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Principles of Music Education
Applied to Pronunciation Instruction

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Principles of Music Education
Applied to Pronunciation Instruction

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Report

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Dedication

This is dedicated to the friends that I have made while learning how to teach English as a Second Language.

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I would like to acknowledge and extend my heartfelt gratitude to Dr. Veronica G. Sardegna, my pronunciation mentor, for her ongoing guidance, generosity, support, and sharing of expertise. To my graduate advisor Dr. Elaine Horwitz for the editing advice that she provided. I would also like to thank Eric, my parents Robert and Renelle, and my two sisters Mélissa and Vanessa, for always being there for me.

Abstract

Principles of Music Education
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The University of Texas at Austin, 2014

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Music education and pronunciation teaching within second language education would seem to be two entirely separate fields. Yet, there are undeniable links between learning to play an instrument, such as the violin, and learning to speak in a second language. This Report attempts to bridge the divide between both disciplines by highlighting the similarities between musical features and pronunciation features, and by applying principles for practicing music to pronunciation practice. It is hoped that this comparison will motivate second language learners to practice pronunciation and increase the quality of their home practice, which has been found to play an important role in determining the degree of students' pronunciation improvement (Sardegna, 2011). This Report begins with a review of pronunciation teaching trends and how they have shaped pronunciation teaching today. It then provides an overview of three important pronunciation learning models, followed by a discussion of a principled approach to

teaching pronunciation. This principled approach may help bridge the gap between theory and classroom practice. Then, grounded on evidence suggesting strong links between teaching pronunciation and teaching violin, the Report concludes with a rationale for applying the proposed principles to a musical teaching context and suggests adopting a musical approach to practice in order to effect change in students' English pronunciation.

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Chapter One

INTRODUCTION

The term *pronunciation* is defined by the Oxford Online Dictionary as "the way in which a word is pronounced" ("pronunciation," n.d.). However, researchers who specialize in English pronunciation and teachers who teach English pronunciation to second language learners know that pronunciation teaching expands beyond simply teaching the correct pronunciation of words and sounds. It involves helping students improve specific features of speech, such as segmentals (consonant and vowel sounds), suprasegmentals (rhythm, stress, intonation), and extralinguistic features (appropriate body language, pragmatics), so that they can communicate effectively. Due to the fundamental role that pronunciation plays in developing one's ability to communicate in a second language (Atli & Su Bergil, 2012), making informed pedagogical decisions when teaching English pronunciation to second language learners is of utmost importance. Unfortunately, many teachers lack the knowledge to teach pronunciation and neglect teaching it (Derwing & Munro, 2005).

My interest in pronunciation teaching emerged while taking Dr. Veronica G. Sardegna's *English as a Second Language: Oral* class in the Fall of 2012. I was fortunate to have the opportunity to put the theory learned during class into practice by tutoring two Korean adult students on English pronunciation on a weekly basis, during six weeks. The degree to which my two tutees' pronunciation skills improved in such a short amount of time was remarkable. This experience was rewarding and empowering for my tutees and myself. Upon realizing the impact that pronunciation teaching can

have on students' intelligibility, I continued my studies in pronunciation teaching by taking a conference course entitled *Specialization in Pronunciation Teaching and Assessment*. One of the course components included supervising ESL pronunciation tutoring sessions and providing feedback to the student teachers. Through my pronunciation teaching experience and through observing student teachers teach pronunciation, I realized that there are many links between pronunciation teaching and music teaching.

Prior to starting a Master of Arts with emphasis in teaching English as a second language, my education had been in the field of music. I completed an undergraduate degree in violin performance to learn more about the intricacies of the instrument and then I completed a Master of Music Education with emphasis in violin pedagogy to learn more about pedagogical approaches to teaching the violin. My fascination with pronunciation teaching stems from the close connection I found between pronunciation teaching and violin teaching. As a violin teacher, I always refer to Fletcher-Copp's (1916) quote "[t]he value of learning music is not in the number of pieces one may play, but in the musical thoughts one can think" (p. 301). As a pronunciation teacher, I apply the same concept when I say "the value of learning pronunciation is not the number of target language features (segmental or suprasegmental) that one can produce in isolation, but the ability to use them in free speech."

Chapter 2 includes a brief historical overview of second language acquisition theories and their influences on pronunciation teaching. Chapter 3 outlines three pronunciation teaching models rooted in learner-centered, autonomous learning, and

communicative approaches to L2 phonological learning. Chapter 4 argues for the need to adhere to three pedagogical principles for successful pronunciation teaching and learning. Chapter 5 interweaves pronunciation teaching and violin teaching by building links between features and addressing teaching implications common to both teaching contexts. The Report concludes with an example of how pronunciation teachers could teach pronunciation from a musical perspective in order to improve the effectiveness of in-class pronunciation practice and, ultimately, the quality of students' out-of-class pronunciation practice.

Chapter Two

SHIFTING PERSPECTIVES IN PRONUNCIATION TEACHING

INTRODUCTION

To gain an understanding of the field of second language pronunciation teaching and how it relates to the world of music education, it is important to start with a review of second language acquisition (SLA) approaches that have supported, valued, and influenced pronunciation teaching practices over the years. The first part of this chapter briefly introduces and discusses similarities and differences among past pronunciation teaching models. The second part addresses shifts in perspectives and priorities for teaching pronunciation features, which have led to the pronunciation teaching models discussed in Chapter 3.

A BRIEF HISTORICAL OVERVIEW OF PRONUNCIATION TEACHING MODELS

The popularity of pronunciation teaching has fluctuated throughout the years (Atli & Su Bergil, 2012; Jones, 1997). Its popularity is strongly correlated with the importance attributed to pronunciation skills by the SLA method thriving at the time. According to Celce-Murcia, Brinton, and Goodwin (2010), pronunciation teaching first gained importance in the late 1800s and early 1900s with the Direct Method. The Direct Method was a foreign language teaching approach that advocated imitation and repetition, much like a child learning to speak a first language. The success of this intuitive-imitative approach relied on the student's "ability to listen to and imitate the rhythms and sounds of the target language" (Celce-Murcia et al., 2010, p. 2).

By the 1940s, the Audio-lingual Method emerged. The Audio-Lingual Method was an analytic-linguistic approach that advocated teaching phonetic information explicitly with the aid of articulatory setting charts and of tools such as the phonetic alphabet (Celce-Murcia et al., 2010), and used techniques, such as minimal pair drills and dialogues, to memorize patterns and develop automaticity (Morley, 1991). Hence, similarly to the Direct Method, the Audio-lingual Method advocated teaching pronunciation through imitation. It emphasized accuracy over fluency and focused on sound production (Celce-Murcia et al., 2010; Isaacs, 2009; Morley, 1991). Despite its many followers, the Audio-lingual Method was often criticized for making language learning a "tedious, mechanical activity" that incorporated "meaningless non-communicative drill-and-exercise gambits" (Morley, 1991, p. 485-486).

In an attempt to improve students' fluency and communication skills, the Communicative Language Teaching (CLT) approach emerged in the 1980s. However, the traditional approach to pronunciation teaching was largely incompatible with the tenets of CLT (Jones, 1997). Levis (2005) acknowledged the discrepancies between the traditional approach to pronunciation teaching and CLT by writing that "old assumptions are ill-suited to a new reality" (p. 376). Textbooks, for instance, were strongly rooted in Audio-lingualism and did not serve the purpose of developing communicative skills (Pennington & Richards, 1986). In some cases, the discrepancy between CLT and the traditional approach to pronunciation teaching brought on reluctance to teach pronunciation (Isaacs, 2009; Morley, 1991). Fortunately, pronunciation teaching gradually regained its place in the ESL classroom when teachers and researchers started

to realize that poor pronunciation can impede communication. As Morley (1991) puts it, changes in pronunciation teaching occurred upon the realization that "ignoring students' pronunciation needs is an abrogation of professional responsibility" (p. 489). According to Anderson-Hsieh (1989), "while the pendulum has begun to swing back in the direction of more emphasis on pronunciation, it is swinging back in a different arc, and we are now at a very different place than we were during the audio-lingual period" (p. 73).

TRACING THE SHIFTS IN PRONUNCIATION TEACHING PERSPECTIVES

Today, pronunciation teaching is colored by (a) the shift toward intelligibility and comprehensibility as primary goals, (b) the evidence in support of segmentals' and suprasegmentals' impact on intelligibility and comprehensibility, which has now led to a broader teaching scope, and (c) the shift from generic drill activities to communicative activities that relate to real-life contexts.

Native-like Pronunciation vs. Intelligible Pronunciation

It is widely accepted that most second language learners who acquire a second language as an adult have a foreign accent due to factors that are out of their control, and that changing one's accent is hard and not a priority (Derwing & Munro, 2009). However, early pronunciation teaching methods advocated native-like pronunciation, with a primary focus on sound production. As Pica (1994) put it, achieving native-like pronunciation is a clearly "unrealistic goal" (p. 73). Jenkins (1998) argued that "with an increasing focus on communication, […] it [has become] of critical importance to

provide instruction that enables students to become, not 'perfect pronouncers' of English, […] but intelligible, communicative, confident users of spoken English" (Jenkins, 1998, p. 489 as cited in Atli & Su Bergil, 2012, p. 3666). As a result, the notion of achieving native-like pronunciation was replaced by that of achieving intelligibility and comprehensibility (Atli & Su Bergil, 2012; Dewing & Munro, 1999, 2009; Field, 2005; Pica, 1994).

