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The nature of applied voice teaching expertise: common elements observed in the lessons of three exemplary applied voice instructors

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BOSTON UNIVERSITY
COLLEGE OF FINE ARTS

Dissertation

**THE NATURE OF APPLIED VOICE TEACHING EXPERTISE:
COMMON ELEMENTS OBSERVED IN THE LESSONS OF THREE
EXEMPLARY APPLIED VOICE INSTRUCTORS**

by

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ABSTRACT

Based on theories of expert pedagogy, the purpose of this study was to better understand the nature of expertise in voice instruction by observing common elements across three expert voice teachers (Joseph Frank, tenor; Eric Howe, baritone; and Erie Mills, soprano) and discovering the extent voice teaching aligned with common elements of instrumental instruction (Duke & Simmons, 2006a). This qualitative study addressed the overarching question: How can expert voice teaching be characterized? More specifically, using Duke and Simmons' study of instrumental music teaching expertise as a point of departure, I wanted to understand: To what extent does voice teaching observed in the present study align with Duke and Simmons' 19 Common Elements of Expertise? Methods of data collection included observation-digital recording of nearly 20 hours of lessons, participant interviews, and field notes. Recorded lessons were reviewed to identify teaching behaviors-attributes that related to students' goal achievement within "rehearsal frames" (Duke, 1999/2000; 2008). Data analysis occurred in two phases, first coding transcribed data for original elements and second for new elements. Narrative descriptions were created for new elements. Findings gave evidence that expert voice

teaching was similar to 14 original elements and revealed nine new elements under three categories: working with a largely invisible and fully embodied instrument, frequent exclusive focus on technique, and drawing on extensive familiarity with texts used for singing. Conclusions advance a theoretical model of voice teaching expertise, drawing on Berliner (1986; 1988). That model has implications for the preparation of novice voice teachers and for further research on voice teaching expertise.

KEYWORDS: Applied Instruction, Applied Voice, Studio Instruction, Teaching Expertise, Vocal Pedagogy.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

Allison, a junior vocal performance major, checks her posture in the mirror while singing through Gounod's *Faites lui mes aveux*; her voice is rich but often over-sung. Reaching for the highest note, her voice splinters out of control. "There's that crackle again," she exclaims, frustrated. I rise from the piano and the see-saw of vocal instruction continues: we laugh together over that pesky "crackle," work through a few metaphorical images and physiological corrections, sing the passage on her best [i], and modify the text's vowel production. Finally Allison is able to perform the passage with consistently beautiful tone. A year later Allison beams as she performs her demanding senior recital program with facility, balanced technique, and artistry. She is singing well and she knows it. For me, her applied voice instructor for the past four years, it is a moment of deep satisfaction and joy.

I have always wanted to teach; from early childhood "let's play school" through graduate studies, I maintained a desire to practice good pedagogy (in my young opinion I was the only one on my block who played the role of teacher correctly). A love of vocal music, developed in high school, focused my desire to emulate my dedicated choral director. My career path led me to faculty positions at small private colleges where, of necessity, I taught a broad scope of classes from music fundamentals to world music. Though stretched thin in my course assignments, I always identified as a vocal music instructor and longed to develop depth and expertise in my pedagogy. When I discovered Duke and Simmons' (2006a) "The Nature of Expertise: Narrative Descriptions of 19 Common Elements observed in the Lessons of Three Renown Artist-Teachers" (see

Appendix A for narratives) during doctoral coursework, my interest piqued.

As a person who appreciates lists, I was immediately captivated by the idea that Duke and Simmons' (2006a) findings could serve me as a "Golden Ticket" of sorts, opening doors to instructional expertise development. I quickly cut and pasted the list and got to work, taking reflective inventory of my own applied teaching and distributing copies to my students for assessment during and after lessons ("I do this, but did I do that?"). There followed a partially successful attempt to identify and "do" the entire (prominently posted) list of 19 elements in my applied voice instruction. While proudly recognizing many elements, I was nonetheless concerned when some behaviors did not seem to appear in my voice teaching. As I began considering Duke and Simmons' elements in light of vocal pedagogy, it became clear that some common voice teaching behaviors were not described in their list. It occurred to me that all three expert instructors in Duke and Simmons' investigation taught applied instrumental music. Could this be a factor in my inability to completely align my teaching practice with their 19 elements? As a further revelation, when viewing Duke and Simmons' (2006b) element videos with my husband and son, both professional instrumentalists, I received no confirmation that certain behaviors varied from what I consider good vocal pedagogy. Instead, I drew a somewhat mollifying explanation that "this was the way instrumental instructors teach." I was intrigued; it seemed that instrumental teaching expertise and voice teaching expertise must be characterized differently, and such a characterization I hoped to uncover with research.

Statement of the Problem

Duke and Simmons (2006a) described “common characteristics that are present in the teaching of truly superb teachers” (p. 1) upon observation of Professors Richard Killmer, Donald McInnes, and Nelita True as they taught applied lessons on oboe, violin, and piano, respectively. Duke and Simmons framed their research problem in terms of expertise, arguing that more information was needed about how expert instructors “elicit[ed] positive changes in their students moment to moment” (p. 7) and that “the difficulties in defining expert behavior precisely” were “not unique to music” (p. 8). The researchers claimed that, in the field of music education, systematic observation had led to reliable findings about aspects of teaching, such as verbal instruction or teacher modeling, but not to a holistic picture of expertise in teaching that might inform music teacher preparation.

Duke and Simmons (2006a) watched several hours of recorded lessons from each teacher, identifying and describing elements that appeared in most lessons taught by all three instructors (p. 11). The researchers characterized “19 common elements” under three broad categories: Goals and Expectations, Effecting Change, and Conveying Information (p. 11). Duke and Simmons submitted that the most notable aspect of their findings was the “consistency with which the 19 elements” (p. 15) were present in the work of three very distinct people “who teach in different performance domains-winds, strings, and keyboard-all of which pose different technical and pedagogical challenges” (p. 16).

Duke and Simmons (2006a) identified their participants on the basis of their

recognition as distinguished teachers by the Center for Music Learning at the University of Texas at Austin (p. 9). All three taught at noted conservatories, and the authors admitted that, “the teaching observed . . . represents a special case, namely, performance instruction at a near professional level” (p. 16). Thus, the authors recognized that the generalizability of their results to other music education contexts remained open (p.16). Notably, Duke and Simmons did not include expert voice teachers in their study, so the question of generalizability from instrumental pedagogy to vocal is apt.

Blades Zeller (1993, 2003) interviewed nationally prominent voice instructors seeking to determine the presence and characteristic features of an American school of professional voice. Expert voice teachers, who had been identified by professional peers, detailed their personal approaches to addressing technical aspects of singing (e.g., posture, diction, breath, breath support, tonal resonance, and unification), studio practices, use of imagery, lesson structure, auxiliary training, and professional development (2003, p. x). On the basis of interview data, Blades Zeller reported strategies and characteristics typifying an expert voice teacher. While her findings provided a model for emulation by interested pedagogues, the researcher acknowledged that her studies represented only a first phase; there remained a need to observe and assess more voice teaching professionals (2003, p. xi). Blades Zeller’s findings were based solely upon what voice teachers said about their studio methodologies. Remaining to be uncovered is what expert voice pedagogues actually do, with the aim of providing models for more novice teachers.

Theoretical Framework: Expert Pedagogy

Of what value is the study of expert pedagogy? According to Berliner (1986), exemplary teachers' classroom methodology, behavior, problem solving, goals, scripts, and routines had potential to provide a basis for teacher preparation, offering useful models for novices to study (p. 6). Berliner reasoned that studying expert instructors promotes thinking about the nature of expert systems in general (*cf.* Ericsson, 1993, 1996, 2006; Ericsson et al., 2007; Lajoie, 2003). Such study of expert teachers also may provide the beginnings of a shared procedural knowledge, even informing expert systems development, such as computer tutoring (p. 6). Berliner drew on Schön when he suggested that expert teachers' knowledge may be tacit, or intuitive:

Often we cannot say what it is that we know. When we try to describe it we find ourselves at a loss, or we produce descriptions that are obviously inappropriate. Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing. It seems right to say that our knowing is *in* our actions (emphasis in original). (Schön, 1983, p. 49)

Thus, studying expert pedagogues is necessary for making their implicit teaching knowledge explicit.

According to Berliner (1986), by making data-based decisions about expert and novice teachers, policies about who may be a teacher and how master teachers are designated and paid can be influenced (p. 7). In a related vein, Berliner reasoned that studying expertise in teaching dignifies the profession. Expertise in other disciplines has been studied, and "it would be a great boost for teachers to know that some members of their profession resemble experts in other fields" (p. 8). Nevertheless, Berliner acknowledged the problematic nature of teacher expertise research. He cited three

consistent problems: determining teacher expertise, confounding experience and expertise, and deciding among many knowledge domains which ones best identify and categorize teacher expertise. Each of these problems is described in turn.

The first problem Berliner (1986) identified was one of determining expertise. He suggested that expertise in competitive sports, for example, is easy to identify because it is a matter of recorded past success, medals and trophies. No such external criteria exist for judging teacher expertise. Berliner also recognized rigor in adjudicator preparation for such diverse events as American Kennel Club ratings, livestock shows, and athletic competitions, all of which require years of practice, and in some cases, formal coursework. Berliner then contrasted this preparation to less rigorously prepared judges who confer the U.S. national and state teacher of the year awards, and again he concluded that external and independent criteria for judging teacher expertise do not exist (p. 9). Berliner chose teacher reputation, experience of more than five years, independent classroom observation, and performance success in research tasks as criteria by which to identify expert teachers (p. 8); however, he did so reluctantly, and he acknowledged no single best way of determining teacher expertise.

Another problem in theorizing teacher expertise arises because “mere experience is simply not believed by most people to correlate highly with expertise in pedagogy” (Berliner, 1986, p. 9). When expertise and experience are confounded, it may implicate a lack of external criteria or faulty problem structuring (p. 9). Investigating expertise in the field of education is made more difficult than in other disciplines because of the view “that we need to separate expertise from experience and study how experience changes

people without necessarily turning them into experts” (p. 9), which is a challenging task. Consequently, Berliner used the terms “experienced” and “expert” in his discussion as if they are interchangeable, yet he admitted they are not (p. 9). Berliner could not yet “untangle” the two constructs, and he asked for “patience in resolving this situation” (p. 9).

Berliner (1986) confessed a third problem of studying pedagogical expertise: determining the knowledge systems used in task accomplishment (p. 8). At the time of his study, education researchers held diverse opinions about teacher knowledge. Schön (1983), for example, described expert teacher knowledge as “reflection in action,” where professional knowledge is spontaneously applied in response to student need. Leinhardt (1990) suggested expert pedagogues possessed both “sensitive location-specific knowledge” and “craft knowledge” (p. 19) where education theory was applied to classroom decision-making. Berliner (1986) reasoned that expert instructors readily accessed two major knowledge domains in classroom teaching: “subject matter knowledge and knowledge of organization and management of classrooms” (p. 9). To be pedagogically expert, these two knowledge systems were “integrated at all times” (p. 9).

Defining the Expert Teacher

Berliner (1988) theorized five development stages in teachers: novice, advanced beginner, competent, proficient, and expert. He carefully explained that stage theories are not exact, and that individuals “at one stage of development may, in particular situations, show characteristics of individuals who are at another stage of development” (p. 6). He also explained that expertise was highly contextualized, so that expert teaching in math

was not the same as expert teaching in English. Nonetheless, based on a review of studies of teaching expertise, Berliner offered general observations about experts.

First, while watching video recordings of classrooms, experts offered more “detailed and descriptive” (Berliner, 1988, p. 9) comments about the activities of the classroom than did novices. Furthermore, whereas novices typically “gave a step-by-step” (p. 10), commentator-like accounts of what was happening (p. 10), experts’ accounts were full of evaluations, inferences, suggestions, and conclusions about classroom phenomena. Although novices were accurate in their descriptions of slides of classroom scenes, their focus remained on literal depiction such as “students [are] sitting at tables” (Berliner, 1988, p. 12). In contrast, experts observed the same scene and immediately organized important information: “students [are] maybe doing small group discussion on a project as the seats are not in rows” (p. 12).

Characteristic of expert teachers were “well-practiced routines” (Berliner, 1988, p. 14) ranging from attendance and homework review to identifying students in need of assistance, all of which could be executed quickly and accurately. Berliner reasoned that expert teachers spend thousands of hours developing these routines (p. 15). Novices had less familiarity with routines, which led to misunderstandings about the classroom and a loss of control over the pace of instruction. One benefit of expert teachers’ experience was their ability to “predict” or “hypothesize” (Berliner, 1988, pp. 15-16) student behavior and cognition. This included expert teachers’ ability to predict student misunderstandings. “The ability to predict how students think and err” (p. 16) was not observed among novices. In a related vein, experts were able to judge the typicality of

classroom events and student responses, whereas novices lacked experience to make such judgements (p. 16).

Focusing on differences between expert and novice teachers, Berliner (1988) concluded that, “important qualitative differences exist in the performance of novices and experts. Research is making clear these qualitative differences” (p. 20). However, Berliner also recognized the potential implications of his theory for policy, particularly for teacher evaluation (p. 25). He suggested that, “because certain practices and methods have been reliably associated with certain desirable educational outcomes” (p. 25), they would become the focus of teacher evaluation. Evaluating the execution of specific routines and practices might be helpful to the novice teacher, Berliner suggested, but it was “simply irrelevant” (p. 25) for evaluating expert teachers who are more influenced by context, and who perform more intuitively. Berliner urged caution and asserted, “no single evaluation instrument will suffice for teachers at every level of development” (p. 26).

Expert Music Pedagogy

Berliner’s theory of expertise in teaching influenced subsequent research in music education. For example, Standley and Madsen (1991) developed a measure to distinguish between experience and expertise in music teaching, “separating those with music knowledge from those who are expert in the teaching of music knowledge” (p. 9). Their aim in doing so was to identify expert teachers in order to provide “a source for the study of effective routines, teaching patterns, and classroom management techniques” (p. 10). Other researchers took a more focused approach, evaluating specific teaching behaviors

and comparing expert and novice music instructors. Doerksen (1999) Goolsby (1996, 1999) and Siebenaler (1997) all found that expert music teachers stopped rehearsals more frequently. Experts completed more units of instruction than did novices (Goolsby, 1997, 1999), and they delivered instruction with more rapid and concentrated pacing than novices (Siebenaler, 1997). Doerksen (1999) observed more highly developed aural-diagnostic skills in expert music teachers than in non-experts; he also speculated that novice's lower skills related to their lack of teaching experience and professional growth opportunities (p. 86).

In the music education research literature, expert teachers have been identified as effective, to the extent that the terms *effective* and *expert* became interchangeable. Duke (1999/2000), however, posed a problem of evaluating music teacher effectiveness that was similar to Berliner's dilemma of deciding amongst various knowledge systems to identify expertise:

When observers look for excellence in teaching, on which aspects of teachers' and students' behavior do they base their assessments of quality or effectiveness? Given that there are simply too many variables present at any one time to address them all adequately—especially the relationships among them—what information should be included in the assessment and evaluation of music performance instruction? (Duke, 1999/2000, p. 2)

Just as Berliner (1986) expressed concern about the many knowledge systems that could be used to identify expertise, Duke was concerned about the many variables that might be used to identify and classify effectiveness, and how those variables interact within the contexts of music teaching and learning.

Expert Applied Music Teaching

Kennell (2002), examined research literature on teaching effectiveness, focusing

his review on studio, or applied, music teaching. Like Duke, Kennell perceived a problem with the variety of theoretical constructs used to evaluate the effectiveness of studio instruction (p. 245). For example, Rosenthal's (1984) investigation of instructor modeling and verbal guidance, where teacher modeling was found most effective. Sang (1987) and Dickey (1992) followed up with additional studies of teacher modeling ability, usage, and their relationship to students' performance. Conclusions from both studies supported Rosenthal's (1984) findings. Kennell (1984) investigated his own theory of applied teacher scaffolding. He suggested that studio instructors apply scaffolding strategies on the basis of performance error attribution (p. 47) rather than following the scaffolding hierarchy proposed by Middleton (1978). Gipson (1978) and Hepler (1986) used the *Flanders System of Interactive Analysis* (1970) to evaluate applied instrumental instruction. Flanders classified verbal interactions under three categories: direct and indirect teacher talk, responding and initiating student talk, and silence/confusion. Teacher talk included seven behaviors: accepts feelings, praises/encourages, accepts/uses student ideas, asks questions, lectures, gives directions, and criticizes/justifies authority. Hepler (1986) reported on teacher talk, observing that teacher-student verbal exchanges were short, teachers were inclined to make statements rather than to ask questions, and students performed more than they spoke (pp. 310-311). Schmidt (1989) used the Myers-Briggs Type Indicator to examine relationships between applied instructor personality variables and music teaching behavior. Murphy (1995) referenced Schön's construct of reflective conversations as a framework for studying effective teaching. He found that reflective conversations formed "a substantial portion

of the instructional behavior of applied studio music teachers” (p. 168). In her case study of Master violin teacher Dorothy DeLay, Gholson (1998) described teaching effectiveness in terms of preparatory and facilitative strategies.

Which of the many constructs from this body of research should be used to describe and evaluate expert applied music teaching? Duke (1999/2000) cautioned against narrow isolation of variables:

Because teacher-student interactions are so event-rich, it is inevitable that the many coincident behaviors will tend to obscure a clear understanding of what variables are functioning to produce given outcomes. To observe any moment of teaching is to observe a plethora of circumstances and behaviors. Precisely because there are so very many things to look at when observing teaching (even one's own) it is certainly possible to focus on aspects of instruction that may well be consistent in their appearance but nonfunctional with regard to their producing outcomes. (p. 18)

Then, he proposed a solution by which effective teaching might be evaluated while maintaining the complexities of teacher-student interaction:

Extended periods of performance instruction may be viewed as a series of mini lessons, each of which is directed toward the accomplishment of one or more specific goals, during which teachers identify specific objectives that students are expected to accomplish, and it is possible to identify the time periods during which each performance goal is the focus of attention. (p. 19)

Duke called the time period between which an instructor identifies a target goal and the student achieves that goal (often corroborated by the teachers’ decision to set a new goal) a rehearsal frame (Duke, 2008). He acknowledged that the rehearsal frame was not a device to help people learn how to teach; rather, it was a way to segment video-recorded teaching data and simplify the focus of observation.

Duke (2008) observed that, in order to simplify the complexity of observing teaching, some have examined individual components of teaching, such as modeling or

feedback. The problem, Duke asserted, was that in observing individual components we lose “the interactivity of all those components of teaching” (video file, 1:28). A video recording of teaching could also be segmented by time, but any interval of time would be determined arbitrarily. Duke proposed that the teacher’s proximal goal setting marked the initiation of a segment of teaching, and the student’s achievement of that goal marked the end of the segment. In terms of superb teaching, rehearsal frames were typically short, ranging “from 90 seconds to four minutes” (video file, 5:13) because expert teachers strategically set achievable proximal goals to maintain students’ internal motivation. This internal motivation, Duke reasoned, was key. Although the teacher’s intention was to “elicit change” in the student, change only occurred as the student recognized “differences between what they were actually doing and what the teacher intended... Trying to resolve that discrepancy is where learning happens” (video file, 6:47).

While positive change in the student’s performance was important as the marker of the end of a rehearsal frame, Duke’s (2008) focus of attention remained on the teaching. He maintained that a major difference between expert and novice teachers was the decision to set a new proximal goal: whereas the novice teacher moved on to a new proximal goal irrespective of what occurred with the student, the expert was “tenacious” (video file, 8:34) in ensuring that the student had internalized the goal behavior. Duke and Simmons (2006a) employed rehearsal frames to search hours of video recorded applied lessons for evidence of how three “luminaries in the world of music performance and music teaching” (p. 9) engaged in proximal goal-setting intended to elicit change.

They developed “consensus language for articulating . . . the most important points about the instruction” they observed (p. 10). While their research advanced understanding about expertise in applied instruction, Duke and Simmons studied only instrumental teachers, and the question of generalizability to expert voice teaching remains open.

Summary

Investigations of pedagogical expertise have long been a part of professional education. Berliner (1986) submitted that excellent instructors “often lack the ability to articulate the basis for their expertise,” and advocated a need to study and understand the knowledge, skills, and procedures of expert teachers in order to better prepare non-experts (p. 7). He suggested that the performance of expert instructors, though not “perfect, provides a place to start from . . . with a temporary pedagogical theory, a temporary scaffolding from which novices may learn to be more expert” (p. 6). Berliner also articulated the pitfalls of teacher expertise study: 1) finding appropriate criteria to define expertise, 2) confounding experience and expertise, and 3) understanding which knowledge domains are accessed by experts (pp. 8-9). The investigation of expert teaching remains a “work we have started” (p. 12) and a line of inquiry to be continued, where it becomes important to ask “different questions about the phenomena that have been identified as worth looking at” (p. 5). Berliner left it for others to continue researching expert pedagogues, leaving the door open for subsequent investigation of newly formulated questions.

Music researchers Standley and Madsen (1991) traced their work to Berliner’s (1986) study when developing an observation instrument by which expertise and

experience could be disengaged. Other music pedagogy researchers evaluated modeling (Rosenthal, 1984), scaffolding (Kennell, 1984), pacing (Seibenaler, 1997), proximal positioning (Gholson, 1998), aural-diagnostic skill (Doerksen, 1999), and verbal communication (Gipson, 1978; Hepler, 1986). This strand of music pedagogy research, however, began to narrowly isolate variables of teaching, leaving researchers with a problem similar to one which Berliner (1986) expressed: which knowledge systems should be used to identify expert music pedagogy?

The number of teaching and learning variables, and their interrelatedness, makes investigation of applied teaching challenging (Duke, 1999/2000, p. 2). Like Berliner, Duke acknowledged no single way to establish and evaluate expertise in music instruction, but he recognized the critical nature of such decisions. He recommended studying music teaching using rehearsal frames (p. 19) as a way to segment video recorded teaching data and simplify the focus of observation (Duke, 2008). Duke designated a rehearsal frame as the time period between which a teacher identifies a target goal and the student achieves that goal (often substantiated by the instructors' decision to set a new target goal). Though not explicitly stated, Duke and Simmons (2006a) appeared to have used rehearsal frames when they described common elements of instrumental instruction.

Kennell (2002) also described the challenging yet compelling nature of systematic study of studio music instruction (p. 243). He proposed that applied lessons retained the characteristic complexity of classroom music education where teacher, student, verbal and non-verbal communication, literature, and instructional process intersected (p. 252).

Kennell observed:

The professional practice of teaching music through private lessons appears at first to be deceptively simple. In reality, the Western tradition of studio instruction is extremely complex. . . . As we advance our understanding of how this fundamental cultural replication unit works, we advance our understanding of the most basic teaching-learning process. This knowledge is important for our understanding not just of how we learn music but of how humans learn anything. (p. 254)

In his review of the literature on applied music teaching Kennell (2002) seldom mentioned research on vocal instruction. Instead, his review focused on pedagogy across instrumental media or in specialized areas of piano (Jorgenson, 1986; Kostka, 1984), strings (Gholson, 1998), or woodwinds (Gipson, 1978; L'Hommedieu, 1992). On the other hand, Blades Zeller (1993, 2003) focused exclusively on the perceptions and pedagogical strategies articulated by expert voice teachers. Blades Zeller offered her interview-based work as a model for future qualitative research on vocal pedagogy (1993, p. 103). A study observing lessons for common elements of expert vocal instruction would be a logical next step in better understanding the nature of voice teacher expertise.

Research Purpose and Guiding Questions

Based on theories of expert pedagogy, including those in music pedagogy, the purpose of this study was to characterize expert voice teaching while evaluating the generalizability of Duke and Simmons' (2006a) 19 elements of expertise to applied voice instruction. The following overarching question guided the study:

How can expert voice teaching be characterized?

More specifically, using Duke and Simmons' (2006a) study of instrumental music teaching expertise as a point of departure, I wanted to understand:

To what extent does voice teaching observed in the present study align with Duke and Simmons' (2006a) 19 Common Elements of Expertise ?

Overview of Research Design

To address these questions, I chose a collective case study design. According to Stake (1995), case study design allows researchers to gain understanding about complex relationships as they exist in natural settings (p. 37). Merriam (2015) indicates that case study involves “description and analysis of a bounded system” (p. 37). In this study, the bounded case was expertise, and I characterized expertise in voice teaching as it was informed by three instructors, similar to the way that Duke and Simmons (2006a) characterized music teacher expertise. After recording more than 20 hours of one-to-one voice instruction, I transcribed rehearsal frames, and I applied codes from Duke and Simmons' (2006a) descriptions of 19 Common Elements of Expertise. Not all events within the rehearsal frames conformed to this etic coding system, so I analyzed the transcribed rehearsal frames a second time, applying open and axial coding and spoke outlining (Mack & Skjei, 1979) processes to allow codes to emerge more organically from the data.

Rationale and Significance

Though the field of music education values applied teaching, investigators have yet to determine whether applied instruction of various musical instruments “follows one set of rules for all instruments or if different rules exist for teaching different instruments” (Kennell, 2002, p. 254). Neither have researchers determined whether

teaching the human vocal instrument requires a unique set of pedagogical behaviors. Duke and Simmons (2006a) clarified the picture of studio expertise by describing commonality at the highest level of applied instrumental instruction. However, their findings may not accurately represent elements characterizing expert applied vocal instruction. No studies have been found which consider the generalizability of common elements observed in expert instrumental studios to expert applied vocal instruction. There is a need for the present study to describe common elements used in expert voice studios and explore potential differences between instrumental and vocal pedagogies.

Orientation to the Study

A brief summary of the preceding and ensuing chapters serves as an orientation to the study. In the first chapter I provided context for this investigation with an overview of research on teaching expertise, introducing Berliner's (1986) seminal research, Duke and Simmons' (2006) common elements, and Blades Zeller's (1993, 2003) compendium of renowned vocal pedagogues' thoughts and teaching strategies. In Chapter Two I review relevant research on expertise in applied instrumental teaching and in voice teaching. Chapter Three details the design and methods of this study. In Chapter Four, I report results of my first data analysis, applying etic codes derived from Duke and Simmons' (2006a) 19 elements. Results of the second analysis, applying an emic coding process, are reported in Chapter Five. Finally, in Chapter Six, I summarize my findings, and turn toward a theoretical model of voice teacher expertise, drawing on Berliner (1986; 1988). Also in Chapter Six, I discuss implications of the theoretical model for research and practice.

CHAPTER TWO: REVIEW OF LITERATURE

Berliner (1986) suggested that expert teachers possess knowledge about the organization and management of classrooms of a different order than their subject matter knowledge and unlike that of novice instructors (p. 10). He further suggested that the features of the knowledge of expert teachers might be studied, described, and even codified (p. 13). In the field of music, such special knowledge for teaching has been examined in general music classrooms and performance ensembles (Duke, 1999; Duke & Henninger, 2002; Duke & Prickett, 1987, 1992; Duke, Prickett, & Jellison, 1998; Brenner & Strand, 2013; Hamann et al, 2000; Rosenthal, 1984; Sang, 1987; Yarbrough & Madsen, 1998). However, it might also be observable in the one-to-one context of the voice lesson. In this study, I aim to describe expert vocal pedagogy by observing common elements across expert voice teachers and relating the findings to those observed in expert applied instrument lessons (Duke & Simmons, 2006a). Therefore, I have reviewed research about applied music instruction in instrumental and vocal studios, and organized the review of literature into two sections: Expertise in the Applied Instrumental Studio and Expertise in the Applied Voice Studio.

Expertise in the Applied Instrumental Studio

Duke and Simmons' Elements of Expertise and Follow-Up Studies

The purpose of Duke and Simmons' (2006a) study was to describe common elements in the teaching of three expert instrument teachers, not only to provide useful information generally, but also as a tool for evaluation of applied teaching (p. 8). The researchers watched about 25 hours of video recorded lessons, searching for those

instances when the teachers identified targets and applied behaviors which subsequently “produced a positive change in students’ performances” (p. 8). Teaching behaviors and attributes common to all three teachers were then classified as elements and described. The authors developed a “consensus language” to characterize 19 common elements under three categories: Goals and Expectations, Effecting Change, and Conveying Information (p. 11). Duke and Simmons’ common elements included:

Goals and Expectations

1. *The repertoire assigned students is well within their technical capabilities; no student is struggling with the notes of the piece.*
2. *Teachers have a clear auditory image of the piece that guides their judgments about the music.*
3. *The teachers demand a consistent standard of sound quality from their students.*
4. *The teachers select lesson targets (i.e., proximal performance goals) that are technically or musically important.*
5. *Lesson targets are positioned at a level of difficulty that is close enough to the student’s current skill level that the targets are achievable in the short term and change is audible to the student in the moment. When errors in performance require attention, teachers guide error correction successfully.*
6. *The teachers clearly remember students’ work in past lessons and frequently draw comparisons between present and past, pointing out both positive and negative differences.*

The Process of Change

7. *Pieces are performed from beginning to end; in this sense, the lessons are like performances, with instantaneous transitions into performance character; nearly all playing is judged by a high standard, "as if we are performing."*
8. *In general, the course of the music directs the lesson; errors in student performance elicit stops.*

9. *The teachers are tenacious in working to accomplish lesson targets, having students repeat target passages until performance is accurate (i.e., consistent with the target goal).*
10. *Any flaws in fundamental technique are immediately addressed; no performance trials with incorrect technique are allowed to continue.*
11. *Lessons proceed at an intense, rapid pace. Because teachers identify targets quickly and concisely, teacher-student interactions occur frequently..*
12. *The pace of the lessons is interrupted from time to time with what seem to be "intuitively timed" breaks, during which the teachers give an extended demonstration or tell a story.*
13. *The teachers permit students to make interpretive choices in the performance of repertoire, but only among a limited range of options that are circumscribed by the teacher. Students are permitted no choices regarding technique.*

Conveying Information

14. *Teachers make very fine discriminations about student performances; these are consistently articulated to the student, so that the student learns to make the same discriminations independently.*
15. *Performance technique is described in terms of the effect that physical motion creates in the sound produced.*
16. *Technical feedback is given in terms of creating an interpretive effect.*
17. *Negative feedback is clear, pointed, frequent, and directed at very specific aspects of students' performances, especially the musical effects created.*
18. *There are infrequent, intermittent, unexpected instances of positive feedback, but these are most often of high magnitude and extended duration.*
19. *The teachers play examples from the students' repertoire to demonstrate important points. The teachers' modeling is exquisite in every respect. (pp. 11-15)*

Duke and Simmons (2006a) suggested that the consistency of their findings was due to the excellence of the teachers they observed, yet they also admitted that additional

research would confirm or refute the stability of these 19 elements in other settings.

Further, some of the elements they characterized were at odds with accepted pedagogical practice (p. 16). For instance, while excellent modeling was consistent with a body of research about expert teaching, they saw the prevalence of negative feedback at odds with that same body of literature. The researchers allowed that the question of the generalizability of their common elements to other contexts remained open (p. 16).

Similar to Duke and Simmons (2006a), Wexler (2009) asserted that the preparation of future studio teachers should be based on observation and analysis of best practices. The purpose of Wexler's study was to uncover shared goals, values, and expectations (p. 5) across performance pedagogies by surveying applied teachers of different instruments. Applied voice teachers were not included in the survey population. Wexler's project addressed four questions:

1. Are there common goals and values across different non-vocal instrumental studios?
 - 1a. Are there common formative assessment strategies across different instrumental studios?
2. Are there common teaching strategies across different instrumental studios?
 - 2a. Are there common expectations concerning and strategies for encouraging individual student practice among instrumental studios? (p. 5)

The theoretical framework for Wexler's investigation was based on Shulman's (2004) idea of propositional knowledge, specifically, teacher's "principles, maxims, and norms" (p. 206). Wexler thought it necessary to determine whether such instructor knowledge varied across instrumental studios or if teachers of different instruments had common goals and attitudes (2009, pp. 7-8).

Wexler (2009) referred to his design as mixed methods, using interviews to develop and field-test a survey to address his research questions. The final survey comprised 42 Likert scale questions, one item ranking studio goals, and an open-ended question about common goals across instrument teachers (pp. 65-66). Wexler distributed the survey to members of the College Music Society, receiving 168 responses (p. 74). Results were tabulated by item groups related to the research question topics.

Based on general agreement, disagreement, and neutrality on item groups, Wexler (2009) concluded that applied instructors of various instruments shared common goals, values, and studio expectations for developing rapport with students, teaching expressiveness, and mentoring students' careers (p. 156). In terms of assessment, teachers were ambivalent about valuing artistry over technique, although they agreed about the importance of good intonation, rhythmic accuracy, and beautiful tone (p. 157). Wexler also found ambivalence from teachers about valuing their own need for authority over their students' independence (p. 157). Wexler concluded that there were common teaching strategies across instrument groups such as scaffolding, immediately addressing intonation, and providing constant feedback (p. 158). As an aside, Wexler noticed that one difference in teaching strategy preference was more pronounced across gender than across instruments--males preferred to explain concepts and females favored demonstration (p. 158). He recommended follow-up research on gender differences in studio teaching.

Parkes joined Wexler (2012) to replicate Duke and Simmons' (2006a) study with three expert studio teachers (French horn, violin, and harp) of undergraduates who were

“not necessarily accomplished” (p. 49). For their conceptual framework, Parkes and Wexler drew upon their interpretation of Vygotsky’s Zone of Proximal Development, whereby a novice can “transcend his or her limitations, operating on a higher level as a result of support by the teacher” (p. 46). The authors took scaffolding to be a Vygotskyian concept, where as a student displayed competence, a teacher began to withdraw support (p. 46). Parkes and Wexler were interested in discovering whether their instructors taught toward this type of developing independence (p. 46) and which original elements they used. The questions of their study were:

1. Are the 19 characteristics of Duke and Simmons (2006a) evident in other applied teachers and their students?
2. If observed, with what frequency are these characteristics present?
3. Are there are other observable and common characteristics in these studio settings? (p. 49)

Parkes and Wexler (2012) observed 14 hours of video-recorded lessons, using Duke and Simmons’ (2006a) descriptions of 19 elements as codes, and developing seven new codes (p. 51). These included:

- Ia. Student struggles with repertoire or notes in performance as he or she plays;
- IIa. Teacher accepts flaws in student performance with a view to focus on getting to the end without stopping;
- IIb. Short student attempt of one phrase or short section where students are asked to play short passages in order to focus on one aspect such as the intonation, the rhythm, the correct note, or the dynamics;
- IIc. