing...not asking too

much, not asking too little. I think it's very well balanced, so teaching the class while keeping an eye on the learning outcomes, it's not difficult at all.

To achieve the course objectives, the five teachers utilize either study guide materials, which were developed by the OC curriculum committee, or a designated textbook for the course. For the most part, the five teachers are satisfied with these materials, explaining that they help to guide how they teach the course. Nevertheless, the teachers do not rely solely on these materials. They all incorporate supplementary materials or activities to help achieve the learning outcomes. The only two teachers who expressed some misgivings about the course curriculum were Laura and Vala. In Laura's case, and particularly because she helped develop the learning outcomes, she was concerned that certain aspects of the pronunciation curriculum in her course may appear "disjointed" in how they are taught in relation to other skills. To augment the pronunciation content in the OC-oriented textbook that is used in her course, she incorporated materials from other more pronunciation-oriented textbooks; however, even the supplementary materials did not seem appropriate for her class. She explained:

Right now it's the [published textbook] book which I like, but I don't... when I try to take pieces out of it according to what I need from the learning outcomes, I guess I didn't find what I really think was valuable. Bu I don't know what I really think is valuable at this point, so I didn't really like it for what my purposes for this class. I feel it is a little too hard and what I have to do is too random, so I definitely would look around to find something else that they can use.

From Vala's perspective, the difficulty that she had with the course, as was discussed earlier in this chapter, was the limited amount of time that she was able to spend on pronunciation as a

result of the numerous objectives that had to be completed in the courses, including having students complete several presentations and discussions. She remarked:

Our curriculum has so many other facets to it per course, we just don't have time [to do pronunciation]. Also, our time periods are 50 minutes long and we've got reading, note-taking and listening to do, and then, oh yeah, we have to do a discussion about this and we have to practice these classroom pragmatics, and there goes your Monday and Wednesday.

Thus, the majority of her time appeared to be spent on syllables, word ending and word stress, and not on intonation and rhythm (two other pronunciation features highlighted in the course curriculum) at least as far as she mentioned in the interview or was seen in the observed lessons. These findings are similar to those of Hislam and Cajkler (2005) who found that the issue of limited time to address the mandated teaching objectives caused trainees a large degree of anxiety and interfered with grammar instruction. While Vala did not appear to be anxious about meeting the course learning outcomes, the pressure to meet the learning outcomes nonetheless resulted in some areas of the course, namely pronunciation instruction, receiving less attention than Vala believed that it should.

Overall, despite some of the concerns mentioned by the teachers, most notably Vala, the other four teachers appear to be satisfied with the integration of pronunciation in their courses as guided by learning outcomes outlined in the course curriculum. In comparison, Macdonald (2002) found that inadequate curriculum objectives were one of the primary factors leading to teacher reluctance to teach pronunciation in the ESL classes. In the case of the five teachers in the current study, however, the learning outcomes and the materials provided them with the "structure" they needed to teach pronunciation in their respective OC courses.

4.2.5 Cognitions about Learners

The role of the language learner has a special place in the cognitions of L2 teachers. The purpose of teaching ultimately centers on learner needs, which may not always coincide with the desires of the learner. This section examines the teachers' cognitions about learners, specifically the learners taught during the present study. The following topics are explored: the needs of a learner in an IEP; learner confidence; desire for instruction; desire for feedback; models of English; and accents. The development of each of these sections, excluding the first, follows a similar developmental path. Tracing the same path traversed during the execution of the research procedures in the study, each section first explores the teachers' beliefs as articulated in the first and second semi-structured interviews about students' beliefs concerning certain topics, namely those listed above. Then, the cognitions of the teachers are compared with the beliefs of the students as reported from the questionnaires completed by the students following the second interview. Finally, findings from the third semi-structure interview are examined. During this interview, the results of the student questionnaires were revealed to the five teachers, and they were encouraged to express any thoughts or feelings they had about the students' opinions. Thus, this final section on teachers' cognitions about learners is dynamic, illustrating how teachers' cognitions have developed, at least in part, through their participation in the current study.

4.2.5.1 Learner Needs in an Academic English Program

As ESL teachers in an university Intensive English program, the underlying assumption of both the teachers and the program is that most students, particularly those in the higher levels, have a desire to matriculate into an USA-based undergraduate or graduate program; thus the curriculum and the accompanying lesson plans designed by the teachers focus on developing the students' academic OC skills. Of course, the overarching goal of the program does not

necessarily mean that all ESL students strive toward this goal, but the assumed knowledge remains the cornerstone of most of the teachers' decision-making processes.

4.2.5.2 Learner Confidence

When asked how confident they believed learners to be in terms of their English pronunciation abilities, the five teachers felt that, for the most part, students were relatively confident. Abby felt that the students she met were "fairly confident...but not overly confident", a feeling that was shared among the five teachers. In the questionnaire, the students were presented with the statement: "I am confident about my English pronunciation skills," and their responses corresponded positively with their teachers' beliefs. As shown in Figure 4.24, most students in all five classes chose either "agree" or "neutral" in response to this statement; yet, the majority of students in Tanya's high-beginning class chose "strongly agree." In an earlier interview, Tanya explained that two of these students were employed in Korean-based companies and that all four of them appeared "pretty confident" and seemed "very comfortable participating" in class. Only one student, a student in Vala's high intermediate class, strongly disagreed with the statement. After reading these results, none of the teachers provided any additional comments; however, the results are interesting in light of other research that has been done on students' beliefs. A recent study by Kang (2010) found that a large percentage of beginning, intermediate and advanced-level ESL students (n=238) from the USA and New Zealand reported having low confidence in pronunciation skills. Similarly, in Couper's (2003) study, the 15 high intermediate students in New Zealand also indicated a low level of confidence in their pronunciation skills. Couper's and Kang's findings are the opposite of those in the present study where the majority of the 63 students claimed to be confident in their abilities. In fact, Vala's high intermediate class of 17 students, although comparable with Couper's (2003) high-intermediate class of 15 students of

similar L1 backgrounds, are markedly dissimilar in their confidence toward English pronunciation. In comparison with these two studies, the students in the current study have a greater degree of confidence in their pronunciation abilities, and their teachers appear to agree with the students' personal assessment of their confidence.

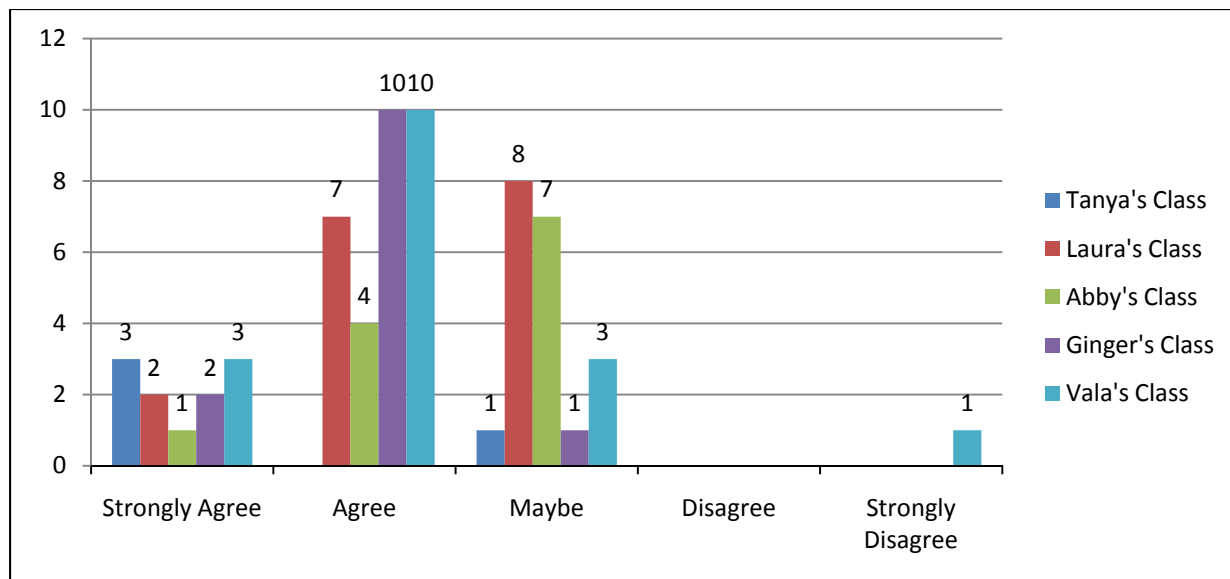


Figure 4.24 "I am confident about my English pronunciation skills"

Along the same lines as students' confidence, four of the teachers believed that students wanted to improve their pronunciation, although Ginger was uncertain. Ginger said that only one student this semester expressed an interest in devoting more time to the voice recordings.

According to Ginger, that same student said "We should really do more of these activities. They are very helpful." But, at the same time, Ginger remarked that she felt some of the students had the attitude of "yeah, yeah, yeah, we know how to do this." The questionnaire results in Figure 4.26 demonstrate that, even though most students were "fairly confident" in their pronunciation, every student in all five classes still wanted to improve their pronunciation, selecting either "agree" or "strongly agree" for the statement "I want to improve my pronunciation skills in

English." Thus, the teachers' beliefs about students were confirmed. In the case of Ginger, she gained knowledge about the students' desires. After reviewing these results, none of the teachers provided any further comments. Unlike the earlier question about learner confidence, these results are comparable to Kang (2010) who also found that students wanted to improve their pronunciation.

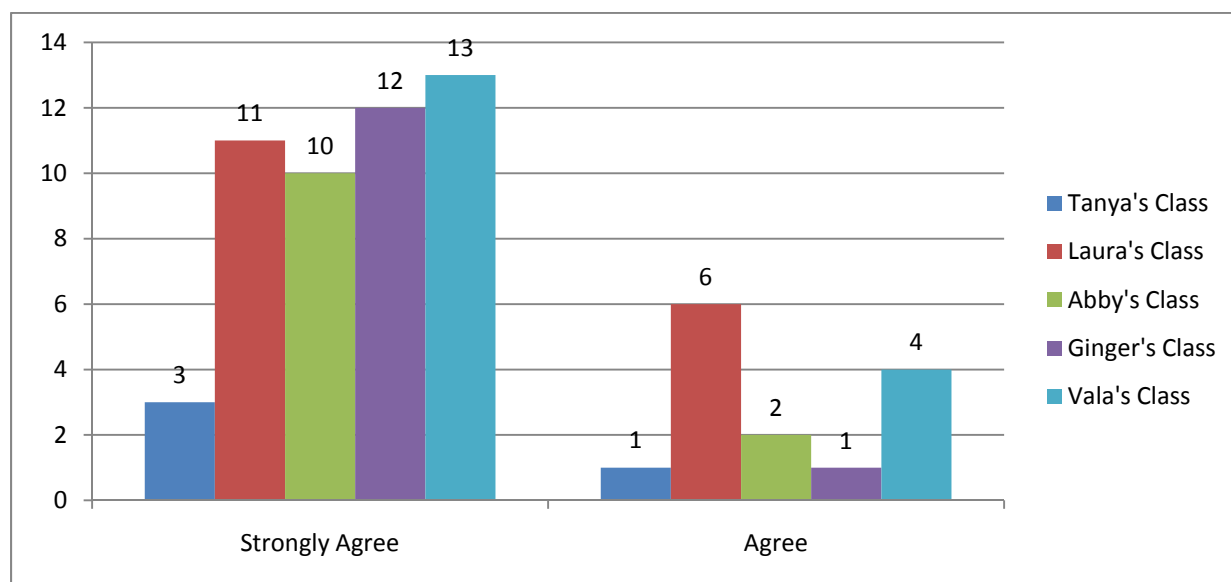


Figure 4.25 "I want to improve my pronunciation skills in English"

4.2.5.3 Desire for Instruction

In regard to the question about whether they believed students wanted instruction in English pronunciation, all five teachers responded positively. In fact, Vala believed that students wanted more pronunciation than was currently provided in the program, but that, at the same time, she did not feel they would enjoy a course dedicated entirely to pronunciation. Vala explained:

I think that they would like a pronunciation class, but maybe not necessarily in this class.

I think they want more pronunciation overall from our program. And pronunciation is just crammed into this oral comm. class, which has speaking, fluency and listening fluency in

it. So, I think that they feel that they don't get enough pronunciation, but I also think that if they were signed up for a three-hour university pronunciation course, they'd hate it. It's a lot of pronunciation in one week, so be careful what you wish for. Because at a community college where I taught, we had a three-hour pronunciation class, and the students were just picking their eyelashes. They were so bored. It was just so much. I think they want it, but I don't know how much they want it. A lot of the students go to the tutoring services for pronunciation, initially, but they don't always stick with tutoring or pronunciation when they go to the tutors. I don't know how committed they are.

To this same question, almost every student either *strongly agreed* or *agreed* (see Figure 4.26).

The only students who disagreed were three students in Vala's class who indicated either *maybe* or *disagree*. One student in Laura's class also selected *maybe* in response to this item. Overall, these results demonstrate an agreement between the beliefs of both the students and teachers.

Both the current study as well as other research (Couper, 2003; Derwing & Rossiter, 2002) have found that the majority of students want instruction in English pronunciation.

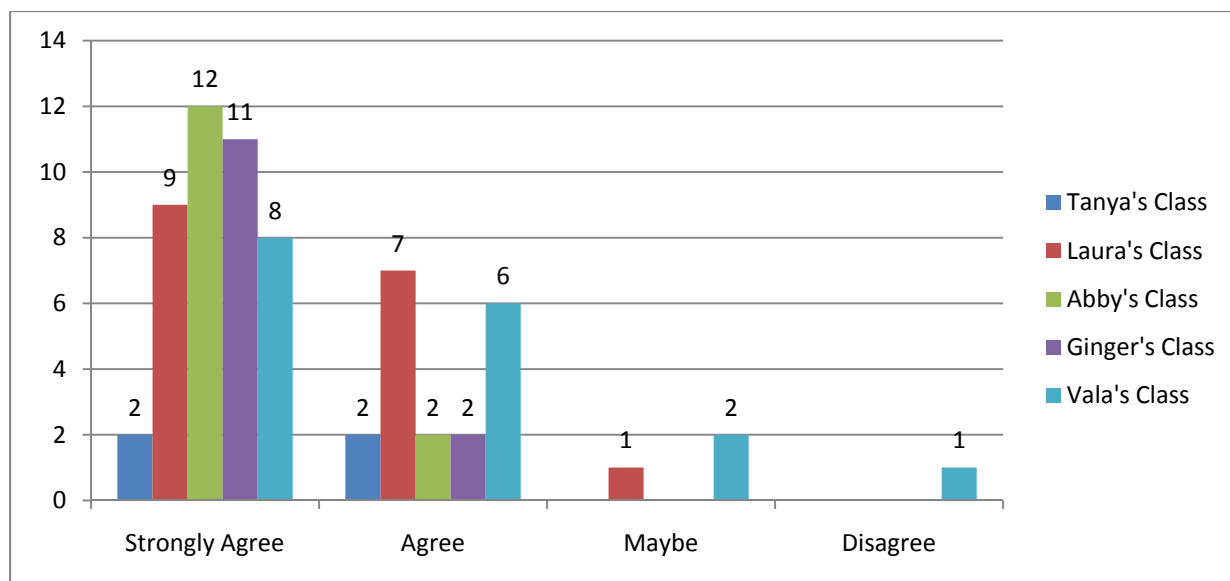


Figure 4.26 "I want my teacher to teach pronunciation"

When asked whether they felt that the time they spend on teaching pronunciation is enough to meet students' needs, the teachers' opinions varied. Abby and Vala both felt that pronunciation was insufficiently addressed in their courses to meet students' needs as a result of all the different objectives the students had to complete for the course. On the other hand, Tanya and Ginger believed the opposite. In Ginger's case, she explained that in terms of working toward comprehensibility, their needs were being met; however, for students who wanted "[...] to sound quote, unquote, native, this is something they'll probably work on for years to come. Maybe never reach that level [...]." As for Laura, her view on time changed from the beginning until the midpoint of the semester. When asked a similar question during the first interview, Laura felt that the students received sufficient time on pronunciation practice, but by the midpoint, she thought otherwise. In the second interview, she said, "This is where I am struggling. [...] I am not sure, I guess in this level, their goal with pronunciation is to develop awareness of the different sounds. I don't feel successful with that. That is something I need to figure out." To gain a sense of how students felt their needs were being met in the course, I asked them to answer two questions: what did they feel was the ideal amount of time to spend on pronunciation in their course and what was the actual amount of time they felt was spent on it in the course. Answers to these questions varied widely from one student to the next (see Table 4.4); however, when the responses were averaged for each class, there was a strong similarity between the class's overall perception of ideal and actual times. In Tanya's class, the average was 94/92, signifying that, on average, students felt that 94% would be the ideal amount of time spent on pronunciation and that 92% of the time was the actual time spent on pronunciation. For Laura's class, the averages were 71/72; for Abby's class, they were 81/83; for Ginger's class, they were 61/61; and for Vala's class, they were 60/50. These averages indicate that, according to

students, they felt that the teachers were meeting pronunciation needs. That said, when the individual scores are examined, some students wanted more time spent on pronunciation while others wanted less time. After seeing these results, Laura commented:

I am trying to see if there is any pattern [...]. Do they think I spend more time on it than they want? Well, you have both I guess. Some are saying that I am spending more time than they would want but some of them are saying they are spending less time than they would want. Interesting. This is very interesting.

Overall, the student results also agreed with the opinions of Ginger and Tanya: both the two teachers and their students felt that sufficient time was spent on pronunciation. In comparison, the views of Abby and Laura differed from those of their students with the teachers believing that more time was required whereas the students appeared satisfied with the time spent on pronunciation. Furthermore, the results from Vala's class indicate that the students wanted more time spent on pronunciation instruction; therefore, in Vala's class, the teacher's beliefs about students matched the students' belief that a larger amount of time was needed for pronunciation instruction. Upon reading these results, Vala noted:

Interesting. A lot of them want more. 100% of the time? [for two students] [...]It's mixed. Definitely it's mixed on what they want and what they perceive happened. Depends on how much you like learning pronunciation, I guess.

Vala's earlier comment that higher level students may require a course dedicated to pronunciation might be an appropriate solution for her students, despite Vala's misgivings that spending three hours a week on pronunciation might be boring for them. When these findings are considered in light of the findings discussed earlier (e.g., the two classes that routinely used the same or similar techniques (Vala's and Tanya's) are both occasionally perceived as "boring" by

the teachers), it may be that a dedicated pronunciation course is needed at the higher levels. However, such a course would require an instructor who is knowledgeable in a wide range of techniques in order to keep the course both interesting as well as effective in terms of meeting students' needs. In Tanya's class, at least 20 different techniques were used to teach pronunciation, but for a class that spent nearly 100% of its time on pronunciation, 20 techniques may be insufficient if Tanya's fears (e.g., that at least from Tanya's perspective the course was boring) were correct.

On the topic of techniques, students were also asked the following question: *What activity has your teacher used that is most helpful for improving your pronunciation?* The responses to this question varied considerably among the students in all classes. Table 4.10 provides a list of techniques highlighted by at least two or more students in each class. As illustrated in the table, the preferred technique by most students was either the lab activities for the lower levels or the voice recordings for the higher-level classes. Practicing the pronunciation of key words was also liked by several students in both Ginger's and Vala's classes. In addition, preparing for presentations was highlighted by a couple of students in both Vala's and Abby's classes. For the most part, in referring back to Table 4.8, the teachers' and students' opinions about the most beneficial techniques for improving student pronunciation did not match. The teachers and students clearly had different preferences. Nevertheless, many of the techniques identified as "most helpful" by the students were nonetheless techniques that the teachers regularly used in their classes. Upon seeing these overall results, particularly those pertaining to voice recordings, Ginger expressed her relief:

Okay, the recordings they do like. Good. Because I spend a lot of time giving feedback, and I worry that they don't listen to the feedback. Last time I didn't give them their scores

in writing because I said, "No, you have to go to ULearn to get your scores." I am worried because there are some people I give the same feedback to week after week, and so it's like "This time I'm not giving you the paper, the rubric. You guys go and listen to my feedback." So, we'll see.

Furthermore, Tanya also expressed satisfaction upon reading that the students liked the practice quizzes for the listening tests. She remarked that "that's good that they like that. I get the impression that that's helpful for them."

Table 4.11

Students' Preferred Pronunciation Techniques

Tanya (High Beg)	Laura (Low Inter)	Abby (Inter)	Ginger (Inter)	Vala (High Inter)
<ul style="list-style-type: none"> • Lab activities (2) • Practice quizzes for the listening tests (2) 	<ul style="list-style-type: none"> • Lab activities (9) • Practice speaking in a group (5) 	<ul style="list-style-type: none"> • Voice recordings (5) • Repeating sentences and words (3) • Presentations (2) • General: activities and lessons (3) 	<ul style="list-style-type: none"> • Voice recordings (9) • Key word card practice (3) 	<ul style="list-style-type: none"> • Voice recordings (9) • Word stress vocabulary Cards (3) • presentations (2)

4.2.5.4 Desire for Feedback

On the issue of feedback, all of the teachers believed that students in their courses wanted feedback, and the students (with the exception of one who indicated "maybe") either *agreed* or *strongly agreed* that they wanted feedback. These findings mirror the results of both Diab (2005), a study concerning teachers' and students' beliefs about teacher feedback on student writing, and Cathcart and Olsen (1976) more than thirty years ago. Cathcart and Olsen's study, however, focused specifically on pronunciation; the researchers determined that students desired receiving pronunciation error correction in class.

Next, to determine in what ways students liked to receive feedback on their pronunciation, I asked the teachers whether they felt their students preferred to receive feedback either: 1) in front of the class where the class can hear what she says; 2) privately either quietly in class or with the voice recordings where the class cannot hear what she says; or 3) as a group in class, but the teacher does not focus on the student individually. To this question, Abby, Ginger, Laura and Abby felt that their students preferred to receive feedback privately, although Abby also felt that individual students might vary. Abby noted:

I guess that depends on the individual student. Some of them are pretty confident, I mean just their personality. They're like "sure, go ahead, immediate feedback. [...] if it's in front of the class, fine. Just go ahead and tell me what do I need to say right."

Nevertheless, one of the main reasons teachers felt students might not like to be corrected in front of the class is the potential for embarrassing students. Laura explained that:

I don't focus on it in class unless I just can't understand them and then I will repeat the word and then sometimes I think they feel kind of like "oh, you are right, sorry". I don't want to make them feel bad because they pronounce wrong, but I do try to give them the individualized feedback with those [computer lab exercises] and I think that they do...I think they like it.

The only teacher who did not believe that her students might be embarrassed by individual correction in front of the whole class was Tanya. In her case, with "such a small group", Tanya commented:

I don't feel like they are shy about my correcting them, because I correct everybody, so it's kind of like individual all the time. Sometimes, it's individual in front of the group where I'm like oh, let's try to say that again. Sometimes, it's individual through ULearn

through Wimba where I correct them. But I think they get the most out of in class because on Wimba, I'm not so sure how much they listen to that and internalize it, but in class, maybe the pressure of having people around them makes them...I mean I don't know what they think, but they don't seem embarrassed when I correct them in class, so I don't hesitate to. I'm just like, Nope, try that again. And they're ok with that.

From the students' perspective, the questionnaire results varied, but generally, the majority of students in all five classes either *strongly agreed* or *agreed* with "liking" all three types of feedback. Figures 4.27 - 4.29 provide the class results for each questionnaire item. After seeing the students' opinions about the different methods and that a large majority of students either *Strongly agreed* or *Agreed* with that statement on feedback provided in from of the class, they appeared surprised. Abby's first reaction was "Wow. *Strongly* some of them. Oh, so good. I haven't been crushing them." In a similar fashion, Ginger commented:

Wow. Yeah. See, that's big news for me. I mean...I know there are some people who don't mind, but I didn't know when you phrase it "I like it when"...like that surprises me. That's good to know. Coz I try to keep that to a minimum in general, thinking...just from some reactions that I get to it that I think that they're kind of ashamed, or feel a little embarrassed. No, that's good.

Also, surprised by the results, Laura responded:

Yeah that's surprising to me just because I think I try to avoid correcting pronunciation in front, I mean direct correction. Or I will try to make it more of like 'let's all say that' you know. Like that's, I don't even know if I succeed in this but like that's sort of my goal is to not single out someone say [...] so I am surprised.

These findings show that the one type of feedback that most teachers were concerned that their students would dislike (e.g., receiving personal feedback on their pronunciation in front of the whole class) was preferred by all, although a few students indicated "maybe" in each of the five classes. Unlike the other two types of feedback, however, none of the students expressed a *dislike* for this type of feedback. Laura, Abby and Ginger were all surprised with these findings. One possible reason for the students' overall preference for personalized feedback in front of the class may be a desire for receiving, as Abby stated, "immediate" feedback on their performance. Earlier research by Cathcart and Olsen (1976) would support this theory as students in this study from 35 years ago expressed a preference for feedback on oral performance in class. In particular, their students indicated a preference for "correct" model presentation, followed by a comparison of the error and the model, and finally an explanation of the error. Another reason may be, as Tanya surmised, that the students are comfortable in class and, thus, do not feel threatened when their teacher personally addresses their pronunciation in front of others.

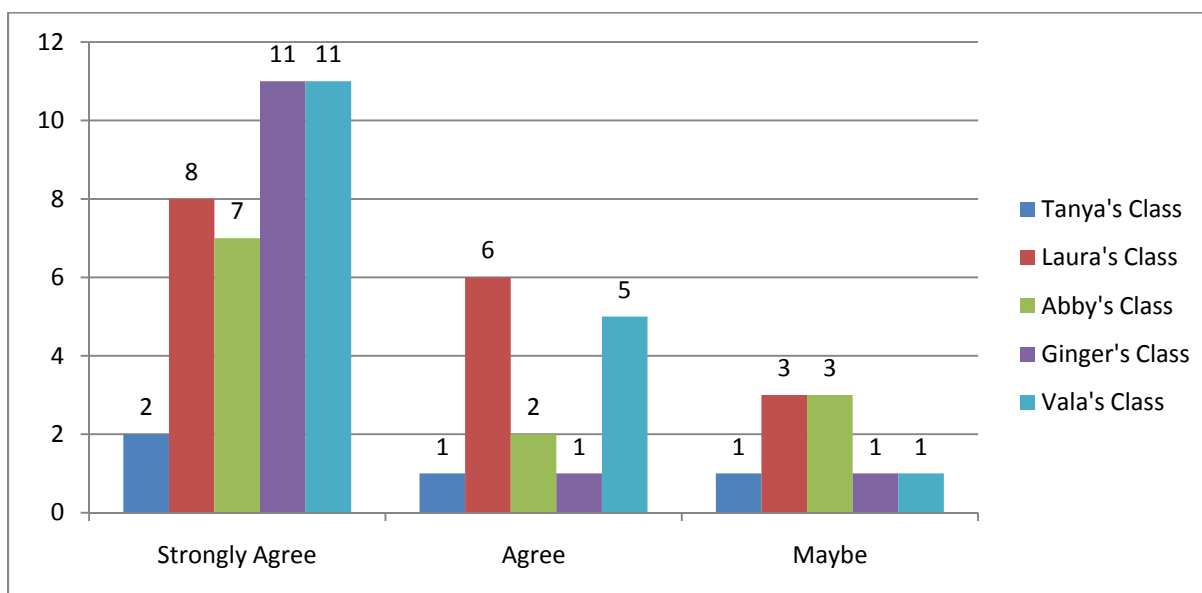


Figure 4.27 "I like it when my teacher corrects my pronunciation in front of the class (when the class can hear what she says)"

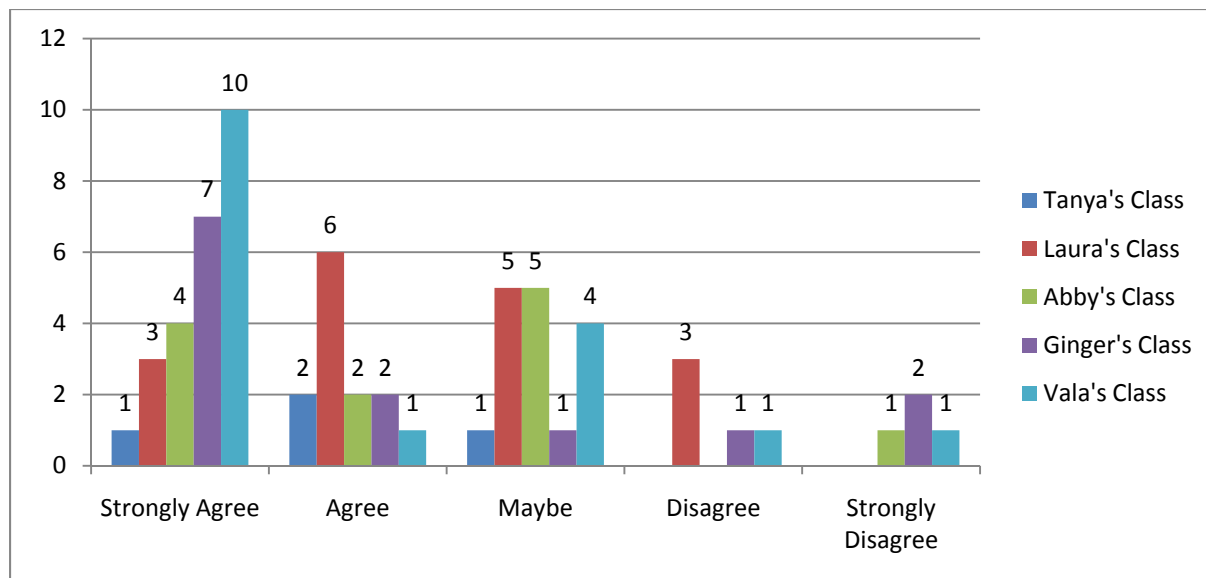


Figure 4.28 "I like it when my teacher corrects my pronunciation privately (e.g., in ULearn, in her office, or quietly in class). (The class can NOT hear what she says)"

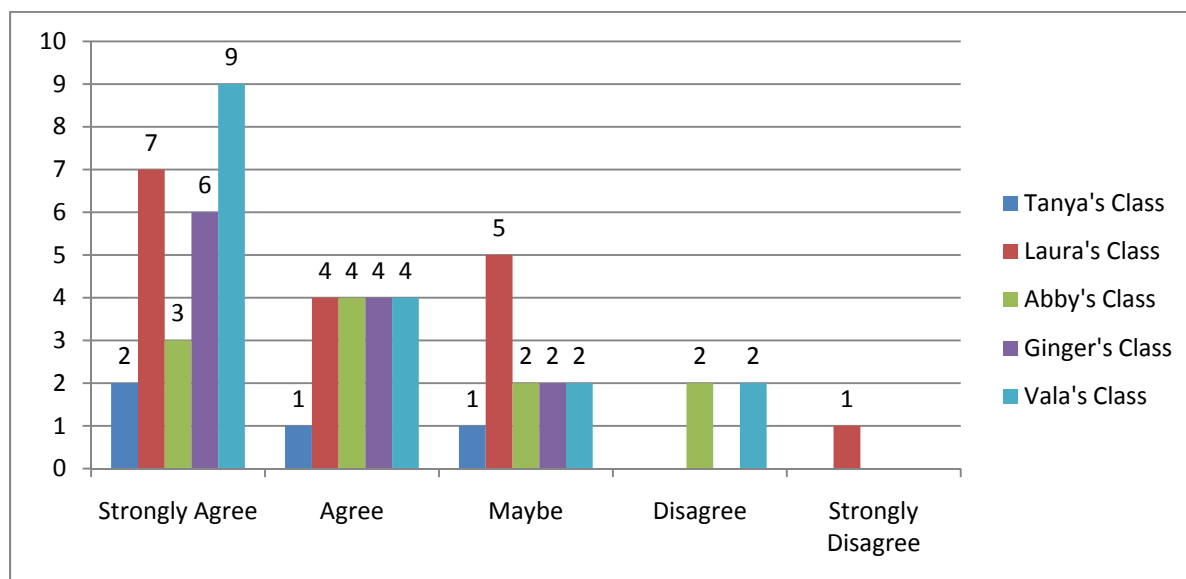


Figure 4.29 "I like it when my teacher corrects our pronunciation as a group in class. (She does NOT focus on me individually)."

4.2.5.5 Models

In terms of different types of models or dialects of English that students might be exposed to in class, all five teachers believed that NS models of English were the only dialects that students in their courses wanted to hear. In fact, Abby, Ginger and Tanya believed that students wanted to listen specifically to NAE dialects because the students had chosen to study English in the United States. Ginger also mentioned that one of the reasons she believed her students wanted NAE is because they find other dialects of English difficult to understand. After teaching an Oral Fluency class in a previous semester where they used a textbook with audio recordings of British speakers, many of her students complained. Ginger reported that:

This is my impression based on just discussions with the students. When I taught level two Oral Fluency, not oral communication, we used [textbook], and that had a lot of listenings done by British speakers, and they didn't like it. "Like what? What did she say? I couldn't understand. I couldn't hear." I said, "No, come on. This is good for you. Let's listen. You shouldn't just be used to my voice and my pronunciation. But the impression that I had was that they wanted American models.

Vala, in considering what she believed to be the desires of her students, expressed her disappointment. She explained that her many of her students probably did not attribute any value to listening to the speech of NNS, and she attributed her students' beliefs to the education they received in their home countries. Vala said:

I don't think that many of our students consider highly proficient non-native speakers as valuable examples and samples of language. Their concern is "reduce my accent", so I just don't think they would see the point of it. They haven't been taught the value of it; "I need a native speaker model." I think a lot of students are in that mind frame. I think that

will change when more teachers' attitudes towards that change, especially EFL instructors, because most of the students learn English as EFL first. So I think having a non-native speaker model, I see the value of it, but they don't and neither does the text book publishers, so the sound files that the students can listen to related to the activities in their book is "Amy Smith from Wisconsin". So I think attitudes need to change before the students' attitudes and appreciation, and realistic expectations change.

The opinion ventured by Vala here is similar to the beliefs of the EFL teachers in Jenkins' study of teachers' identify as speakers of English as a Lingua Franca (ELF). While the teachers in Jenkins' (2007) research expressed a desire to teach ELF accents, they persisted in using recordings of NS models when teaching English.

The students' responses in the questionnaire clearly indicated that their five teachers were correct in their assumption that the students' had a preference for NS models of English, especially NAE models⁵. Except for four students, most students either *strongly agreed* or *agreed* that they wished to listen to American English. When asked whether they would like to listen to other dialects of English such as British English or Australian English, there appeared to be less enthusiasm, especially in Vala's high intermediate class. Of the 16 students who responded, only four indicated either *agree* or *strongly agree*, eight said *maybe* and the remaining four chose *disagree*. In each of the other classes, the students expressed more interest in listening to other models of NS speech, although not as much interest as they had for NAE. When asked to indicate their desire to listen to Indian, Chinese, Arabic, Spanish or other English-speech models, the majority of students in all five classes chose either *maybe*, *disagree* or

⁵ Although the term, "North American English", is considered more standard in the field (Celce-Murcia et al., 2010), the questionnaire uses the term "American" because the respondents are not specialists in the field and are more likely to use the term "American" when talking about the English spoken in the U.S. - the place where they are studying English.

strongly disagree. These results demonstrate that the five teachers were correct in their assessment that their students' wanted to listen to mainly the traditional "native-speaker" models, but most particularly NAE dialects. Upon seeing these results, Laura thought the students' responses were "interesting." She furthered commented that the results were "not surprising" but, as with Vala, Laura felt that the students beliefs were "not good". She wondered, "how do we change that perception?" In addition when Vala saw the same results, she commented that they were also "interesting" but that it was "unfortunate" that "they don't see it as valuable." The other teachers did not comment on these results. Overall, the findings indicate that the teachers' knowledge about students appears to be in sync with student beliefs. In an English program geared to prepare students to be successful communicators in an US university (either as students or as international teaching assistants), it is "not surprising" that the students have a preference for NAE speech models. However, with so many international students studying in the US system (or in other English-dominant educational systems), exposure to other dialects of English would certainly be of benefit to them.

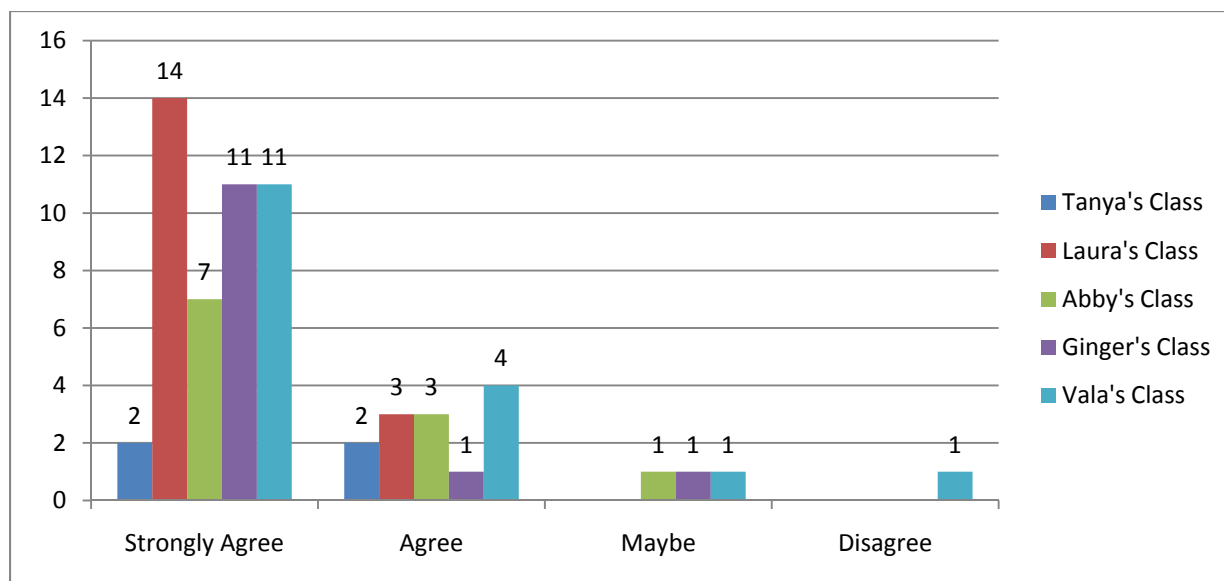


Figure 4.30 "I want to listen to American English speech"

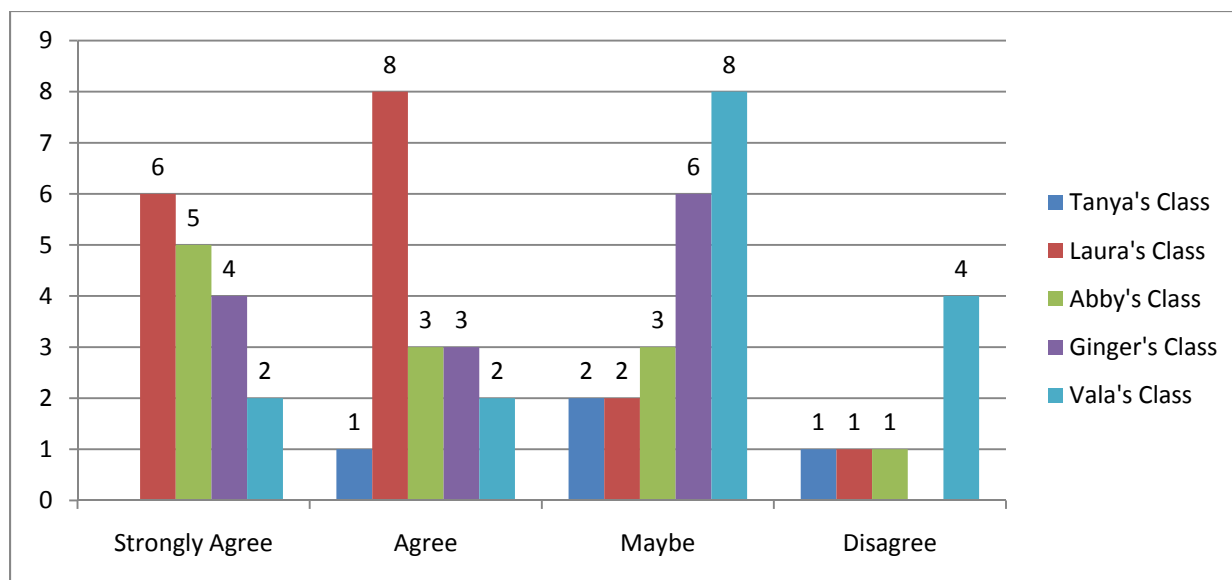


Figure 4.31 "I want to listen to British, Australian, Canadian or other native-English speech"

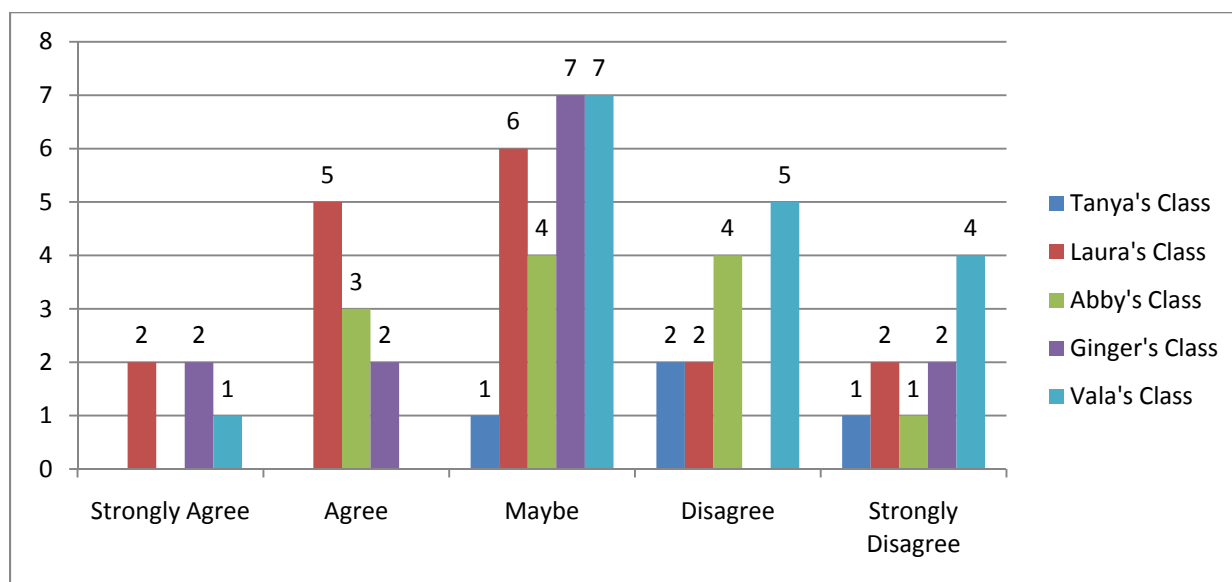


Figure 4:32 "I want to listen to Indian, Chinese, Arabic, French, Spanish or other English-speech models"

4.2.5.6 Accent

On the issue of accent, or rather a particular dialect of English that students would like to acquire, all five teachers believed that most students wanted to adopt a NAE dialect. At the same

time, the five teachers mentioned that the students' desires were unrealistic and that as adults they would be unlikely to change their way of speaking to approximate that of a NS of NAE. The five teachers appeared to be aware that the later in one's life that a learner tries to acquire another accent, the less likely they are to fully realize that goal (Piske, MacKay, & Flege, 2001). They also appeared to be aware that the topic of changing the accent of an L2 speaker is a very sensitive area. Numerous scholars have advocated against pronunciation instruction, perceiving such instruction to be a threat to the L2 learner's identity (Golombek & Jordan, 2005). Other scholars view instruction intended to improve the intelligibility and comprehensibility of a speaker as a means for enabling L2 speakers to better communicate their L2 identity (Derwing & Munro, 2009). The participating teachers in the current study recognized the sensitivities involved in pronunciation instruction and how intricately a learner's identity might be intertwined with their accent. In the event that students approached her for help in changing their accents to become the "same" as a NS, Tanya commented that she would explain to them:

You have to just do your best to make it clear with your own accent. I don't think there's anything wrong with having their own accent, so I would try to encourage them to see that viewpoint too, and to just do their best to be clear through that.

In trying to help students improve the intelligibility of their accents, Abby tried to highlight to her students that she was not attempting to, in her words, "reject" their identity, but rather change their way of thinking about acquiring additional accents. During one classroom observation, she made an analogy between the compatibility of different types of software program for different types of computer (i.e. Mac vs. PC) and changing one's accent. She explained to her students that "You have the right software for the right type of computer.[...] So, I'm not trying to change your

native way of speaking, ok? What we're doing is a little software adaptation." Then the following dialogue took place:

Abby : If you go to the beach, [Student A], are you going to go to the beach wearing that sweater? The coast? The ocean? Are you going wearing that sweater?

Student A: No.

Abby: No. Would you [Student B] wear that sweater with your hood at the beach? Going swimming? Would you go swimming with that?

Several students: No.

Abby: No. We wouldn't do that. With tennis shoes? Would you go swimming with tennis shoes? Even in the pool? No. So, depending on what, where you are, you wanna change your clothes. So, depends on who you're speaking to, you wanna change your speech pattern. Just think of it that way. Don't think of it as, "Oh, Abby doesn't like my accent." No. Your accent is very nice. But in order to be understood, and to understand, just change your clothes. Okay?

Especially for Abby, who reported giving the same or a similar speech to each class of students she has taught over the past several semesters, the five teachers certainly recognized some of the sensitivities underlying pronunciation instruction and learner identity; however, they still felt that students would still most likely prefer to achieve a native-like NAE accent.

Based on the questionnaire results, the students in the current study indicated a preference for achieving native-like pronunciation of English. The majority of students in each of the five classes selected either *strongly agree* or *agree* in response to the questionnaire item that stated: *I*

want to speak English with an American accent (see Figure 4.33). Only five students chose *maybe* in response to this statement. Conversely, to determine how much the students appeared to value their own L1 accent when speaking English, the next questionnaire item stated: *I want to speak English with my native language accent*. In this case, the majority of students in four of the classes indicated either *maybe*, *disagree* or *strongly disagree* to this statement (see Figure 3.34). Of those who selected either *agreed* or *strongly agreed*, there were only five students in Laura's class, four students in Abby's class, one in Ginger's class and two in Vala's class. The class where the students were evenly split at 50% were those in Tanya's class: two *strongly disagreed* and the other two *agreed* to varying extents. Based on these results, the teachers' beliefs about their students reflected the students' own beliefs. As with the findings of numerous research studies that have been conducted over the past decade (Derwing & Munro, 2003; Kang, 2010; Timmis, 2002), it appears that students' desire to achieve native-like English speech has remained unchanged, a fact that the five teachers correctly predicted.

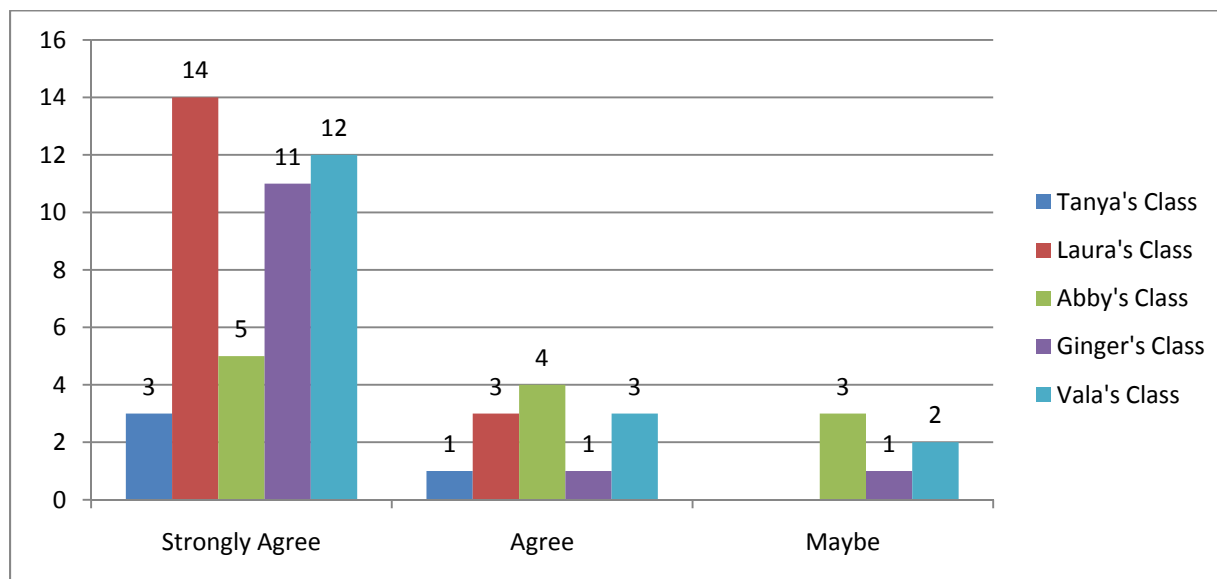


Figure 4.33 "I want to speak English with an American accent"

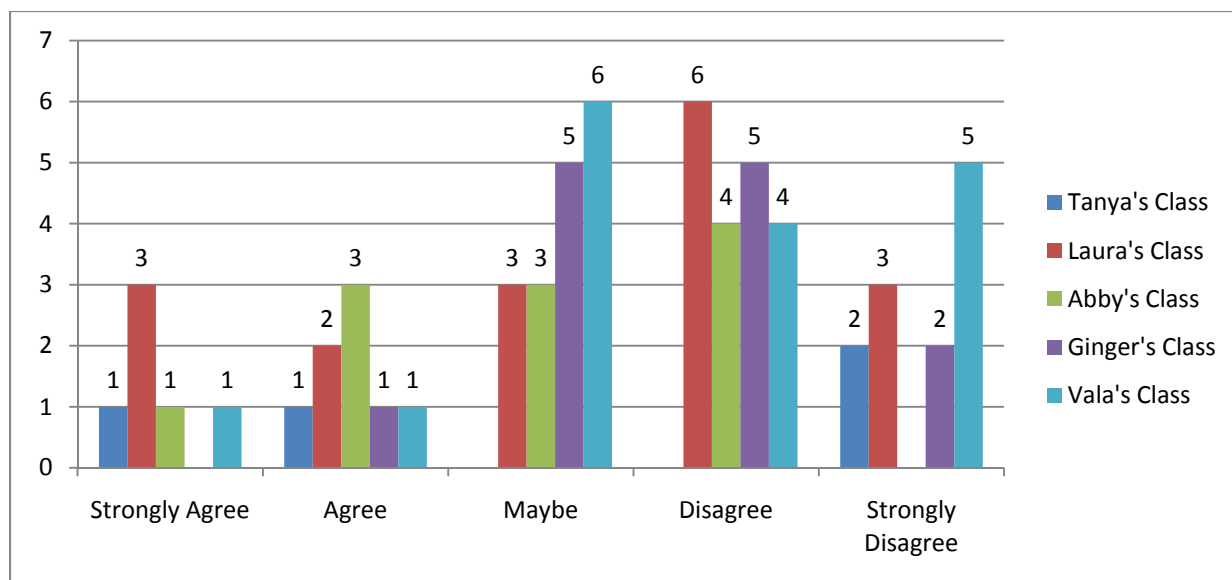


Figure 4.34 "I want to speak English with my native language accent. (E.g. Chinese, Arabic, Korean, French, etc.)"

4.2.5.7 Summary and Further Discussion

In summary, the teachers appeared to have an accurate view of the students' beliefs. Based on the questionnaire results, the teachers' beliefs generally coincided with several learner beliefs, namely that the learners: 1) were confident in their pronunciation abilities, but nonetheless still wanted to improve the English pronunciation; 2) wanted instruction in English pronunciation; 3) wanted feedback on their pronunciation; 4) wanted to listen to native-speaker models of English, especially NAE dialects of English; and 5) wanted to acquire native-like English speech. Conversely, some of the beliefs that teachers had did not always converge with the perspectives of the learners. On the issue of whether sufficient time was spent on pronunciation instruction in the course, sometimes the teachers believed that adequate time was allotted for pronunciation, an opinion also shared by some students, but other times, the teachers and students differed with either the class or the teacher believing that insufficient time was spent on pronunciation. Furthermore, the teachers and students both differed on what they

believed to be the most helpful techniques for improving the learners' pronunciation, although the techniques that the students preferred were also techniques that the teachers regularly used in their classes. Finally, the one difference that "surprised" most of the teachers upon learning their students' opinions was on the types of feedback the learners preferred. Three of the teachers believed that students might feel "embarrassed" if corrected in front of the whole class, but according to the questionnaire results, the students indicated that they had a strong preference for this type of correction. The teachers' beliefs appear to be in conflict with the students' beliefs. However, even though students expressed a desire for immediate, in-class feedback, they might be upset if teachers provided such feedback. L2 teacher education has emphasized that the learner's "language ego" may be negatively affected when they perceive their language ability to be judged by others, especially in front of their peers. Brown (2000, p. 149) states:

...mistakes can be viewed as threats to one's ego. They pose both internal and external threats. Internally, one's critical self and one's performing self can be in conflict: the learner performs something "wrong" and becomes critical of his or her own mistake. Externally, learners perceive others to be critical, even judging their very person when they blunder in a second language.

Further empirical study is required to determine whether students would actually be content if they received the type of feedback they believed to be most beneficial.

Understanding the connections between teacher cognition and practice and student beliefs and desires is important in L2 education research. Pajares (1992, p. 327) argued the "[l]ittle will have been accomplished if research into educational beliefs fails to provide insights into the relationship between beliefs, on the one hand, and teacher practices, teacher knowledge, and

student outcomes on the other." Although this study did not explore "student outcomes" per se, knowing what students believe about their teachers' practices in conjunction with what teachers' believe about their own practices is a critical first step in future explorations that are sorely needed in the area of L2 pronunciation learning. Nevertheless, the more teachers understand about the relationship between their own beliefs and practices and students' beliefs, the greater the likelihood that teachers can deal with, or at least address, mismatches between their own beliefs about learning and those of students. As is the case in the current study, several of the teachers learned that, contrary to the teachers' beliefs, students preferred individual correction in front of the class; thus, teachers might feel more comfortable providing this type of feedback to their students at least to a certain point. It is nonetheless important for teachers' to be aware of such feedback as being potentially harmful to students' language ego. Finally, knowing that many students do not wish to speak English with their L1 accent, the teachers might, as in the case of Tanya and Abby, talk about this issue with their students.

CHAPTER SIX

CONCLUSION

5.1 General Discussion

As the first in-depth study to directly explore L2 teachers' knowledge and beliefs with respect to their actual teaching of pronunciation to ESL students, this study provided a thick description of the dynamic relationships that exist between five experienced teachers' cognitions and their observed pedagogical practice. The study also provided greater insight into connections between teachers' knowledge of students and students' self-perceptions concerning pronunciation learning and teaching. Overall, this exploration enhances our understanding of the knowledge base of ESL teachers by adding this relatively understudied area of teachers' cognitions about pronunciation teaching in conjunction with classroom-based research.

Part of this research examined the development of the teachers' cognitions, as arising out of prior L2 learning experiences, teacher education, teaching experience and reflective practices, and investigated how those combined developmental experiences surfaced in their current teaching of pronunciation as evidenced through self-reports and classroom observations. The primary finding from this component of the study was the essential role that teacher education, but specifically teacher education comprising a graduate course dedicated solely to the teaching of pronunciation pedagogy, had in shaping the teachers' cognitions since such a phonology-centered course resulted in teachers' implementing relevant knowledge into regular classroom practice. Without such education, or efforts made by teachers to devote considerable time and energy to reflective practice, especially through self-initiated research projects or collaboration with colleagues, not only was their knowledge of pronunciation pedagogy observably limited, but so was their confidence in teaching pronunciation. Teachers without sufficient guidance in teaching pronunciation have frequently been found to lack confidence in teaching this skill area

(Fraser, 2000; S. Macdonald, 2002). Armed only with knowledge gained through either course textbooks or L2 learning experience, as in the case of Vala, many ESL/EFL teachers may be disadvantaged when faced with teaching pronunciation to language learners, especially if choral repetition of isolated words or phrases is the main form of pronunciation pedagogy to which they have been exposed during their own L2 learning. Not all teachers are intrinsically motivated to engage in time-consuming reflective practices or additional training in order to expand their knowledge of pronunciation pedagogy. Furthermore, in contrast with Abby's and Ginger's experiences, many teachers do not have the benefit of being able to work side-by-side. Not all teachers have the opportunity to collaborate with teacher-colleagues who have taken specialized graduate course work in the area of pronunciation pedagogy.

The theme of teacher self-confidence in teaching pronunciation surfaced throughout the study. As with the findings of Baker (in press), even teachers who have taken a course in pronunciation pedagogy still had concerns with teaching pronunciation. However, in this case, the teachers were specifically concerned with how to assess student pronunciation, highlighting their uncertainty in how to diagnose pronunciation problems and to provide students with tools in how to address these difficulties. Their concerns directly mirrored Levis' (2006) position that teachers need to know not only how to identify important errors within the different phonological areas, but also how to determine which errors have the most influence on intelligibility. Both scholars and ESL teachers agree: practicing teachers require more guidance and training in discerning and addressing intelligibility issues stemming from problematic pronunciation. Furthermore, some of the teachers were hesitant to assess students' pronunciation, fearing that negative feedback might be damaging to the learners' emerging L2 identities. In a field where scholar-specialists are becoming increasingly more verbally combatant to the point where some

consider pronunciation instruction to be either (a) a threat to L2 learner identity (Golombek & Jordan, 2005) or (b) a means to enhance learner pronunciation in order to better communicate learner identity (Derwing & Munro, 2009), the ESL teacher is left to their own resources when it comes to deciding what to do in the classroom. An additional dilemma concerns the question of, With whom should ESL teachers be preparing their students to speak? Should we be preparing them to speak with monolingual English speakers or with multilingual speakers of English in regions of the world where English has traditionally been learned as a foreign language? If English is to be used primarily in monolingual English-speaking parts of the world, numerous specialists have advocated for a primary focus on suprasegmentals or at least a balanced emphasis on both segmentals and suprasegmentals (Esling, 1994; Firth, 1992; Gilbert, 1987; Goodwin, 2001; Lewis & Grant, 2003; McNerney & Mendelsohn, 1992; Seidlhofer & Dalton-Puffer, 1995) in order to achieve high levels of intelligibility. However, if English is to be used mainly between NNSs of English whose dominant language is other than English, then other specialists have argued instead for a focus on segmentals (Jenkins, 2000, 2002, 2007; Walker, 2010). But what about learners who want to communicate as effectively as possible with a broad range of speakers falling along the continuum of English language users? More research is certainly required in this area.

In the meantime, as was demonstrated in the preceding chapter, teachers must contend with the sensitive nature of pronunciation instruction, providing feedback as deemed necessary and encouraging the negotiation of mutual intelligibility through student-student interactions whenever possible. As the teachers learned through the time span of this project, students ask for and desire feedback on the quality of their pronunciation; they want to improve their pronunciation to the point where they can communicate successfully with other speakers of the

language. Granted, similar to students in other studies (Derwing & Munro, 2003; Kang, 2010; Scales, et al., 2006; Timmis, 2002), the majority of the students also wanted to acquire native-like pronunciation, a goal that most trained teachers realize may be impossible for most adult L2 learners to attain (Pica, 1994; Scovel, 2001). However, the point relevant to the present discussion is that the students perceive a need to improve their intelligibility. In fact, much to the surprise of most of the participating teachers, their students favoured explicit feedback in class in front of their peers. While most of the teachers believed that students had a preference for receiving feedback privately to avoid embarrassment, the students instead expressed a desire for immediate feedback in class. This finding suggests that students' beliefs about the utility of explicit in-class feedback have not changed since Cathcart and Olsen's (1976) findings more than three decades ago. Essentially, L2 learners are the ones who must interact with other speakers of the English language outside of the safe confines of the classroom in a world where other English speakers may be more or less tolerant of different varieties of English pronunciation. ESL and EFL teachers alike need to prepare students to interact with English speakers in a variety of contexts.

Another finding of interest in the study concerned the teachers' cognitions about the techniques they used for teaching pronunciation. Teachers with focused education and training in pronunciation pedagogy used a larger variety of techniques in their classes than teachers without similar education and training. However, using a wide range of techniques did not necessarily mean that teachers, specifically Tanya and Vala, could not help but feel that their pronunciation lessons were occasionally "boring." While Vala's lack of education in pronunciation pedagogy led to the use of the same few techniques in the limited amount of time that was allotted to pronunciation instruction, Tanya employed a wider range of techniques over larger amounts of

class time that were almost entirely dedicated to pronunciation instruction. In other words, most of Tanya's classes were devoted entirely to pronunciation instruction, but even though she used numerous techniques, given the significant amount of class time spent on pronunciation, these techniques quickly become routinized. Furthermore, as noted by Tanya, her lessons were textbook-driven, and since textbooks regularly use the same techniques from one unit to the other, Tanya's concern over the potential tediousness of her lesson may have derived from this routinization. Thus, the end result for both teachers appeared to be "overroutinization" (Prabhu, 1992).

Furthermore, the combined results from the interviews, students questionnaires and classroom observations revealed that the teachers predominantly employed controlled techniques when teaching pronunciation and that, of all the techniques used, guided techniques appeared to be used less frequently. Guided techniques, especially information-gap activities involving a two-way exchange of information, serve as strong communicative activities that require learners to simultaneously negotiate meaning with one or more other learner(s) of English, work collaboratively to complete a task, address breakdowns in communication that are caused by problems with intelligibility, and enable learners to act as linguistic models for their peers. With their dual focus on meaning and intelligible pronunciation, guided pronunciation-oriented techniques are one answer to the need identified by the ESL teachers to encourage learner autonomy and to provide learners with successful NNS models of English pronunciation, assuming that at least some students have attained a threshold level of intelligible pronunciation in their classes.

Finally, one of the last major findings revealed in this study of teachers' cognitions related not so much to the specific area of pronunciation pedagogy, but rather to the study of

teachers' cognitions in general. The process of conducting the study confirmed that teachers' self-reports of their beliefs, knowledge and practices are limited in providing a sufficiently accurate and elaborated picture of teachers' cognitions, especially in representing their knowledge of pronunciation-oriented techniques. For example, in representing their knowledge of pronunciation-oriented techniques, the interview and observation data frequently provided complementary information with each data source supplying information that the other did not. Only through the combination of teachers' self-reports, classroom observations, and student reports can a sufficiently detailed picture be produced. As advocated by Borg (2003b), studies of teachers' cognitions require an examination of teachers' actual pedagogical practices. Without the inclusion of observed practice, cognitions that are implicit remain hidden from view. Likewise, classroom practices alone cannot reveal the rationale underlying teachers' decision-making in the classroom, especially in determining how any number of contextual factors might influence teachers' cognitions (Burns, 1996). Each construct is mutually shaped and informed by the other; yet, the end point of teachers' cognitions lies at the intersection of where those cognitions, whether explicit or implicit, interact with students or other observers in the classroom.

Thus, the classroom practices and interactions of a teacher in many ways mirror the teacher's cognitions. The classroom is a reflection of teachers' cognitions - their beliefs, their thoughts, their knowledge, their passions, their desires, their fears, and how these cognitions intersect with a variety of different contextual factors, limitations and challenges that influence teachers' actions and behaviors. The image of a mirror is useful in this context, since the quality of reflection in a mirror depends upon the clarity and subtle inconsistencies in the shape of its surface just as the degree to which a teacher's instructional practices may reflect underlying cognitions is filtered through both classroom contextual and internal states of being. In essence,

the teacher's instructional practices illustrate what teachers' believe to constitute effective practices for their particular class of students given the various constraints involved in teaching in their local contexts. While pedagogical practice, as evidenced through classroom observations, provides a window into teachers' cognitions, that window is inevitably tinted by the perspective of the outsider looking in. Interviews with teachers, especially stimulated recall interviews that attempt to elicit teachers' thoughts at the moment that a specific classroom behavior occurred, are important in understanding the rationales for teachers' behaviors and actions; however, the caveat remains that teachers may be unable to accurately recall what they were thinking at the time. Or, the teacher participating in a stimulated recall interview might be inventing a completely new explanation for their actions that are disconnected from the original classroom event. Awareness of such complications is why triangulation in methods in data collection is essential.

Nevertheless, the process of conducting the study has convinced me that interviews do provide useful background information necessary for better understanding what is happening in the classroom - the approaches that teachers use, the techniques they choose, the explanations and interactions that take place, otherwise called their professional actions. As noted by Borg (2006), "Ultimately, [...] we are interested in understanding teachers' professional actions, not what or how they think in isolation of what they do" (p. 105).

What occurs in the classroom is the end result of all the classroom participants' cognitions coming together at a single point in time. Yet, these cognitions are diverse. Cognitions are first built on the foundation of the teachers' experiences as learners and later through teacher education and experience as novice and/or more experienced language teachers as well as through various forms of reflective teaching. The foundation of classroom learning experience, teacher education, teaching experience and past reflective teaching practices then

intertwines with their current cognitions that pertain to a specific classroom of learners. With this classroom of learners, teachers' cognitions about the subject matter and how to teach it, the learners, and the curriculum all interact with their earlier, foundational cognitions. We might expect that every semester, teachers' cognitions develop as result of their experiences in the classroom and possibly through additional reflective practice or further education as well.

Although what transpires in the classroom at one point in time may constitute "best" practices, these practices are not necessarily what the teachers would consider to be "ideal" practices.

Throughout the study, all of participating teachers expressed misgivings about at least one aspect of their teaching, admitting their uncertainty about how to effectively teach pronunciation, particularly those teachers with limited training in pronunciation pedagogy. Nevertheless, given the foundational and experiential resources they have and the local contexts in which they work, their classroom practices represent how they think their beliefs and knowledge about teaching will work most effectively with their current group of language learners following the learning outcomes and/or objectives of the program curriculum. These cognitions are dynamic and ever-changing as teachers develop their understanding of language teaching/learning from one semester to the next. Calderhead (1996, p. 710) posits that "[t]eachers clearly have a vast, somewhat idiosyncratic knowledge base that may be continuously changing and restructuring."

As each semester unfolds and then passes, teachers may or may not choose to develop their teaching to better fit their perception of what might be even more effective ways of teaching. Or, they may engage in further reflective teaching practices such as classroom action research to try to determine how to better serve as classroom teachers. They may even seek out extra information through consultations with peers, reading relevant literatures, attending workshops or conference presentations, among other possibilities. The potential for such professional

growth is only limited by the teacher's personal motivation or curiosity along with external factors (e.g., program administration, time, experiences with learners, life in general) that influence how their cognitions are both developed and ultimately applied in the classroom.

5.2 Limitations

The study of teachers' cognitions is, in and of itself, inherently predisposed to certain limitations. As mentioned earlier, exploring the beliefs, thoughts and decision-making processes of teachers is challenging. No one methodology alone is capable of delving into the cognitions of teachers, and even through multiple research procedures, our insight is still limited to what teachers can discuss in terms of their own cognitions. By combining semi-structured interviews with classroom observations as well as students' opinions, and then allowing teachers to respond to video-tapings of their classroom behaviors and to students' perspectives, we can gain entrance to both the known and hidden mental processes of teachers. However, even with such multiple lenses, we can still only investigate processes that teachers are able to articulate into words. Teachers cannot always provide complete rationale for what they do even when classroom observations or students indicate that they behave in a particular way.

Furthermore, in a context where all OC classes occur during the same time slot, observations could only be arranged with two or three teachers in each of the semesters involved. At the same time, due to difficulties with scheduling, the observations were limited to five times throughout the semester, of which only four were examined in detail. Thus, the observations provide snapshots of teacher behavior and may not be representative of teachers' cognitions as related to pedagogical content.

Finally, another limitation with the study is the challenge associated with generalizability. Although the study provides insight into the mental processes of teachers, only the beliefs,

thoughts and behaviors of five teachers could be explored. As all of the participating teachers were working in the same IEP, and all were female native NAE speakers, their cognitions and classroom activity cannot be considered representative of all experienced IEP instructors. Similarly, these findings may not necessarily be reflective of other classroom ESL or EFL contexts. Nevertheless, as an exploratory study into teachers' cognitions as they relate to pronunciation pedagogy, the methodological procedures and findings from the current study provide a framework for future investigations in different contexts. Future explorations could include EFL tertiary programs, new immigrant programs in ESL contexts, elementary and secondary school programs in either ESL or EFL contexts or, alternatively, other language programs.

5.3 Implications for Teacher Education and Teacher Development

Unlike L2 grammar and literacy, pronunciation appears to be rarely or only partially taught in ESL/EFL programs; thus, without courses dedicated to pronunciation pedagogy, teachers have very little to draw upon when teaching pronunciation. Consequently, some teachers may be unaware of the complexity of English pronunciation and the variety of approaches and techniques available for teaching this skill area. In essence, many teachers may have limited or insufficient knowledge about: (1) phonological dimensions of language; (2) how to teach pronunciation; and (3) how to assess learners' pronunciation proficiencies, abilities, and needs. Therefore, one of the study's overarching implications is that more TESOL programs need to provide high quality courses dedicated to pronunciation pedagogy.

This view of English pronunciation as a complex system means that advanced study is required (usually starting with graduate coursework and later developed through teaching experience in classrooms). Advanced study is necessary to achieve a working knowledge of: 1)

the features of English pronunciation; 2) how to teach them; 3) how to enable students to learn them (points 2 and 3 are not necessarily mutually inclusive); and 4) whether they are important for learners to acquire in order to improve their comprehensibility to other proficient speakers of the English language (including monolingual, bilingual and near-bilingual (or multilingual) English speakers). Teachers need to learn how to do three things: diagnose difficulties with pronunciation that interfere with intelligibility, teach learners techniques that will enable them to continue to improve their pronunciation long after a formal period of instruction is over, and assess whether the learners are accomplishing these goals. Not only do teacher preparation programs need to include courses on pronunciation pedagogy, but such courses need to give teacher candidates adequate opportunity to practice in all three of the areas listed above. One of the reasons the offering of high quality teacher education courses in this area is so important is, more often than not, teachers have never been exposed to pronunciation teaching techniques as L2 language learners themselves. Thus, they may be unaware of essential features of English pronunciation (e.g., aspiration, linking, vowel reduction, prominence, intonation).

In an ideal world not constrained by economic considerations, an effective way to enhance teacher awareness would be to include two courses on pronunciation pedagogy. The first course could be dedicated to the phonological system of English and could also include an introduction to controlled, guided and free techniques that could be used in teaching pronunciation. Later, a second course could be focused even more directly on the diagnosis of student intelligibility problems, the selection of appropriate controlled, guided and free techniques to address these problems, and ways to assess whether the learners' intelligibility needs are being met. Furthermore, such a program of study could more appropriately prepare teachers to address the needs of language learners who wish to use their English language skills

during interactions with diverse populations of English language users (e.g., nonnative, monolingual, bilingual, and near-bilingual speakers of English, as well as multilingual speakers). In the second course described above, the definition of intelligibility would be adapted to relevant contexts in which the English language learners need to be able to use their language skills. For EFL or other bilingual speakers who have less need to communicate with monolingual English speakers, certain features which are considered important to monolingual speakers (or to bilingual speakers who grew up learning English in a monolingual English society) could be relegated to a position of secondary importance (e.g., EFL curricula designed for non-English dominant parts of the world such as Egypt, Indonesia, Japan, Korea, Spain, Sweden, Vietnam).

For teacher development programs that cannot devote one course (let alone two) solely to the teaching of pronunciation pedagogy, one alternative is to better integrate pronunciation pedagogy with the teaching of other skills. When introducing L2 teaching strategies for reviewing vocabulary associated with a lecture, teacher educators can also illustrate activities that would focus language learner attention on word stress or segmentals. Also, teacher educators might demonstrate that when ESL/EFL students listen to a lecture, they can also be asked to identify features of English rhythm such as sentence stress or prominence to help language learners locate key information in a listening activity. When teacher educators provide instruction on how to engage pairs or small groups of students in discussion groups focused on comprehension questions, they can simultaneously show teacher trainees how to structure such conventional language learning activities so that ESL/EFL students would be challenged to practice intonation or rhythm when reading the questions, and later in answering the questions. OC pedagogy courses need to demonstrate ways of integrating not only pronunciation-related

controlled techniques, but also guided and free techniques throughout the teaching of other OC skills.

For programs that currently do not have any courses dedicated to pronunciation pedagogy, the hope of the present research is to provide the incentive needed to more fully incorporate the teaching of pronunciation within TESOL-oriented curriculum. As found in earlier research (Breitkreutz, et al., 2001; Derwing & Munro, 2005; Murphy, 1997), many teacher training programs have neglected this skill area. Without education in the fundamentals of English pronunciation and how to teach this skill area, teachers, at best, lack confidence in teaching pronunciation and, at worse, avoid teaching it altogether (Fraser, 2000; S. Macdonald, 2002).

Furthermore, in addition to efforts made to enhance TESOL education (or related) programs, ESL/EFL programs also need to take additional action. Enhancing or incorporating instruction on pronunciation pedagogy cannot be limited solely to teacher education programs. Many ESL/EFL teachers have already graduated from TESOL programs that had either a limited or no focus on pronunciation instruction. For these teachers, many of whom are experienced ESL/EFL teachers, institutional teacher development initiatives are key. One of the primary ways that language programs could address teachers' limited knowledge in pronunciation pedagogy is to encourage teacher-initiated research projects. If possible, eliciting the aid of specialists to assist with the teachers' projects can further enhance the teachers' knowledge and also strengthen teacher confidence in conducting research and teaching pronunciation. L2 programs can request assistance from TESOL program faculty (from neighboring institutions) or invite graduate students to conduct research with teachers in their ESL/EFL programs. With the increasing number of MA TESOL (or related) programs around the world, there is a large pool

of potential specialists to draw upon. As in the case of Abby and Ginger, collaboration with graduate program faculty coupled with teacher curiosity and a genuine desire to improve the intelligibility of student speech can serve to strengthen both teachers' knowledge base of pronunciation pedagogy and confidence in teaching pronunciation. Supporting teacher-initiated research projects and cultivating collaborative, working relationships with specialists in the field is an important step that ESL/EFL programs can take to enhance the knowledge base of their teachers. ESL/EFL programs can further support their teachers by granting course releases to provide teachers with the extra time typically needed to conduct research.

Finally, ESL/EFL programs can also provide in-house workshops devoted to pronunciation pedagogy. Programs can invite pronunciation specialists to give full day or weekend workshops on how to practically incorporate pronunciation instruction into integrated skills or OC course curriculum. Full day or longer workshops, as opposed to shorter, two-hour workshops, are essential given the complexity of the English pronunciation system and the variety of techniques and approaches available for teaching this skill area. In the event that inviting specialists to conduct these workshops is not feasible, then ESL/EFL programs can provide financial support and time-off for teachers to attend comprehensive, pronunciation-oriented workshops such as the pre-conference institutes at the annual international TESOL convention.

5.4 Implications for L2TC Research

In the study of the development of cognitions and practices of experienced teachers of English, or of any L2, the coupling of observations of teachers in action and the same teachers' self-reports of their current practices is essential. Although there is always the danger that teachers participating in research projects may modify their typical practices to conform to

practices they believe to be desirable to an observer, the combination of observations and self-reports can provide valuable insight into teachers' cognitions about teaching. In interviews, having participants highlight their most memorable moments about learning pronunciation in a L2, their most memorable moments from coursework dedicated to pronunciation pedagogy in their teacher education programs, their past experiences as L2 teachers, and their reflective practices, and then comparing this information to actual observations of their classes can provide a detailed picture of how past experience has impacted their current cognitions and pedagogical practices. As seen in the cases of Abby, Laura, and Tanya, the interviews highlighted several techniques or materials that the teachers reported to have gleaned from their graduate education in TESOL and also reported to continue using in the current OC class. The observations confirmed that the teachers continued to use these techniques. Alternatively, in the interviews four of the teachers never mentioned using repetition work in their current teaching; however, the observations demonstrated that these four teachers used repetition drills to varying degrees. In the interviews, the teachers identified repetition work as an integral, or sometimes the sole activity, used to teach pronunciation in their prior L2 learning experiences. Based on this information, studies that neglect to include observations of actual classroom practices in their research methodology can only re-create and reaffirm an inaccurate representation of how teachers' cognitions about teaching develop over time. Both self-reports and observations are necessary in order to map out how the cognitions of teachers have developed over time as reported practice does not always equate to actual practice. Although self-reports of prior L2 language learning experiences, teaching experiences, teacher training, and reflective practices may not be as reliable as observing these past experiences or practices first-hand, in the case of experienced teachers, self-reports are the most realistic way for researchers to gain access to such

information. The alternative is a direct observation of participants, starting with their first L2 learning experiences as a child – an almost impossible undertaking. Nevertheless, direct observation of participants as teachers in their current classes is certainly a realistic option for any in-depth study of teachers' cognitions. Without such observation, we gain an incomplete picture of teachers' knowledge about pronunciation or how to teach it.

In addition, as mentioned by Borg (2006), the inclusion of student perspectives on their classroom education is an important element in L2TC research. In the present study, teachers were given an opportunity to see summary results from the student questionnaires and to respond to the opinions expressed by their students they were concurrently teaching. The teachers' reactions to this data provided additional insight into their cognitions about teaching in general and about teaching pronunciation in particular. In some cases, the teachers were surprised about what they learned from their students. This surprise, in turn, led to the teachers providing a rationale for teaching the way they do (for example, how and why they give feedback to students in a particular way), and then trying to figure out what might be the cause of their students' beliefs. In some cases, this realization caused them to reflect on their own teaching and to contemplate how they might change in the future. Thus, giving teachers the opportunity to view their classroom teaching from the eyes of their students as well from the lens of the video camera enables teachers to reflect on their teaching in a manner that they normally would not have time to do on their own. In that way, both researcher and teacher benefit from the research enterprise.

One final implication for L2TC research relates to the difficulty involved in distinguishing between teachers' knowledge and beliefs in the coding of interview data. As the primary researcher who had complete access of all the interview and video data, I found separating these two types of cognitions to be easier than the second coder did when analyzing

the interview data. First of all, the second coder only had access to a limited amount of the data. (Since coding the data in its entirety would take an individual more than a month to complete, it would be unrealistic to ask another individual to invest this amount of time given their own academic and personal schedules.) With only partial access to the interview data, the second coder experienced difficulties in distinguishing between knowledge and beliefs. The boundaries between those two types of cognitions became unclear the coder did not have access to a lot of the contextual information found in another part of the same interview or in a different interview. For example, in an earlier interview the teacher participant may have discussed her knowledge of a particular technique that was considered "effective" for teaching a specific element of the English pronunciation system as learned from previous graduate coursework or readings about that technique. However, the coder did not always have access such related parts of these interviews - the background information necessary to successfully distinguish between knowledge and beliefs - thus, when coding another part of a subsequent interview with that participant, the coder occasionally classified discussions of "effective" techniques as "beliefs" because he considered such discussions to be based on the participants' personal opinions about that technique rather than on knowledge learned from previous coursework or through reading journal articles or books. Based on the difficulties inherent in separating teachers' knowledge from beliefs when involving additional coders who analyze less than 100% of the data, the broader category of "cognitions" is a considerably more reliable theoretical construct to use in studies of L2TC.

5.5 Final Thoughts and Future Directions

By investigating the cognitions and practices of experienced teachers who demonstrate an on-going desire to grow as effective language teachers, we can discover what teachers consider

to be effective ways to teach a language in a particular context as evinced by observations of their classroom practices. These observed practices are ultimately what teachers believe to be the most effective given their level of knowledge about pedagogy and considering the conditions under which they have been assigned to teach, within a particular local context and program curriculum. In other words, as articulated by Murphy (2001b, p. 4), "all instances of English language teaching take place within particular sets of circumstances." What experienced, and motivated, teachers do within this set of diverse contextual and personal circumstances demonstrates their beliefs about best, or at least what might be considered promising teaching practices. It is here, in the local context, be it English in North America (Inner Circle), English in India (Outer Circle), or English in China (Expanding Circle), that research into best practices needs to begin. Building first on what experienced teachers (but especially teachers who have a desire to increase their effectiveness as teachers) believe and do is where research into effective practices should begin. What these teachers do in an authentic classroom context should be the starting point for research. If we know what seems to work in the classroom from the perspective of experienced teachers, we can further test the robustness of these practices in more experimental contexts where we can potentially determine their effectiveness for language learners in either the same local context or in other contexts. With this knowledge, we can enhance the education delivered in our L2 teacher preparation programs, and provide current, practicing teachers who are uncertain about how to teach pronunciation with appropriate methods and techniques for teaching.

Future research, however, needs to examine not just the effectiveness of individual techniques that teachers use for enhancing the intelligibility of L2 learners - as has been the focus of a great deal of previous research. Too much of even an effective technique will likely result in

"overroutinization" (Prabhu, 1992) and boredom on either the part of the teacher and/or students; thus, in the classroom, these techniques may become ineffective over time due to tedium.

Instead, future research needs to investigate collections of techniques or preferably systematic approaches to pronunciation instruction, involving controlled, guided and free techniques in multiple modalities from kinesthetic/tactile to audio and visual modalities. To achieve this goal, what is needed is an examination of teachers' cognitions and practices in conjunction with the perceptions and learning outcomes of students. How do teachers' cognitions and professional activity, in the end, affect and/or intersect with both students' beliefs and their acquisition of the L2, especially in the skill area of pronunciation, which can be extremely resistant to change? Such a research agenda must necessarily be expansive and include procedures such as the ones employed in the current study, but with the addition of pre-test, post-test and, long-term delayed post tests to assess students' mastery of elements of English, in this case, features of English pronunciation. Only by combining studies of teachers' cognitions and practices with learning outcomes can we determine what "best" practices are in authentic classroom environments.

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APPENDICES

Appendix A

Guiding Questions for the First Semi-Structured Interview

(adapted from Borg, 1998b; Cathcart, 1976; Cohen and Fass, 2001; Macdonald, 2002; as well as from the research questions in the current proposed study, which were based on those presented in the literature review in the first half of this manuscript)

Part 1: Education Background

Second language learning

1. Have you learned a second language either as a child or as an adult?
2. What do you remember about your experiences of learning a second language? Of learning pronunciation in particular?
 - a. What kinds of methods were used to teach pronunciation?
 - b. What models were used?
 - c. Were there any formal discussions or analyses of second language pronunciation?
 - d. Do you recall whether you enjoyed such lessons or not?
3. Do you feel that your own education as a language student has had any influence on the way you teach pronunciation today?

Teacher education

1. How and why did you become an ESL teacher?
 - a. What recollections do you have about your earliest teaching experiences?
 - b. Were these particularly positive or negative? How about in relation to teaching pronunciation?
 - c. What kinds of teaching methods and materials did you use? What methods and materials (if any) did you use for teaching pronunciation?

2. Tell me about your formal teacher training experiences.
 - a. Did they encourage participants to approach pronunciation in any particular way?
 - b. Which aspect(s) of the course(s) did you find most memorable?
 - c. Do you remember any particular activities or techniques that you thought would be useful for teaching pronunciation?
 - d. How strong do you consider your linguistic knowledge of English pronunciation?
What aspects of English pronunciation were addressed in your courses?
3. What have been the greatest influences on your development as a teacher? Language learning experiences? Past teaching experiences? Teacher training/development courses? How about specifically in relation to pronunciation?

Reflections about typical teaching practices and pronunciation

1. Tell me how you feel about teaching pronunciation.
 - a. How much do you like teaching pronunciation?
 - b. Are you confident in teaching pronunciation?
 - c. How important do you think having knowledge about English phonology is when teaching pronunciation (i.e. knowledge of vowels, consonants, rhythm, intonation, etc.)
 - d. How should pronunciation be taught (formally as part of a lesson, on a case-by-case or ad hoc, implicitly, etc.)?
2. What emphasis do you feel should be placed on pronunciation? (How important is pronunciation? How should it be prioritized in the classroom?)
3. Do you typically teach pronunciation in your classes? Why? Why not?

- a. How much time do you spend on pronunciation in oral communication-type classes?
 - b. Is the time you spend on pronunciation typically enough to meet your students' needs?
4. When/if you teach pronunciation, what do you normally do? Which linguistic aspects do you usually focus on? (vowels, rhythm, intonation, etc.)
 5. What pronunciation model(s) should be used?
 6. How important do you think it is to assess students' pronunciation? How should their pronunciation be assessed? How do you normally assess students' pronunciation?
 7. How do you normally give them feedback on their pronunciation?

Other influences on teachers' cognitions

1. In what ways do external factors such as the objectives of the IEP or the curriculum affect how you address pronunciation in the classroom?
2. In what ways do you assess what your students' pronunciation needs are? How does this knowledge about students affect how you address pronunciation in the classroom?
3. Do you engage in any reflective practice such as journaling or other types of reflection that may influence your lessons? With respect to pronunciation? How important is reflecting on your practice to you?
4. How does knowledge sharing with other teachers impact your knowledge about pronunciation or how you teach pronunciation to your students? For example, do you get ideas for activities from other teachers for teaching this skill?

Appendix B

Guiding Questions for the Mid-Semester Interview

Knowledge of students and pronunciation instruction

(adapted from Borg, 1998b; Cathcart, 1976; Cohen and Fass, 2001; Macdonald, 2002; as well as from the research questions in the current study, which were based on those presented in the literature review)

1. This semester, how does your knowledge about your students' needs affect how you address pronunciation in the classroom? For example, are there any differences between how you've taught it this semester versus other semesters?
2. Do your students want you to teach pronunciation?
3. Are they confident about their pronunciation? Do they think other people can understand them when they speak?
4. What is the ideal percentage of class time spent on pronunciation? Why?
5. What percentage of time do you think you spend on pronunciation in your class?
6. Is the time you spend on pronunciation enough to meet your students' needs?
7. Up until this point in the semester, what features of English pronunciation have you focused on? What features do you plan on addressing during the remainder of the semester?
8. For each of those features you listed, what activity do you use that is the most helpful for improving their pronunciation?
9. What materials do you use to teach pronunciation to your students? How appropriate/effective are they?
10. Do your students want you to assist them in improving their pronunciation?
 - a. If yes:

- i. How do you know they want such assistance?
 - ii. Do you know how they would like you to provide this correction? For example, do they want you to correct it in class where others can hear you, do they prefer you to do it privately (i.e. on ULearn or in your office) where others cannot hear, or do it as whole-group correction?
 - iii. How do you provide this assistance?
 - b. If no:
 - i. How do you know they don't want such assistance?
 - ii. Do you provide assistance even though they don't want it? How?
11. What other factors influence when you decide to provide students with help on their pronunciation or not?
12. What kind of pronunciation models do you think your students want to be exposed to?
13. In what contexts do you think your students will use their spoken English after they finish their studies in the IEP? Does this influence your decision about what kind of pronunciation models you use?
14. What kind of pronunciation models do you use? How do you model them?
15. What kind of accent do you think your students want to acquire? Do they want to acquire an American accent or maintain their own L1 accent?

Appendix C

Guiding Questions for the Final Semi-Structured Interview

Part 1: Review summary results of student questionnaire.

Part 2: Follow-up questions

1. Now that we're at the end of the semester, based on what you've done with pronunciation teaching and learning, what might you change, if anything, if you were to teach this course again? Why? Why not?
2. Would you change anything about the following?
 - a. How you give feedback to students? (Privately, Whole group, individual but observable by the rest of the class)
 - b. How you assess students' pronunciation?
 - c. The materials/textbook you use?
 - d. The pronunciation models (accents) students get to listen to?
 - e. The elements of pronunciation you teach to your students?
 - f. Other activities you use for teaching pronunciation?
 - g. The amount of time you spend on pronunciation?
3. Has your interest in teaching pronunciation increased, decreased or remained the same since the beginning of the course? Why? Why not?
4. Has your confidence in teaching pronunciation decreased, increased or remained the same since the beginning of the course? Why? Why not?
5. Has my dissertation research affected how you've taught this course this semester
6. Has my dissertation research affected how you might teach this same course in the future? If yes, how?

7. How likely are you to attend presentations or workshops focused on pronunciation instruction at local or national conferences in the future? Is this more or less likely or the same as before you became involved in my dissertation research?
8. What do you think about being involved in this project on teachers' beliefs, knowledge and practices in relation to teaching pronunciation?

Appendix D

Classroom Observations in Research on L2TC

Study	Curricular Focus (if any)	Observations	
		Number of observed classes per teacher	Number of Teachers
Andrews & McNeil (2005)	Grammar	2	3
Andrews (2006)	Grammar	Unspecified	3
Basturkmen et al. (2004)	Grammar	4?	3
Borg (1998a, 1998b, 1999b, 1999c, 2001, 2003a) ⁶	Grammar	2 week period (15 hours)	5
Brumfit et al. (1996)	Grammar	8 week period	7
Burns & Knox (2005)	Grammar	4	2
Burns (1992)	Writing	Unspecified	6
Cathcart & Olsen (1976)	Oral Communication	1	21
Cohen & Fass (2001)	Oral Communication	6 (6 consecutive hours)	6
Collie Graden (1996)	Reading	1-7 (57 total)	6
Farrell & Lim (2005)	Grammar	2	2
Farrell (2006)	Writing	7	1
Gatbonton (1999)		Unspecified	7
Gatbonton (2008)		2 week period	4
Hawkey (2006)	Grammar	Unspecified (20 lessons	Unspecified

⁶ These papers (Borg, 1998a, 1998b, 1999b, 1999c, 2001, 2003a) are all based on data collected from the same study. Full details are provided in Borg (1998b). The number of participants identified for this study reflects the total number of participants in the larger study. Individual papers may only discuss the situations of 1-5 of the participants.

		in total)	
Johnson (1992)	Reading	8	3
Johnston & Goettsch (2000)	Grammar	2	4
Ng & Farrell (2003)	Grammar	2	4
Phipps & Borg (2007)	Mixed	Unspecified	3
Popko (2005)	Grammar	1	4
Shi & Cumming (1995)	Writing	4 week period (48 total)	5
Zhang (2008)	Vocabulary	4 (over 14 weeks)	7

Appendix E

Stimulated Recall Interviews in Research on L2TC

Study	Curricular Focus (if any)	Stimulated Recall (SR)			
		Number of SR sessions per teacher (Total)	Number of Teachers	Time between observations and SR	Stimulus
Andrews & McNeil (2005)	Grammar	1	3	“as soon as practicable”	Video
Basturkmen et al. (2004)	Grammar	1	3	Unspecified	Transcript/ Audio
Borg (1998a, 1998b, 1999b, 1999c, 2001, 2003a)	Grammar	2	5	Unspecified	Transcript
Burns & Knox (2005)	Grammar	2	2	Unspecified	Transcript
Burns (1992)	Writing	Unspecified	6	Unspecified	Transcript/ Audio
Gatbonton (1999)		1	7	“right after teaching” for most, but “a few days to 3 weeks” for 1-2 teachers	Video
Gatbonton (2008)		1	4	Unspecified	Video

Johnston & Goettsch (2000)	Grammar	Unclear (1 or 2)	4	“shortly following observations”	Transcripts
Popko (2005)	Grammar	1	4	“same day if possible”	Observation notes and Teachers’ lessons plans
Zhang (2008)	Vocabulary	2	7	Same day (except for 2 held the following day)	Video

Appendix F

Instructions for Stimulated Recall Interview

(adapted slightly from Gass and Mackey, 2000)

Instructions for research participants

What we're going to do now is watch the video. I am interested in what you were thinking at the time you were teaching, discussing or addressing something related to pronunciation in your class. We can hear what you were saying by looking at and listening to the video, but we don't know what you were thinking. So, what I'd like you to do is tell me what you were thinking, what was in your mind at that time while you were observing or speaking or listening to your students.

I'm going to put the keyboard in front of you and you can pause the video at any time that you want. So if you want to tell me something about what you were thinking, you can press the SPACE BAR to pause to video. To play the video, press the SPACE BAR again. If I have a question about what you were thinking, then I will pause the video and ask you to talk about that part of the video.

Appendix G

Studies of L2TC including Student Perspectives

Study	Curricular Focus (if any)	Number of Students	Type of Student Data	
			Questionnaires	Interviews
Brumfit et al. (1996)	Grammar	Unspecified		√
Cathcart & Olsen (1976)	Oral Communication	188	√	
Cohen & Fass (2001)	Oral Communication	63	√	√
Diab (2005)	Writing	2		√
Drewelow & Theobald (2007)	Pronunciation	73	√	
Hawkey (2006)	Grammar	228	√	

Appendix H

Student Questionnaire

Please respond to each statement below using a check (✓). Choose from: Strongly agree, Agree, Maybe, Disagree, or Strongly Disagree)

	Strongly agree	Agree	Maybe	Disagree	Strongly Disagree
I am confident about my English pronunciation skills. (I think other people can understand my pronunciation.)					
I want to improve my pronunciation skills in English.					
The textbook and/or materials that the teacher uses are helpful for improving my pronunciation.					
I want my teacher to teach pronunciation.					
I want my teacher to correct my pronunciation.					
I like it when my teacher corrects my pronunciation in front of the class (when the class can hear what she says).					
I like it when my teacher corrects my pronunciation privately (e.g., in ULearn, in her office, or quietly in class). (The class can NOT hear what she says).					
I like it when my teacher corrects our pronunciation as a group in class. (She does NOT focus on me individually).					
I want to <u>listen</u> to American English speech.					
I want to listen to British, Australian, Canadian or other native-English speech.					
I want to listen to Indian, Chinese, Arabic, French, Spanish or other English-speech models					

	Strongly agree	Agree	Maybe	Disagree	Strongly Disagree
I want to <u>speak</u> English with an American accent.					
I want to speak English with my native language accent. (E.g. Chinese, Arabic, Korean, French, etc.).					
I want to speak English with a(n) _____ accent. (write language here)					

Other questions:

- What is the ideal (best) percentage of time that you think should be spent on pronunciation in this class? _____%
- What percentage of time does your teacher spend on pronunciation in your class? _____%
- What activity has your teacher used that is most helpful for improving your pronunciation?

- When you **finish** the IEP program, where will you **use** spoken English? (Check all that apply)
 In my home country (Please explain: _____)
 In an American undergraduate program
 In an American graduate program
 In my daily life - living or working in the United States
 Other (Please explain: _____)
- What is your native (first) language? _____.
- How long have you studied English? _____ years _____ months.
- How long have you lived in an English-speaking country? _____ years _____ months.

Appendix I

Initial Codebook: Start List of Codes

The following start list of codes were used in the initial analysis of the transcripts.

Knowledge

Subject matter content knowledge	KSM
General pedagogical knowledge	KGP
Curriculum knowledge	KCU
Pedagogical content knowledge-pronunciation specific	KPCP
Pedagogical content knowledge-other skills areas	KPCO
Knowledge of learners	KLE
Knowledge of educational contexts	KEC
Impact of confidence about knowledge of pronunciation	KCF
Other	KOT

Beliefs

Importance of knowledge about pronunciation	BIKP
Prioritization of pronunciation in curriculum	BPPC
Pronunciation models	BPM
Usefulness of materials/textbooks	BUM
Assessment of pronunciation	BAP
Other	BOT

Development of cognitions

Teaching experience	DTEX
Language learning experience	DLL

Teacher training	DTT
Time spent in reflection	DRF
Knowledge sharing with colleagues	DCOL
Other	DOT

Actual practices (pronunciation) - Knowledge

Subject matter content knowledge	APKSM
General pedagogical knowledge	APKGP
Curriculum knowledge	APKCU
Pedagogical content knowledge-pronunciation specific	APKPCP
Pedagogical content knowledge-other skills areas	APKPCO
Knowledge of learners	APKLE
Knowledge of educational contexts	APKEC
Impact of confidence about knowledge of pronunciation	APKCF
Other	APKOT

Actual practices (pronunciation) - Beliefs

Importance of knowledge about pronunciation	APBIKP
Prioritization of pronunciation in curriculum	APBPPC
Pronunciation models	APBPM
Usefulness of materials/textbooks	APBUM
Assessment of pronunciation	APBAP
Other	APBOT

Appendix J

Sample Coder-Agreement Datasheet

Pre-Observation Interview with Abby	Coder 3	Coder 1
<p>A: In general, based on what you learned in that course, how would you consider your linguistic knowledge of English pronunciation?</p> <p>R: I think it gave me a good solid foundation but there are things that still need to be filled in. Gaps.</p> <p>A: Even today?</p> <p>R: Yeah, I think so. Certain things that I wonder about, things that I get confused coz I've been teaching this level three in the IEP for awhile.</p>	CSM	
<p>A: How many semesters?</p> <p>T: It's the only pronunciation class that I've taught actually. 4 or 5 semesters. Something like that. Somewhere around there.</p>	DTEX	
<p style="text-align: center;">So, I feel like it's some things I need to go back to the Celce-Murcia book. That's the book I really like to fill in some gaps. Like I said, is it prominence or sentence stress? where one word gets focus. The adjectives like white WHITEhouse or white HOUSE. Some of those things coz I haven't taught it so it gets a little hazy sometimes.</p> <p>A: Any other things that you find there's gaps?</p> <p>T: Intonation stuff. Once I start talking I'll add stuff.</p>	CSM	
<p>A: So of all these different influences, it sounds like from what you're saying, that particular course has had the greatest impact on how you teach pronunciation..</p> <p>T: Oh definitely.</p>	DTT	
<p>A: Have there been any other influences that you know of that might have influenced how you teach pronunciation today?</p> <p>T: Just being exposed to different language groups and specifically the Vietnamese and that group of students just were very difficult. I didn't know what to do with them. I kept using all these techniques and having them repeat. I would one on one, try to explain it better, but it's all the same stuff over again....and it wouldn't work.</p> <p>A: What part were they having the problems with?</p> <p>T: See at the time I didn't know. I didn't know what was going on</p>	DTEX-LE	
<p>T: What I need to know more about is the positions of the mouth. Fricative and whatever. All these labials. Those are the easy ones. Then some other ones I get confused and then new sounds come in and I don't know how to classify them. The segmentals.</p>	CSM	
<p>A: How do you feel, how much do you like teaching pronunciation?</p> <p>R: Oh, I really like it. I feel like it's my niche.</p> <p>A: You seem like you really enjoy it.</p> <p>R: I really like it. We get into it.</p>	CAT	
<p>R: It's very interactive with all these little games we call them that I get from Professor X.</p>	DTT	
<p>A: And do you feel overall confident in teaching pronunciation?</p> <p>R: Teaching level 3 yes. And actually I think if I were to go down now, if I were to go down to level 2 or level 1, after this project, you know, we were really working on segmentals, yeah. Yeah, now I feel like I could handle level one and level two.</p>	CSM	

Appendix K

Informed Consent for Teachers

Georgia State University

Department of Applied Linguistics

Informed Consent

Title: Pronunciation instruction and second language teacher cognition

Principal Investigator: John Murphy

Student Investigator: Amanda Baker

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate what teachers think, know and believe about the teaching of pronunciation as well as how they actually teach pronunciation. You are invited to participate because you are an English as a Second Language (ESL) instructor for a course or courses which incorporate the teaching of pronunciation. A total of 5 participants will be recruited for this study. Participation will require a maximum of 12.5 hours of your time over a span of 14 weeks.

II. Procedures:

If you decide to participate, you will participate in 4.5-5.5 hours of interviews and 7 hours of classroom observations over a 14 week period. The classroom observations will be both video and audio-recorded using digital recording devices. The interviews will be divided into two types. The first type will involve discussions of your educational background and teaching experiences. The second type will involve watching video recordings of your teaching and discussing what you observe on the video footage. The research will be conducted entirely by Amanda Baker and the interviews will take place in the department of Applied Linguistics and ESL. The interviews will be audio-taped. The researcher will collaborate with you to ensure that all parts of this research occur at times convenient to you.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may or may not benefit you personally. Overall, we hope to gain information about the complexities involved in the teaching of pronunciation. In part, we hope to

use the knowledge gained from this study to enhance teacher education programs in this skill area.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. We will use a pseudonym rather than your name on study records. Only the principal and student investigators will have access to the information you provide. It will be stored on a password- and firewall-protected computer. The audio and video recordings will be stored in digital format on the same computer. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally. The collected data may be used for future study and analysis as well. In the event that this occurs, your identity will remain completely anonymous.

VII. Contact Persons:

Contact [REDACTED] or [REDACTED] at [REDACTED] if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact [REDACTED] in the Office of Research Integrity at [REDACTED] or [REDACTED].

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio and video recorded, please sign below.

Participant	Date
Principal Investigator or Researcher Obtaining Consent	Date

Appendix L

Informed Consent for Student Observations

Georgia State University

Department of Applied Linguistics

Informed Consent

Title: Pronunciation instruction and second language teacher cognition

Principal Investigator: John Murphy

Student Investigator: Amanda Baker

I. Purpose:

You are invited to participate (join) in a research study. The purpose (goal) of this research study is to study your beliefs about the learning and teaching of English pronunciation. You are asked to participate because you are a student in an oral communication-type class. A total of 100 participants will be asked to participate in this study. Participation will require about 7 hours of your time.

II. Procedures:

If you decide to participate, you will participate in 7 hours of classroom observations. You will not be asked to do anything during the classroom observations. We are observing your normal participation in classroom activities.

III. Risks:

In this study, you will not have any more risks (dangers) than you would in a normal day of life.

IV. Benefits:

Participation in this study may or may not benefit you personally. Overall, we hope to gain information about the teaching and learning of pronunciation in the ESL classroom.

V. Voluntary Participation and Withdrawal (decision to stop participating):

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you can decide not to participate at any time. You can stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. We will use a pseudonym (fake name) rather than your name on study records. Only the principal and student investigators will be able to look at the information you give us. This information will be stored on a password- and firewall-protected computer. The video recordings will be stored in digital format on the same computer. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally. The collected data may be used for future study and analysis as well. In the event that this occurs, your identity will remain completely anonymous.

VII. Contact Persons:

Contact [REDACTED] or [REDACTED] at [REDACTED] if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact [REDACTED] in the Office of Research Integrity at [REDACTED] or [REDACTED].

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be video recorded, please sign below.

_____	_____
Participant	Date
_____	_____
Principal Investigator or Researcher Obtaining Consent	Date

Appendix M
Informed Consent for Student Questionnaires

Georgia State University
 Department of Applied Linguistics
 Informed Consent

Title: Pronunciation instruction and second language teacher cognition

Principal Investigator: John Murphy

Student Investigator: Amanda Baker

I. Purpose:

You are invited to participate (join) in a research study. The purpose (goal) of this research study is to study your beliefs about the learning and teaching of English pronunciation. You are asked to participate because you are a student in an oral communication-type class. A total of 100 participants will be asked to participate in this study. Participation will require (need) about 15 minutes of your time.

II. Procedures:

If you decide to participate, you will complete (do) a brief 15- minute questionnaire.

III. Risks:

In this study, you will not have any more risks (dangers) than you would in a normal day of life.

IV. Benefits:

Participation in this study may or may not benefit you personally. Overall, we hope to gain information about the teaching and learning of pronunciation in the ESL classroom.

V. Voluntary Participation and Withdrawal (decision to stop participating):

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you can decide not to participate at any time. You may skip (not answer) questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. We will use a pseudonym (fake name) rather than your name on study records. Only the principal and student investigators will be able to look at the information you give us. This information will be stored on a password- and firewall-protected computer. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally. The collected data may be used for future study analysis as well. In the event that this occurs, your identity will remain completely anonymous.

VII. Contact Persons:

Contact [REDACTED] or [REDACTED] at [REDACTED] if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact [REDACTED] in the Office of Research Integrity at [REDACTED] or [REDACTED].

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research, please sign below.

_____	_____
Participant	Date
_____	_____
Principal Investigator or Researcher Obtaining Consent	Date