Abrahamsson and Hyltenstam's (2009) study provides empirical evidence in support of intelligibility over native-like pronunciation goals. These scholars analyzed the attainment level of 200 Spanish native speakers who learned Swedish between the ages of 1 and 47 years. The participants in this study demonstrated an extremely high Swedish proficiency and considered themselves to be near-native or native-like. Results of the study, however showed that some of the early learners (before age 11) and a very few late learners were in fact perceived as mother-tongue speakers of Swedish. However, when tested, only a few of the early learners and none of the late learners actually were comparable to Swedish native speakers. Similarly, Flege, Munro, and MacKay's (1995) study supports intelligible and comprehensible goals over the unrealistic native-like goal. These researchers gathered data from 240 native Italian speakers who learned English in Canada between the ages of two and twenty-three. Native speaker ratings of sentences produced by Italian speakers of English in comparison to native English speakers led to the conclusion that achieving native-like pronunciation after early childhood is extremely rare. This study provides further evidence that native-like pronunciation is an unrealistic goal for most adult learners.

Intelligibility is a term that is widely used in the pronunciation literature. However, defining the concept of intelligibility has been subject of debate (Isaacs, 2008) and still, "many aspects of the notion remain poorly understood" (Derwing & Munro, 2010, p. 7). Derwing and Munro (2008) offer a distinction between three important pronunciation constructs. They define *accentedness* as "how different a pattern of speech sounds compared to the local variety" (i.e., the difference), *comprehensibility* as "the listener's perception of how easy or difficult it is to understand a given sample" (i.e., the listener's effort), and *intelligibility* as "the degree of a listener's actual comprehension of an utterance" (i.e., the end result; how much the listener understood) (p. 478).

Some researchers have investigated the distinction between accentedness, comprehensibility, and intelligibility. For example, Munro and Derwing (1999) analyzed the utterances of 10 native Mandarin speakers of English, which had been transcribed and evaluated by 18 native English listeners in terms of accentedness, comprehensibility, and intelligibility, and found that the speakers received high intelligibility and comprehensibility scores although the perception of foreign accent varied significantly, with prevalence in the 'heavily accented' range. The results of this study indicate that having a strong accent does not compromise intelligibility and suggest a hierarchy of importance where the main role is played by intelligibility, then comprehensibility, with acccentedness given the least important consideration, in spite of its high saliency. Jenkins (2002) provides empirical evidence in support of adopting the goal of intelligibility in the English as an International Language context. She argues that unless an accent detracts from the communication, intelligibility should be the primary goal.

The increasing importance of communication in the second language classroom and the need for international communication has resulted in a rejection of native-like pronunciation in favor of intelligible and comprehensible pronunciation. The shift toward intelligibility and comprehensibility, two closely related constructs, from native-like pronunciation models is being advocated by many pronunciation scholars (e.g., Morley, 1991; Jenkins, 2002; Celce-Murcia et al., 2010).

Segmental vs. Suprasegmental Features

The shift from a focus on native-like pronunciation toward intelligible and comprehensible pronunciation also changed the focus of instruction. Because the Direct Method and the Audio-lingual method advocated to "eradicat[e] deviant first language tendencies (Brinton & Goodwin, 1996, as cited in Isaacs, 2009, p.2), pronunciation teachers adopted a segmental approach, which addressed articulatory phonetics (Celce-Murcia et al., 2010). However, the incompatibility of teaching segmental features in a communicative language classroom led to the belief that traditional approaches to teaching pronunciation had given priority to the "wrong aspects of pronunciation"(McNerney & Mendelsohn, 1992, p. 185). In the late 1980s, to address the conflict between the segmental approach and communicative language teaching, Pennington (1989) proposed a "top-down" approach: An approach in which "segmental articulation assumes less importance than more general properties of speech, such as rhythm and voice quality" (p. 20). Pennington's (1989) top-down approach was based on the assumption that "training in prosody may be more valuable and essential than to work

on individual sounds, or phonemes, for achieving accurate perception and production at the segmental level" (p. 25). However, at the time, Pennington (1989) called for more research to enlighten her speculations.

Since then, some researchers have investigated the impact of specific pronunciation features on intelligibility. First, Hahn (2004) investigated the effect of primary stress on intelligibility. She developed three mini-lectures that differed only in the placement of primary stress. The first had the accurate primary stress placement, the second had an incorrect primary stress placement, and the third had no primary stresses. Listeners in the accurate primary stresses group reacted more positively toward the speaker and scored higher on the comprehension quiz. She concluded that intelligibility was greatly affected when primary stress is inaccurate or missing. Second, Field (2005) examined the impact of L2 word stress on intelligibility. In his study, native and non-native listeners transcribed two-syllable words. Some of the words had accurate stress placement and some had inaccurate stress placement. Results showed that incorrect stress placement reduced the intelligibility of words. Field's research also indicated which types of stress errors have a greater impact on intelligibility. He found that a wrongly distributed stress paired with a corresponding shift from a weak vowel quality to a strong vowel quality did not impact intelligibility as much as when the stress shifts with weak vowel qualities that remained the same. In addition, he found that when stress is displaced to the right, it is more difficult to understand than when stress is displaced to the left. Next, Pickering (2001) examined the impact of tone or pitch movement on the intelligibility of Chinese International Teaching Assistants (ITAs) teaching in the United

States. Pickering concluded that the ITAs with atypical tone choices were not easily understood by the students in the class and they were perceived as being disinterested and uninvolved. These studies provide empirical evidence that suprasegmental features, such as primary stress (Hahn, 2004), word stress (Field, 2005) and intonation (Pickering, 2001), impact intelligibility and comprehensibility.

In contrast, some researchers have attempted to determine which segmental features have the greatest impact on comprehensibility and intelligibility. For instance, Catford (1987) and Brown (1991) have individually investigated the relative importance of English phonemes. Following different methods, both predicted which segmental contrasts may be more important to intelligibility. Munro and Derwing's (2006) preliminary study empirically tested Brown's (1991) and Catford's (1987) theoretically-based functional load prioritization by having thirteen native English listeners judge sentences produced by twenty-three Cantonese English Speakers. Sentences were methodically selected and contained high and low functional errors. Functional load was based on "the frequency of minimal pairs, the neutralization of phonemic distinctions in regional varieties, segmental position within a word, and the probability of occurrence of individual members of a minimal pair" (Munro & Derwing, 2006, p. 522). The researchers concluded that high functional load errors correlated mostly with accentedness; however, they also found that high functional load errors did have a greater negative impact on comprehensibility than low functional load errors. Thus, these findings provided evidence supporting segmental pedagogical decisions based on the functional load principle.

Other researchers have compared the impact of a suprasegmental-based pronunciation instructional approach to a segmental-based approach by comparing the impact that both types of instruction can have on students' comprehensibility and intelligibility, in hope of discovering whether teaching suprasegmental features or teaching segmental features is most important. For instance, Derwing, Munro and Wiebe's (1998) 12-week study compared the effects of segmental instruction and global instruction (mainly prosodic) on comprehensibility to that of a control group. Although both groups' comprehensibility and accentedness improved in read-aloud sentences, only the group that received global instruction showed significant improvement in terms of comprehensibility and fluency in communicative contexts. Similarly, Gordon, Darcy, and Ewert (2013) compared the impact of segmental instruction on comprehensibility to the impact of suprasegmental instruction on comprehensibility by assigning different kinds of pronunciation instruction to three groups of ESL students. The first group received explicit instruction on four segmental features (/i/, /I/, /ae/, and /e/), the second group received explicit instruction on suprasegmental features (rhythm, stress, linking, reduction) and the third group received non-explicit segmental and suprasegmental instruction. The findings of this study revealed that students' comprehensibility improved more quickly as a result of explicit suprasegmental instruction. Yet, the researchers also concluded that segmental instruction is "indeed necessary and important" (p. 201). These results echo Derwing et al.'s (1998) findings that suprasegmental instruction has a greater impact on improving students' comprehensibility and intelligibility, but that segmental instruction should not be neglected in pronunciation

teaching because, when communication breaks down, " a student who has received segmental training might be able to focus on the mispronounced form in a self-repetition [whereas] global instruction seems to provide the learner with skills that can be applied in extemporaneous speech production, despite the need to allocate attention to several speech components" (p. 407). Furthermore, Carey (n.d.) writes that "segmental and suprasegmental aspects overlap and contribute to each other in several important ways" and that they "combine to form a dynamic system that cannot be isolated one from the other" (p. 5).

The evidence thus far indicates that suprasegmentals can greatly affect intelligibility as well as comprehensibility in a second language, but that there is also a need to teach segmental features. Until there is more empirical evidence, it may be wise to adopt a balanced approach rather than favoring segmental features over suprasegmental features or vice versa. In other words, they are both necessary to "enable learners to surpass the threshold level so their pronunciation will not detract from their ability to communicate" (Celce-Murcia et al., 2010, p. 9).

Drill Exercises vs. Communicative Activities

To achieve the traditional goal of native-like pronunciation, teachers focused on individual sound targets and used both imitation drills and read-aloud activities. However, these types of activities were not well suited for a focus on suprasegmentals and received criticism from advocates of the communicative language teaching approach.

On the one hand, oral drill exercises were criticized for interfering with students'

ability to communicate. According to Jones (1997), the decontextualized approach to teaching pronunciation resulted in an approach that "lack[ed] grounding in the realities of actual communication" (p. 108). For example, working on sounds in isolation did not allow students to develop their communicative skills; therefore, some students struggled when it came time to express themselves. In addition, it has been argued that accuracy achieved during controlled practice may fail to transfer to communicative situations (Cohen, Larson-Freeman, Tarone, 1991). As a result, researchers and practitioners have called for integrating pronunciation features in a broader, more meaningful context by incorporating aspects of phonology in connected speech rather than practicing with isolated sounds (Jones, 1997).

On the other hand, a sole focus on integrating pronunciation in a communicative context led to some criticism as well. Undeniably, repetitive practice does have an important role in automatization and retention of pronunciation features. In fact, according to Isaacs (2009), "repetition and drills need not be mechanical or incompatible with CLT" (p. 7). She suggests adopting different types of drills as described by Paulson (1970). The different types of drills include mechanical drills (focused on forms), meaningful drills (requires processing of meaning by using familiar information), and communicative drills (requires processing of meaning and relating unknown content). To sum, repetitive practice is important and does lead to automatization, but a balanced approach is crucial to providing a well-rounded education.

Chapter Three

CURRENT PRONUNCIATION TEACHING MODELS

INTRODUCTION

According to Dickerson (2013), "for any new pedagogical goal to flourish, it must have the support of an accepted learning model" (p. 6). Among the many pronunciation teaching models, this paper will firstly focus on Morley's (1991) Multidimensional Model, which attempts to integrate pronunciation in language programs as well as hint toward autonomous learning; secondly, on Celce-Murcia's (2010) Communicative Framework, which attempts to integrate pronunciation teaching in a communicative language teaching framework; and thirdly, on Dickerson's (2013) Covert Rehearsal Model, which addresses autonomous learning in more detail.

MORLEY'S MULTIDIMENSIONAL MODEL

Morley's (1991) Multidimensional Curriculum Model emerged in an attempt to broaden the scope of pronunciation teaching. It is divided into six components: (a) a dual-focus communicative program philosophy; (b) learner goals; (c) integrated instructional objectives; (d) the role of the learner and their involvement; (e) the role of the teacher; and (f) instructional planning.

First, Morley's dual-focus framework includes a focus on both microlevel (i.e. speech production) and macrolevel (i.e. speech performance). The microlevel includes features that affect intelligibility, such as clarity and precision of sound articulations, rhythm, stress, intonation, etc., whereas the macrolevel includes elements that affect

communicability by developing discourse, sociolinguistic, and strategic competences.

In addition to a shift in program philosophy, Morley describes a shift in learner goals. She argues that the native-like pronunciation goal is unattainable. She also believes that modifying one's accent can actually have negative repercussions as well as be detrimental to a student's motivation level. There is also disagreement regarding which accent model is most desirable. To avoid these issues, Morley proposes the following four learner goals. The first goal should be intelligibility. That is, the learner should aim to be easily understood. Learner goals should also include functional communicability so that the learner can express himself or herself when needed. In addition, it is also important to empower students so that they develop self-confidence and encourage self-monitoring as well as strategy use so that improvement can continue outside of the class.

Morley's model also calls for instructional objectives that include intellectual, affective, and performative involvement. First, intellectual involvement refers to speech and study awareness. Morley's (1991) advice is that "simplicity, selectivity, and moderation are the keys to effective use of both language information and procedural information" (p. 503). Next, affective objectives refer to the psychological aspect of learning. Affective objectives consist of self-involvement, classroom atmosphere, and positive teacher and student interactions. According to Morley (1991), self-involvement can be cultivated in different ways. For instance, it can be cultivated by providing clearly defined tasks that lead students toward taking responsibility. It can also be cultivated by giving specific advice on how to self-monitor so that students develop their self-

monitoring skills, thus relying less on the teacher or by encouraging speech "modification" rather than error correction which can help students maintain a positive attitude. Morley also notes that pronunciation progress is slow; therefore, acknowledging any progress can help students feel self-accomplishment. Fostering a nurturing classroom atmosphere can also help students feel at ease and this can improve their learning achievements. A final affective objective that can positively impact learning is to have supportive interactions between the teacher and the student or among peers. Finally, performative involvement refers to the physical aspect of pronunciation. Morley breaks this down into three parts: (a) speech practice; (b) pronunciation-oriented listening practice; (c) spelling-oriented pronunciation practice. According to Morley (1991), speech practice should move beyond imitation. She advocates starting with imitative practice, then moving on to rehearsed practice and finally switching to extemporaneous speaking practice. Morley also stresses the importance of pronunciation-oriented listening tasks in developing students' perception and English aural comprehension. Spelling-oriented practice plays an important role in developing relationships between spelling, stress and rhythm. Spelling-oriented practice can increase a student's English literacy.

Morley discusses a shift from teacher-fronted classrooms to teachers as a guide or coach. One of the reasons for the shift is that "adult learners seem to benefit most when they are involved, consciously, in the speech modification process as they work to become intelligible, communicative, confident speakers of English" (p. 506). When teachers adopt a role as facilitator, it gives students more independence and gives them

responsibility for their own progress.

In Morley's last component of the Multidimensional Model, she provides a practical framework for instructional planning that includes cognitive, affective, and practice dimensions in a meaningful context, and that will help students improve their intelligibility. The three suggested modes of practice for achieving lasting results include imitative speaking practice, rehearsed speaking practice, and extemporaneous speech practice. Imitative practice should be used until the learner can independently produce the targeted pronunciation feature. After that, oral reading or scripts can be used to practice rehearsed speech, a step used to "work toward stabilization of modified pronunciation/speech patterns so that the learner can manipulate them easily at will" (Morley, 1991, p. 509). The final step consists of extemporaneous speech practice. This step gives students the opportunity to apply speech patterns to creative communications. The steps are sequenced in a way that gradually leads students toward achieving independence. Although the Multidimensional Model does include linguistic training for developing autonomous learning and utilizes steps that lead students toward independence, it has been criticized for failing to provide learner autonomy details and how to implement learner autonomy in pronunciation instruction (Sardegna, 2009).

CELCE-MURCIA'S COMMUNICATIVE FRAMEWORK

In an attempt to align pronunciation teaching practice with the tenets of Communicative Language Teaching, Celce-Murcia et al. (2010) proposed a communicative framework for teaching pronunciation. Their approach consists of five

phases for teaching pronunciation in a communicative way. Phases move from "analysis and consciousness raising [phase 1] to listening discrimination [phase 2] and finally production [phases 3, 4, &5]" (2010). The goal is to guide students so that they are able to apply a pronunciation target learned in a controlled task into spontaneous speech.

The first phase consists of *description and analysis*. During this phase, explicit information is given on how and when to produce a specific pronunciation feature. According to Celce-Murcia et al. (2010), descriptions can include both oral descriptions and written illustrations. The second phase is *listening and discrimination*. This is when the student's perception of the pronunciation target is developed. During this phase, the student listens to a model (i.e., teaching reading aloud; listening to an audio file, such as a podcast; or watching a video) and answers questions, which require students to identify and distinguish between the target pronunciation feature and similar pronunciation features (i.e., minimal pairs). The student's oral or written answers provide insight on their ability to discriminate features. During this phase, teachers provide feedback that indicates the learners' ability to differentiate between specific features. The third phase, *controlled practice*, allows students to produce a specific feature in a controlled context. This phase typically includes oral reading of minimal-pairs, sentences or short dialogues that brings saliency to a specific feature so that their awareness is raised. The goal of this phase is to gain practice producing the target accurately. During the next phase, which is *guided practice,* the student practices producing a specific pronunciation feature in 'structured communication exercises.' These exercises should consist of activities that allow the student to focus on meaning by choosing answers (i.e., information-gap, cued-

dialogues, sequencing tasks); however, the answers should be controlled so that the student's attention is primarily on producing the targeted pronunciation feature. Such controlled activities enable students to self-monitor their performance. The fifth and final phase is *communicative practice*. The goal of this phase is to allow the student to use the target pronunciation feature during authentic communication so that they can develop fluency. Although the student has complete freedom over his or her answers, the overall activity can be developed so that it elicits the use of the targeted pronunciation feature (i.e., role-plays, storytelling, problem solving tasks, word games). The less controlled nature of this phase allows students to "attend to both form and content of utterances" (Celce-Murcia et al., 2010, p. 45).

Celce-Murcia et al.'s five phases can be used to improve any pronunciation feature and, most importantly, their framework helps to bridge the gap between the highly controlled repetitive drill exercises and communicative exchanges by gradually guiding the student toward being independent learners. Celce-Murcia et al. (2010) warn that learning takes time and that it is not a linear process. When a student exhibits backsliding, it is important to review previous phases prior to moving on to the next phase.

DICKERSON'S COVERT REHEARSAL MODEL (CRM)

Dickerson's Covert Rehearsal Model (1987, 1994, 2013) is a pronunciation teaching model that is based on Morley's Multidimensional Model, but according to Sardegna (2009), "it deals with autonomous learning techniques with more precision" (p.

17). It does so by implementing prediction along with perception and production strategies. According to Dickerson (2013), the prediction stage is of equal importance to the perception and production stages as it "highlights the value to learners of making good judgments about the sounds to use even before (pre-) speaking (-diction). The Covert Rehearsal Model therefore advocates teaching perception, followed by prediction, and then production (the three P's). Dickerson's model also emphasizes the importance of private covert rehearsal. According to Dickerson (2013), private rehearsal allows students to "speak aloud without self-consciousness and engage in rule-use without distraction" (p. 6). Overall, the goal of Dickerson's (1994) model is to "equip students with those liberating skills that enable them to evaluate and modify their own pronunciation for the rest of their English speaking careers" (p. 32).

Sardegna's (2009, 2011, 2012) studies have provided empirical evidence in support of the Covert Rehearsal Model. Sardegna's (2009) and (2011) studies examined the impact that empowering students by teaching them how to use strategies via Covert Rehearsal Model can have on improving different pronunciation features. For example, Sardegna's (2009) study traced the improvement of students' English read-aloud stress production five to twenty–five months after receiving CRM pronunciation instruction. Research findings revealed that the participants' production of primary stress in words, constructions, and phrases had improved significantly. Similarly, Sardegna's (2011) study traced the long-term effects of empowering students by teaching strategy use to ESL students via the CRM. However, this study focused on the effect it has on improving students' ability to link sounds within a word and across words when reading

aloud. Sardegna concluded that "students significantly improved over time despite an initial decrease in accuracy after the course ended" (p. 117). This study not only provides empirical evidence in support of the CRM, but it also identifies additional factors that can affect the CRM's effect on learning. According to Sardegna, the CRM's success lies in the learner's commitment to frequent and good quality daily private practice and their motivation to improve and to self-monitor the performance of pronunciation features.

Chapter Four

Principles for Teaching Second Language Pronunciation

INTRODUCTION

Twenty years ago, Brown (1994) argued that second language acquisition was a complex field and that in spite of the insight gained from research, uncertainties remained. A review of the literature on pronunciation teaching reveals that many questions related to pronunciation teaching have yet to be answered.

Throughout the years, numerous pronunciation models have been developed; however, as Darcy et al. (2012) argue, "there is no agreed upon system of deciding what to teach, and when and how to do it" (p. 1). As a result, teachers are left with the overwhelming task to choose among numerous curriculum options. This lack of consensus has led teachers toward adopting a principled approach to pronunciation teaching (Celce-Murcia et al., 2010). The next section describes principles that the author deems foundational to pronunciation teaching, based on the literature.

PRINCIPLE #1: SET APPROPRIATE AND REALISTIC GOALS AND EXPECTATIONS

It is important for teachers and students to set appropriate and realistic pronunciation goals and to remember that what is considered an appropriate and realistic goal is dependent on the teaching context and differs for each student. Pronunciation goals for second language learners have changed throughout the years. For example, the unrealistic goal of eradicating a foreign accent has been replaced by one of achieving

intelligibility and comprehensibility (Avery, 1992; Derwing, 2010). Derwing and Munro (2005) expand on this point by saying that teachers should help their students set goals that will enable them to reach their full potential. They specify that a student's full potential "may well exceed the minimum required for basic intelligibility;" however, they warn that leading students to believe that native pronunciation is attainable will lead students to "expend time and energy working toward a goal that they are unlikely to achieve" and this can do more harm than good (p. 384). The following steps can be used to set appropriate and realistic pronunciation goals.

Identify the Gap

The first step consists of identifying the gap between the student's production and that of an intelligible English speaker. Starting with the clear vision of what an intelligible English speaker sounds like will make the gap between the envisioned level and the student's actual proficiency level more evident. To identify a student's weakest pronunciation features, Sardegna and McGregor (2012) suggest assessing students based on read-alouds and communicative activities. This type of assessment can reveal a student's segmental and suprasegmental weaknesses.

Choose Targets

Once the gap has been identified, careful consideration should be put into prioritizing pronunciation features. Choosing which targets to prioritize first can be a difficult task (Sardegna & McGregor, 2012). Derwing and Munro (2005) stress the

importance of "hav[ing] an accurate understanding of the target language's phonological system" (p. 385). Furthermore, teachers should be aware that what is the most salient error may not have the greatest impact on communication (Derwing & Munro, 2009). Rather than focusing on what is most salient, Avery (1992) suggests focusing on "critical errors, features of a student's speech most responsible for incomprehensibility" (p. xvi). However, determining which of the features are most problematic to comprehensibility and intelligibility is not as straightforward as it may seem. Derwing and Munro (2005) argue that we should turn to research when setting pedagogical priorities. Although research is still in its infancy, teachers should consider current findings that show that both segmental features and suprasegmental features can affect intelligibility, and adopt a balanced approach. According to Grant (2010) segmentals affect "a listener's understanding of words," whereas suprasegmentals impede "a listener's understand[ing] of phrases, sentences, and even conversations" (p. 5). Gilakjani (2012) suggests that choosing the most important segmental features as well as the most important suprasegmental features makes for a well-rounded pronunciation education.

Research has revealed some insights as to which suprasegmental features can affect intelligibility and comprehensibility. To determine which suprasegmental feature to address first, it may be best to follow Celce-Murcia et al.'s (2010) advice and choose suprasegmental features that will "enable learners to surpass the threshold level so that their pronunciation will not detract from their ability to communicate"(p. 9). In other words, choose the suprasegmental feature that most frequently affects communication.

To determine in which order to address the segmental targets, teachers can turn to Brown's Functional Load list (see Brown, 1988). Although Brown's functional load list is theoretically based, it can be used as a guide to prioritize segmental targets (Munro & Derwing, 2006). For instance, if a student has difficulty differentiating between /f/ and /θ/ as well as /p/ and /f/, it would be wise to give higher priority to /p/ and /f/ since the phonemic contrast of p/ and /f/ carries a higher functional load than that of /f/ and /θ/.

Next, it is important to decide how many pronunciation targets to choose so that the pronunciation goals can realistically be achieved during the course of instruction without overwhelming the student. For instance, pronunciation students may have a long list of problematic targets. Yet, it may not be realistically possible to improve all of their listed targets. Sardegna and McGregor (2012) suggest starting with a few and then adding new pronunciation targets as students improve but ultimately, the number of targets to choose should depend on contextual factors, such as the class size, the duration and the frequency of instruction, and will differ for each student since students have different motivational levels and reasons for taking a pronunciation course. Sardegna and McGregor also stress the importance of considering "student[s'] beliefs, awareness, and goals" (p. 2) and that setting goals should be a collaborative effort between the teacher and the student. Therefore, to set realistic goals, it is important to gain insight as to what may be appropriate and realistic for the individual learner based on his or her diagnostic test, and then set up a teacher-student conference to agree on such goals prior to the start of instruction.

Maintain Open Communication with Students

Pre-instruction communication between the teacher and the student is important in establishing mutual goals and making sure that the teacher and the student are on the same page. Individualized teacher-student conferences allow for pronunciation goals and course expectations to be discussed prior to the start of instruction. Once the course has begun, ongoing check-ins are important in helping the student and the teacher to stay on track. A simple way to do this is by inviting students to fill out a short questionnaire before and after each session or by holding additional teacher-student conferences throughout the semester. According to Sardegna and McGregor (2012), an advantage to involving students in the decision process is that it develops accountability.

PRINCIPLE #2: EMPOWER STUDENTS TO BECOME AUTONOMOUS LEARNERS

Once the student and teacher have established appropriate and realistic pronunciation goals (the what), it is important to help students achieve their goals in a way that will empower them (the how).

The traditional approach to teaching pronunciation, which consisted of isolating a problem target and working through it using the listen-and-repeat technique, can help students hear and produce accurate targets. However, this approach can also be limiting and create dependency on the teacher. Instead, teachers should foster autonomous learning. The following paragraphs will expand on different ways to empower students so that they can achieve their pronunciation goals on their own.

Raise Awareness

When learning to speak a second language, speech features from the L1 inevitably transfer over to the L2 speech patterns. Schmidt's Noticing Hypothesis (1990) holds that "subliminal language learning is impossible, and that noticing is the necessary and sufficient condition for converting input to intake" (p. 1). This hypothesis suggests that noticing the gap between the output produced and the target language input leads to language learning. Therefore, when a student struggles with a particular target due to having failed to notice the gap, simply bringing awareness of the discrepancy between the student's English pronunciation and that of an intelligible English speaker (Morley, 1994) can help students improve their comprehensibility and intelligibility (Derwing & Munro, 2005) or in the very least, motivate them to do so.

Awareness can be raised in different ways. One of the ways is through error correction. There are numerous ways to provide corrective feedback. Lyster and Ranta (1997) categorize corrective feedback into seven types although research findings thus far have led to disagreement on which is the most effective. Regardless of the type of error correction chosen, it is important that it helps students notice the gap by making it apparent that a particular pronunciation feature is interfering with the student's intelligibility. Another way of raising awareness, which might be more beneficial than error correction according to Tarone (1978), is to engage students in "consciousness raising activities, which sensitize the learner to the differences between L1 and L2 systems and the L2 system and their own interlanguage" (as cited in Jones, 1997, p. 107). Consciousness raising activities can focus students' attention on a specific problematic

pronunciation target. According to Levis and Grant (2003), awareness can also be raised through explicit instruction. When awareness is not enough to help students become intelligible and comprehensible speakers, teachers can empower students by explicitly teaching prediction rules.

Teach Prediction Rules

Dickerson (1994) argues that students are responsible for their own improvement and that teachers should equip their students with tools that will enable them to continue improving outside of class. Dickerson (2013) stresses that in order to develop autonomous learners, "prediction rules should be an aim rather than an aid" (p. 1). In fact, he writes that teaching prediction rules empowers students to "use the sounds they know in the right places in the words they must say" before speaking (Dickerson, 1994, p. 1). Teaching prediction rules can also help learning transfer to other contexts. As Dickerson (1994) writes, "[t]each someone the sounds of a word, and that person can say that word. But teach someone to predict those sounds, and that person can say any word" (p. 1). Thus, explicit teaching of rules is extremely important in preparing learners to be self-teachers (Dickerson, 2013).

Teach Strategy Use and Guide In-Classroom Practice

Empowering students by raising their awareness and explicitly teaching them the rules is the first step in developing learner autonomy; however, it does not necessarily mean that students will know how to apply the rules. Scarcella and Oxford (1994) write

that "students must become active participants in their own learning" (p. 228). For this reason, it is equally important to involve students in their own learning by teaching them how to use strategies and lead them through guided practice so that they gain experience applying rules and strategies effectively. Researchers in the field of pronunciation argue that teaching strategies to pronunciation students can in fact be beneficial and lead to self-improvement (Sardegna & McGregor, 2012). Sardegna's (2009, 2011, 2012) studies provide support to the view that empowering students with pronunciation strategies that they can use in covert rehearsal can help them improve their English pronunciation. Covert rehearsal is a process that combines private oral practice, speech monitoring, comparison of performance with other models, change of performance based on the models, and practice of the changed performance aloud until fluent. In addition to these strategies, Ingels (2011) found that students can also use self-recordings, self-transcriptions, and annotation of transcriptions to improve their target language pronunciation. Since instruction time is limited, it is important to provide in-class practice applying prediction rules so that students would feel comfortable doing it on their own later on. It is unrealistic to accomplish all pronunciation goals in one semester, but if students have developed the habit of using prediction rules and learning strategies, it may increase the likelihood that they will continue to improve after the instruction period is over (become life-long learners) (Sardegna, 2009, 2012).

PRINCIPLE #3: Effect Change Outside of the Classroom.

Empowering students by raising their awareness; providing them with resources, rules and strategies; and guiding them through classroom practice does not mean that learning will in fact transfer to out-of-class experiences or that students will keep learning after the course has been completed. According to Sardegna (2011), "students do not generally progress much on their own after the course ends" (p. 116). However, teachers may be able to increase the likelihood that classroom learning will transfer to students' daily lives by increasing their English exposure in such a way that students gain opportunities to apply what is learned during class to out-of-class experiences.

Increasing English Exposure

In a recent article, Derwing (2010) identified nine utopian goals for pronunciation teaching. One of Derwing's goals is to have "better strategies for integrating newcomers into the community" (p. 32). This goal is based around Derwing, Munro and Thomson's (2008) conclusion that comprehensibility is affected by the quality and the amount of target language exposure. Derwing (2010) suggests increasing students' comprehensibility and fluency by encouraging more English interactions, such as conversations with co-workers and neighbors, listening to the radio, watching movies and TV. She also suggests following Dudley's (2007) advice of providing pronunciation students with ethical volunteering opportunities. Increasing students' English exposure is advantageous; however, simply increasing the exposure may not allow students to reap its full benefits.

Scaffolding the Experience

When assigning activities that require students to venture out into the community, it is of utmost importance to scaffold them so that students have a positive learning experience. After all, gaining self-confidence could potentially encourage further interactions with the target language community. For example, for a class where students have varying career goals, the teacher could organize a classroom project to help raise funds for a local charity. First, the class would have to agree on a local charity. Then, a guest from the local charity could come and address the class. Next, students could compose a convincing 'spiel' to encourage donations, and in anticipation of questions asked by their audience, come up with a 'frequently asked questions' list. Prior to rehearsing their 'spiel', the pronunciation teacher should provide feedback on the written grammatical accuracy. So that students gain confidence before interacting with the public, they should be given the opportunity to predict pronunciation rules for identifying, for instance, the message units, the primary stresses and appropriate intonations for those messages, the linked sounds, etc. Next, time could be allotted for in-class practice so that students receive the feedback needed to effectively practice on their own while receiving feedback from their peers and their teacher. As a homework assignment, students could record their questions while focusing on specific pronunciation features. According to Grant (2010), changing pronunciation patterns does not happen unless practice is involved. Grant argues that recordings can help students self-evaluate linguistic and extralinguistic features. Breaking down activities into smaller

steps and embedding proper scaffolding should help foster confidence and ensure more successful out-of-class interactions.

Learning Transfer

Transfer is the ability to apply knowledge learned to a different context. Cognitive psychologists believe that transfer can happen due to unconscious habits of behavior which can be achieved through productive repetition (Duke, 2005). Duke also points out that since transfer does not automatically happen, teachers should create learning situations that allow students to practice applying new information to different contexts. By developing in-class activities based on out-of-class experiences, not only will students' English exposure increase, but also it may encourage successful transferring of skills and strategies learned in-class to experiences encountered in their daily lives. For instance, rather than assigning activities disassociated with students' out-of-class lives (i.e., drill-type exercises, fictional topics), teachers could assign authentic and realistic tasks. In other words, the goal of each assignment could be to assign tasks that will help students toward improving their pronunciation skills while being useful for their future careers/lives.

Reflecting on Learning Outcomes

Post-activity reflections are an essential part of the learning process. Sardegna and McGregor (2012) write that reflection is a "powerful corrective and motivational tool" (p. 3). Reflecting also helps consolidate the learning experience.

Establishing a Post-Instruction Plan for Improvement

At the end of instruction, teachers should provide students with a practice plan. The practice plan should include a list of pronunciation features that still need improvement and a list of helpful resources. Sardegna (2011) hypothesizes that giving online access to materials developed to "increase quality, quantity, and frequency of practice" may motivate learners to continue to practice once the course is over.

Perhaps if in-class activities revolved around providing students with opportunities to apply skills and strategies learned in-class to out-of-class experiences, and if teachers provide the resources and a pronunciation plan that students can follow after the course is complete, students will continue to improve their pronunciation and apply what they have learned to their daily lives after the course ends.

CONCLUSION

Principles stated above are not exhaustive. Teachers will undoubtedly face new pronunciation teaching challenges. Fortunately, new research discoveries are made daily and teaching knowledge is highly accessible electronically. As Brown (1994) writes "the answers to […] questions can be found, in one form or another, in the huge stockpile of second language acquisition research and collective experience of language teachers around the world" (p. 12). Teachers who commit to ongoing learning will be able to make informed decisions that draw from research findings and well-established classroom practices.

Although the three principles discussed above focus on pronunciation teaching, they could just as easily apply to violin teaching. The goal of choosing appropriate and

realistic goals extends beyond pronunciation teaching. In fact, the success of violin teaching greatly depends on one's ability to choose and relate appropriate and realistic goals to students. Empowering students to be autonomous learners also holds true for teaching violin. The goal of violin teachers is to work themselves out of a job (D'Ercole, personal communication, March 2009). Finally, it is crucial that violin teachers help students connect skills learned in one piece to other pieces so that students start making links and become autonomous learners.

The three principles discussed in this Report may help pronunciation and violin teachers make informed decisions when choosing instructional goals, and developing teaching materials; however, it is important that teachers connect with students, share information, and nurture growth so that learning is meaningful and rewarding. The next chapter establishes the connection between pronunciation features and musical features, and addresses teaching implications shared by both fields.

CHAPTER FIVE

Establishing Links between Second Language Pronunciation Instruction and Violin Teaching

INTRODUCTION

Prior to addressing teaching implications common to pronunciation and violin, the first part of this Chapter provides a rationale for integrating principles of music education to pronunciation instruction by drawing parallels between music and both segmental and suprasegmental features of pronunciation.

RELATING MUSICAL FEATURES AND PRONUNCIATION FEATURES

Segmental Features

It has long been said that instruments from the string family most closely resemble the human voice. In an attempt to investigate the violin's tonal qualities, Tai and Chung (2012), analyzed the violin's resonance peaks (formants) using a method of speech analysis (linear predictive coding) and confirmed that the "steady-state spectra of violins […] display characteristic formants similar to those of human voices" (p. 1). Also, in an attempt to investigate the tone quality of violins, Nagyvary (2013) conducted a study in which he compared recordings of world-class violinist Itzhak Perlman playing a two-octave chromatic scales, to that of an amateur soprano singer and to the New York Metropolitan soprano opera singer Emily Pulley singing vowels of well-known European languages. Spectra graph comparisons of these performances revealed that some of the chromatic scale notes produced on the violin closely resembled vowels produced by the

human voices. Nagyvary (2013) concluded that when bowed, individual notes on the violin produce different vowels found in the Italian, French, and English languages. He hypothesized that in the "absence of any scientific instrumentation, Guarneri del Gesù, and Stradivari (famous Italian luthiers) had to do no more than to make sure that each note of their violins sounded like the vowel they had in mind for it. The reproduction of selected vowels could have been the ultimate validation of their final product" (p. 27). Nagyvary's research findings led him to describe long bowed tones as vowels and articulated tones as consonants. According to Nagyvary, "[t]he attack of the bow in initiating a musical note creates a consonant sound" (Nagyvary, n.d.). Playing different consonant sounds on the violin result in creating different musical articulations (Whitcomb, 2013). In other words, musical articulations differ from one another by the consonant used to initiate the sound. For instance, a musical accent requires that the string starts to speak with the consonant /k/, whereas a staccato (off-the-string bow stroke) can be initiated by what translates as a /b/ or /t/ consonant sound on the violin. Just as pronunciation students must first learn how to modify their articulatory settings (place of articulation, manner of articulation, etc.) in order to produce a particular consonant sound, violin students must learn which physical motions (a change in bow weight, speed, and contact point, etc.) are required to clearly create a specific musical articulation (equivalent to an English consonant). Just as Celce-Murcia et al.'s phases progress from controlled production to less structured communicative practice, a violin student must first learn how to produce the appropriate articulation, and then practice

applying it into context. Once the target is automatized, violin students have more freedom and variety to express themselves musically.

Suprasegmental Features

When teaching music, an analogy can be drawn between musical phrases and linguistic sentences. Just as sentences can be broken down into clauses (one or more clauses in a sentence), a musical phrase can be broken down into sub-phrases (one phrase or two sub-phrases). Additionally, within each sentence, there may be more than one message unit (or thought group), which Hahn and Dickerson (1999) define as "a string of words that belong together as one unit in the mind of the speaker" (p. 38). To increase their intelligibility and comprehensibility, some ESL students need to learn how to identify message units so that they know where to pause appropriately. Likewise, music students need to learn where to breathe (or let the music breathe). For instance, within each musical phrase (or sub-phrase), there are musical gestures (notes that should be grouped together when played). In order to play a phrase that is pleasing to the audience, gestures embedded within the phrase must be shaped in a way that make musical sense.

ESL students need to learn how to pause appropriately. In addition, they must also learn how to maintain a steady rhythm, and how to produce nuclear stress and intonation appropriate to the message they are trying to convey. Similarly, to communicate to their listeners, violin students must not only learn where to breathe (pause), but also how to maintain a steady pulse (phrase rhythm), and use dynamics to shape a musical phrase (nuclear stress).

Phrase Rhythm (musical pulse)

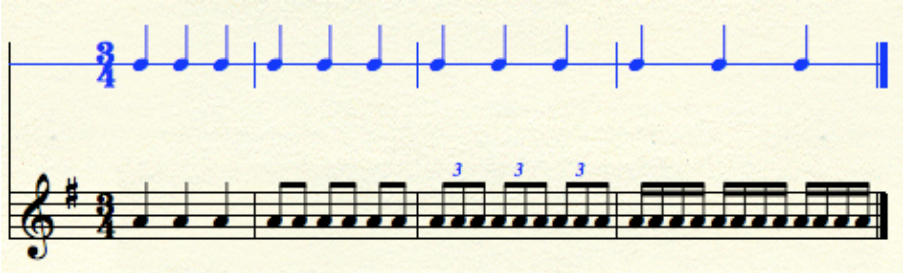
Scarcella and Oxford (1994) refer to the connection between pronunciation and music by defining rhythm as "the measured movement or musical flow of language" (p. 222). English is a *stress-timed language*, which means that its rhythm is characterized by "stresses occur[ing] at roughly equal intervals, irrespective of the number of unstressed syllables in between" ("stress-timed," n.d.). More specifically, content words (nouns, main verbs, adverbs, and adjectives) receive stress while function words (pronouns, prepositions, articles, auxiliary verbs, conjunctions, etc.) are reduced, quicker, and quieter (Hahn & Dickerson, 1999) so that they can be squeezed in between each content word. The following example shows that sometimes one function word is inserted between the beats (noted with capitalized letters) while other times, three (or more) function words are inserted.

i.e.	I	PLAY		MUSic
	I have	PLAYed		MUSic
	I will	PLAY		MUSic
	I have been	PLAYing	the	MUSic
	I could have been	PLAYing	the	MUSic

"Stress" in English pronunciation is referred to as "beats" in music and the unstressed words create the rhythm. Meter organizes music by beats. The number of beats per measure is determined by the time signature of the piece. In some cases, pieces can alternate between meters (mixed meters). Within each beat, composers can choose to include as many or as few notes as desired. Just as spoken English requires that the

speaker squeeze differing numbers of syllables between each content word so that the stress remains constant, composers specify the number of notes to be played in each beat, and the performer must practice doing so while maintaining a steady pulse.

i.e. Simple meter (3 beats per measure)



This example shows that sometimes the performer will need to play two, three, four, etc. notes during a beat. Failing to produce appropriate rhythm when speaking English (content words are not stressed consistently) can be just as irritating for the listener than failing to maintain a steady musical beat when playing the violin.

Nuclear Stress

It is also bothersome to hear non-native speakers emphasize every word of a sentence. Native English speakers typically expect to hear one nuclear stress per message unit. Highlighting one word per message unit helps the listener better understand and remember the content (Hahn, 2004). That being said, the primary stress will vary depending on the speaker's intent. For instance, the speaker has the flexibility to decide whether to emphasize new information or to emphasize a contrast. A speaker, according to Hahn (2004), creates a nuclear stress by a changing the pitch plus increasing the

intensity and the duration of the vowel. A musical phrase also consists of one climax. Musical phrases are usually shaped by gradually increasing the volume leading up to a particular note. The climactic note of the musical phrase is characterized by increased intensity and duration. Typically, the climax of a musical phrase happens on the highest pitched note; however, the player can defeat the listener's expectations and choose to emphasize a different note. Although violinists do have some flexibility in shaping musical phrases, there are often note choices deemed more appropriate (i.e., the first beat of the third measure of a four bar phrase).

Although not every non-native speaker struggle with nuclear stresses, those who do have to be guided through the novice stage of stressing every word to an intermediate stage of stressing content words to the advanced stage of stressing one important word per message unit. This is when speaking fluency is reached. Zander (2008) makes a similar reference when describing musical development. For instance, he points out that beginners tend to lack a steady pulse. Once they develop the ability to play with a steady pulse, they tend to place an impulse on every note. After a year or so, they develop the ability to pulse every second note. A year after that, the student develops the ability to pulse every measure. Finally, the accomplished musician has developed the ability to play one impulse in every phrase.

Pronunciation students are equipped to produce new sounds. They just need to learn *how* to produce the new sounds (Hancock, lecture notes, February 4, 2014). Knowledge of the English phonological system will inform which articulatory setting modifications are needed to produce appropriate target language sounds. In addition,

knowledge of English prosodic features and how they impact communication will help improve students' ability to convey the intended message to their listeners. Likewise, the violin is an instrument that is made to resonate and produce sounds that will evoke emotion in the listener. However, communication is impeded by inefficient physical motions or making inappropriate musical choices. A teacher's thorough understanding of the mechanics involved in playing the instrument and knowledge of playing music are essential in helping students play musically.

TEACHING IMPLICATIONS

Due to the similarities found between pronunciation features and musical features, there are many teaching implications associated with teaching pronunciation and teaching the violin. This Report will amalgamate ideas from both fields in order to discuss implications for creating a learning environment that lowers anxiety, and for choosing appropriate teaching materials.

Lowering Anxiety

Performing on stage is very similar to speaking in a second language in front of an audience. Both can cause anxiety. Anxiety is defined as "[a] feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome" ("anxiety," n.d.). Anxiety can negatively impact a student's success in speaking in a second language (Mejias, 1991), just as it can impede a student's ability

to play the violin. Experts in both fields have pointed out that creating a positive learning environment and providing appropriate feedback can reduce students' level of anxiety.

Creating a Positive Learning Environment

Teachers can foster a positive learning environment by creating strong relationships with their students and encouraging positive interactions within the classroom. To create a good relationship, Morley (1991) writes that the interactions between the student and the teacher should be enjoyable. In addition, Horwitz (2013) writes that teachers should be supportive and understanding. Furthermore, to create positive interactions within a classroom, teachers should be inclusive. Froehlich (2004) argues that when students feel included, caring connections are created, and this gives students the confidence needed to contribute to the class. It can also help students be positively receptive to feedback.

Tactful Error Correction

Horwitz (2013) notes that another way to lower students' anxiety is to provide gentle error correction. A gentle approach to error correction would be to make a general comment to the whole class, just as an orchestra conductor would address a section rather than pinpoint a specific individual. That being said, errors are a natural part of learning and many would argue that they "must be corrected if the students are to develop good pronunciation habits" (Hammerly, 1973, p. 107). Traditionally, errors were corrected through listen and repeat; yet, the efficacy of the correction depended on the student's

ability to imitate the teacher. Instead, Hammerly (1973) suggests telling the student the source of the error (what and why). This pedagogical action renders feedback purposeful rather than judgmental. Also, it is important for errors to be corrected in a way that promotes learning transfer. If the error correction focuses on a particular word in a particular sentence, students' attention may be focused on learning case-specific pronunciation, which will blind them from seeing the big picture. Instead, it is important to connect the pronunciation feature to students' previous knowledge and improve the error by applying it to different contexts. By doing so, the teacher can avoid compartmentalized learning and enable learning transfer. In other words, seeing the big picture, or rather how specific pronunciation features affect intelligibility, is crucial in helping students make changes in their overall communication skills rather than in isolated words. In the field of music, error correction is also important in helping students improve their musical skills. Duke (2005) argues that providing clear feedback is crucial. For instance, Duke explains that precise feedback (i.e. "The rhythm in measure 'x' is too fast" or "I hear too many stressed notes") rather than vague feedback (i.e. "No" or "Try again") can help students accurately identify the problematic source. Try again is vague and does not indicate what changes need to occur in the following repetition. Vague feedback can lead to unsuccessful repetitions, which in turn can be discouraging for both the teacher and the student. In order to provide precise, non-judgmental feedback, violin and pronunciation teachers can describe what they hear in a matter of fact way. In addition, Duke suggests that frequent feedback can help diminish students' fear of making mistakes since it reduces the "cost" of errors. Reed's (2012)

examination of the role of corrective feedback in helping students integrate rule-governed structures into extemporaneous speech provides support for Duke's position on error correction. Reed found that unambiguous feedback generated more uptake. Like Duke, Reed concluded that providing targeted, immediate, consistent, and persistent feedback is key in converting students' explicit knowledge to implicit knowledge. Furthermore, it is important to treat each student as an individual in the classroom and to foster self-comparison rather than student-to-student comparisons (Morley, 1991). For example, regardless of the level, there is always room for improvement so rather than comparing students on a specific feature, it is important to provide error correction on their individual weaknesses. For example, when working on rhythm, it may be important to provide feedback on rhythm to students for whom rhythm is a weakness; however, it is important to provide feedback on another pronunciation aspect that will challenge those for whom rhythm is a strength. In other words, error correction should be addressed to all of the students on an individual basis so that none of the students feel as though they are the best nor the worse student in the class, but rather know what has improved and what still needs improvement over the instructional period. However, to avoid humiliating students, error correction should always be done skillfully.

Choosing Appropriate Instructional Materials

In both teaching contexts, defining clear goals can help guide pedagogical decisions. For instance, violin pieces should be chosen based on whether or not they will allow the student to focus on and improve one of their technical weaknesses. The piece,

according to Duke and Chapman (2011), should also be "well within students' technical capabilities" (p. 31). Choosing a piece that is technically feasible allows students to focus on playing beautifully rather than being cognitively overloaded. Similarly, pronunciation teachers should select or develop materials that will serve the purpose of improving a pronunciation target. For example, teachers should choose a text that will enable a student to improve a particular pronunciation target rather than trying to improve a target within a generic textbook passage. The difficulty of the text should also be considered. To avoid losing sight of the pronunciation goal by getting caught up deciphering the meaning of the text, practice texts should contain vocabulary familiar to students. That is, it may be more difficult for students to pronounce the intonation of a sentence accurately if they do not know its meaning. Similarly, students may create inappropriate rhythm if they get caught up in pronouncing unfamiliar words.

CHAPTER SIX

Applying Principles of Efficient Instrumental Practice to Second Language Pronunciation Practice

INTRODUCTION

In spite of the fact that teachers recognize the need and importance of teaching pronunciation, many are reluctant to do so (Darcy et al., 2012; Gilakjani, 2012). One of the reasons for this neglect is a lack of pronunciation teacher training. Breitkreutz, Derwing, and Rossiter (2001) surveyed 67 Canadian programs and of the teachers that responded to the survey, only 30% had received pronunciation teacher training. However, even teachers who have received training are reluctant to teach pronunciation. Insufficient or poor quality training can result in teachers lacking knowledge of the English phonological system (Celce-Murcia et al., 2010). It can also result in teachers lacking the ability to turn theory into practice. As Baker (2011) writes, "some of the teachers seemed to face considerable challenges in figuring out how to transform research on English prosody (or even segmentals) into their pedagogical practice" (p. 286). Furthermore, teachers can encounter many difficulties or frustrations when teaching pronunciation. According to Darcy, Ewert, and Lidster (2012), pronunciation is difficult to teach because there is a "lack of carry-over or apparent improvement" and because "teachers are left without clear guidelines" (p. 93).

The steps identified in Celce-Murcia et al.'s (2010) Communicative Framework can help guide pronunciation teachers in sequencing activities. Yet, this model fails to provide insights on how to effect change within the controlled production phase. Teachers can use Dickerson's (1994, 2013) prediction rules to empower students to become self-efficient learners. Yet, even if a student is able to apply the prediction rules correctly, it does not mean he or she can then produce them appropriately in speech. These caveats highlight the importance of guiding students through practice that enables them to notice their errors, and helps them develop the ability to use strategies so that they can self-monitor and improve during their own practice.

While observing novice pronunciation teachers, it became apparent to me that they were not 'teaching for change' despite having received a solid English phonological system training, having had the opportunity to put theory into practice, and having previous ESL teaching experience. In fact, some of the student teachers prepared a pedagogically sound lesson plan, but did not pass the stage of bringing awareness or teaching rules. Receiving corrective feedback and experiencing in-class practice are crucial in ensuring that the student understands what he or she needs to do at home to effect change.

EFFECTIVE PRACTICE

After years of playing the violin, it has become apparent that private practice involves much more than playing through or reviewing pieces. The goal of practice should be to produce a change. In music, students who improve the most are those who

practice the most effectively (Duke & Chapman, 2011). Effective practice does not come naturally. Teachers must guide students so that they can learn *how* to practice (during class) to avoid inefficient or even harmful private practice (at home).

RESEARCH ON EFFECTIVE PRACTICE IN MUSIC

Practice plays a central role in one's musical development. However, if executed mindlessly, practice can be useless and even lead to undesired results. Experts in the field of music have investigated variables that determine the degree of effective practice. Williamon and Valentine (2000) found that regardless of the level of the student, quality of practice was more important than the quantity of practice in determining the overall performance quality. McPherson (2005) examined 157 beginning instrumentalists over the course of 3-years. Similarly to Williamon and Valentine, McPherson concluded that greater achievement is determined by the strategies used during a practice session rather than the duration of the practice. Duke, Simmons, and Cash (2009) analyzed the practice behavior exhibited by 17 high level musicians while working on a short passage of a Shostakovich piano concerto. The participants were instructed to practice until they felt confident that the next day, they would be able to accurately play the passage at the performance tempo. Their analysis revealed the following three characteristics of effective practice:

1. The location and source of an error was identified and rehearsed until corrected.
2. The tempo of each repetition increased logically.
3. The targeted passages were repeated until the error was corrected (no errors in succeeding trials).

The researchers concluded that "actions taken subsequent to the discovery of errors were major determinants of the effectiveness of practice" (p. 318). Effective actions taken to correct errors in music consist of incorporating decontextualization techniques, such as varying the speed (slow down then gradually increase the speed), playing shorter passages, or simplifying the passage.

INCREASING THE QUALITY OF PRIVATE PRONUNCIATION PRACTICE

Pronunciation experts have strongly advocated the importance of private pronunciation practice (Dickerson, 1987, 1994, 2013; Morley, 1991; Sardegna, 2009, 2011, 2012). Among other factors, Sardegna (2011) identified that the quality of private practice can lead to pronunciation improvement. One of the aspects that contribute to the quality of practice is students' ability to monitor and assess their performance. However, as Egbert and Hanson-Smith (2007) argue, "most people have a hard time listening to and analyzing their recorded speech to figure out how it deviates from the model" (p. 186). Dlaska and Krekeler (2008) investigated the reliability of 46 German language learners' self-assessments. The second language learners assessed their pronunciation of segmental features. Results showed that learners were only able to identify half of the errors identified by raters. They argue that "without specific training, self-assessments of L2 pronunciation are not sufficiently reliable to be of use in the teaching of L2 pronunciation" (p. 515). Furthermore, Dieling (1992, as cited in Dlaska & Krekeler) writes that teacher feedback is essential in developing students' ability to identify their own mistakes.

Developing self-monitoring and self-assessment skills are equally important in music education as in pronunciation education. Duke et al., (2009) maintain that an important part of teaching music is to help students develop the ability to "skillfully identify and systematically address the[ir] mistakes" (p. 319). The degree to which the student will know how to make changes necessary to overcoming his or her technical difficulty depends on the behavior exhibited by the teacher during the lesson (Duke & Chapman, 2011). Treating lessons as a supervised practice session in which the student receives a lot of feedback may help students develop behaviors that will increase the quality of their home practice. In fact, during a lesson, effective music teachers "assiduously and meticulously show […] students *how to practice* passages with which they are experiencing difficulty, leading them to make independent discriminations about their physical behavior and the sounds they produce" (p. 38). Duke and Chapman argue that teachers can do this by consistently making "very fine discriminations about student performances […] so that the student learns to make the same discrimination independently" (36). They also argue that it is important to give students opportunities to make their own verbal discriminations. These opportunities will reveal their ability "to analyze their own playing, both physically and auditorily" (p. 36). In other words, rather than always "show[ing] and tell[ing]," [teachers should]," "ask and listen" (p. 38). Like music teachers, it is important that pronunciation teachers help students develop their discrimination skills by consistently articulating fine discriminations. This will help students learn how to effectively monitor and self-assess their speech production and ensure quality home practice.

Applying findings related to effective practice in the field of music could potentially resolve the pronunciation teachers' frustration regarding the lack of improvement as indicated by Darcy et al. (2012). In the very least, it should establish a need for more research pertaining to effective practice in the field of pronunciation.

APPLYING DUKE'S REHEARSAL FRAME MODEL TO PRONUNCIATION TEACHING

As stated earlier, the goal of practice is to effect a change. According to Duke (2005), "effecting change resides in the intelligent arrangement of instructions, feedback, and, most importantly, student performance trials that facilitate the accomplishment of proximal goals" (p. 161). To effect change during a pronunciation lesson, it may be helpful to think of it as a musical rehearsal. Just as a musical rehearsal consists of a series of rehearsal frames (Duke, 2005), a pronunciation lesson should also consist of a series of rehearsal frames. Duke defines rehearsal frames as 'time periods' and specifies that each time period consists of specific performance goals (targets). The Rehearsal Frame Model can guide teachers when preparing a lesson plan, it can also help teachers measure progress when analyzing their own teaching or observing another teacher and this can help increase their teaching effectiveness.

Duke's (2005) Rehearsal Frame Model consists of three components:

1. Identification of a target
2. Targeted practice
3. Recontextualization of the target

Identification of a Target. In a pronunciation class, this component could consist of identifying an aspect of the student's oral production that is interfering with intelligibility

or comprehensibility. The target could consist of either an inappropriate vowel or consonant sound, intonation, stress, rhythm, or linking. When choosing the target, the student's list of pronunciation goals (identified based on their impact on the student's overall intelligibility) should also be taken into consideration.

Targeted Practice. This component is divided into two parts or steps: *Part 2A* and *Part 2B*. In a pronunciation class, *Part 2A* could consist of raising the student's awareness by directing his or her attention to the chosen target (noticing) and practicing it in a specific sentence. Repetition is an important part of practice since it can lead to automatization. However, following Duke's Rehearsal Frame Model, each repetition should vary from the original context of the sentence. This is the stage in which "the conductor 'practices the musicians' by leading them through a sequence of performance episodes that facilitate the correction of the pinpointed problem" (p. 88). According to Duke, this practice can be done by slowing down the tempo, isolating a small segment of a passage, altered practice or using a related exercise. These techniques can also be useful when teaching pronunciation. Diminishing the length of the passage, for instance can be done by using the 'add a note technique'. Rather than adding a note, this technique in pronunciation practice would require adding a word. For instance, the student could start with the last beat of the sentence and gradually work toward the beginning of the sentence by adding the previous syllable or word. For example, the sentence: They have been EATing all NIGHT, can be broken down into the following steps.

1- **NIGHT** (attention is on the appropriate production of stress)
2- all **NIGHT** (squeezing in the word all before stressing NIGHT)

3- EATing all **NIGHT** (attention on producing the correct stress on EAT, while producing the primary stress on NIGHT)
4- been EATing all **NIGHT** (work on reducing the word been and inserting it before stressing EAT)
5- have been EATing all **NIGHT** (work on reducing and inserting two function words before stressing EAT
6- They have been EATing all **NIGHT** (Say the whole sentence in rhythm with 1 primary stress).

Breaking the sentence down as such provides opportunities to give guiding feedback that will improve the target (repeat until the new focus has been internalized then move on to the next step). Working from the back of the sentence to the front allows the rhythm of the sentence to stay intact (stress is usually on the last word). *Part 2B* of Duke's Rehearsal Model would consist of the student demonstrating that he or she can successfully perform the target in the full sentence consistently, knowing that when re-integrated in the full-text, the target performance will likely experience a small degree of backsliding. According to Duke (1994), the improvement made thus far is "meaningful only to the extent that the improvements made become a lasting part of the […] performance of the piece" (p. 91) or read-aloud (in the case of pronunciation).

Recontextualization of the Target. This component consists of re-integrating the isolated sentence into the text. The pronunciation teacher should decide how far back to start. Recontextualizing the sentence will require repetitions. The Rehearsal Frame ends when the student has successfully "incorporated the changes accomplished in Part 2 into a larger section" (p. 92) of a text. If the student fails to do so, the teacher could review *Part 2A & B*.

IMPLICATIONS

Similarly to pronunciation concerns, Duke warns that "goals for the improvement of performance (i.e., targets) should not be selected merely on the basis of what appears to be the most salient problem at a given moment in the piece. Rather, the identification of momentary performance goals should reflect a hierarchy of musical importance that is clear to the conductor before the rehearsal begins. The conductor thus prioritizes the aspects for ensemble performance that may be in need of change, so that the most far-reaching, obtainable goals (i.e., these that will most greatly affect the overall performance) are addressed before those that are more idiosyncratic or situationally specific" (p. 87). This notion reinforces the idea that rather than fix idiosyncratic vowel quality errors in words that are specific to a particular context or only appear once in a while, pronunciation teachers should prioritize and focus on teaching goals based on students' list of pronunciation goals. Following Duke's advice teachers should choose targets that have been identified as goals for the student and that will impact students' overall ability to communicate (Principle #1 - Choose appropriate and realistic pronunciation goals).

Duke (2012) stresses that students "must be able to distinguish one repetition from another, and as they gain in physical skill, there must be commensurate gains in auditory and physical discrimination" (p. 39). Having a clear goal is also another important element of effective repetition. Establishing a clear goal will focus the student's attention on a specific target and make sure that the teacher and student are on the same page. Goals and expectations should be relative to what the student is actually

capable of accomplishing. Just as it would be unrealistic to expect a non-native speaker to sound like a native speaker, it would be unrealistic to expect a violin student to sound like a professional violinist after even a few years of study. Therefore, it is important to give students many opportunities to identify and fix problems on their own and to develop their self-monitoring skills and self-efficacy.

Duke also states that "the extent to which the positive changes will remain when the original context is eventually restored is directly proportional to the similarity between the original context and the context in which the problem is rehearsed" (p. 89). Therefore, during the second part, teachers should put thought into the number of contextual changes that must be made when breaking a skills down (correct target production within two or three repetitions is ideal) while remaining as faithful to the original context as possible. However, Duke writes that by "directing the musicians to perform the target over a number of repetitions, each of which is a closer approximation of the original context, the conductor increases the likelihood that the changes made in contextual isolation will become a more 'permanent' part of the ensemble's performance of the piece" (p. 90). He also describes that failing to change the difficulty of the context sufficiently so that the learner can achieve success within two or three repetitions calls for further contextual modifications to avoid negative repercussions on the learner. After all, many repetitions in which the learner does not notice change or progress can be de-motivating and negatively impact a student's self-confidence.

Chapter Seven

CONCLUSION

There is no doubt that pronunciation is a crucial component of second language acquisition. Not only does pronunciation help students improve their English academic skills (Wong, 1993), it also helps them communicate and interact effectively in different social contexts (Morley, 1991). Pronunciation teaching has evolved from teaching correct sounds to empowering students through understanding what they hear, and learning how to produce intelligible target language. Obviously, pronunciation teaching is complex and ever-evolving, so as researchers continue to make new discoveries, teachers must make informed decisions based on available research findings as well as on their own teaching practice.

Just as is the case in learning a second language, learning to play the violin takes years. As a result, progress is very slow. Therefore, like music, improving one's English pronunciation takes time and success should be celebrated one small step at a time. Duke (2005) suggests measuring the success of musical instruction in terms of whether or not the student changed in the way that was intended, during a rehearsal frame. Change happens when a music teacher has a clear goal in mind and gives students many opportunities to 'do' rather than "show" them how it is done. Similarly, modifying a pronunciation feature takes time. Therefore, the instructional goal of each class should be to effect change and the success should be measured in terms of whether the student changed in the way that was intended. In much the same way as changes in a student's

musical performance, pronunciation changes happen when a teacher and student share common goals and the student has many opportunities to apply prediction rules, produce targets, and receive feedback.

The aim of this Report has been to bridge the disciplines of second language pronunciation instruction and music instruction and to identify teaching principles essential to both. In doing so, it is my hope that this Report has provided ideas or guidance on how to teach pronunciation, on how to measure progress, on how to effect change to increase students' English pronunciation abilities, or in the very least, incited the reader to analyze their own pronunciation teaching approach.

This Report concludes with suggestions for directions for future research. The author has shed light on factors that may increase the quality of practice based on research and experts in the field of music; however, considering the empirical evidence that demonstrates the important role that home practice plays in students' pronunciation improvement, the author calls for research that provides empirical evidence of factors that increase the quality of pronunciation practice.

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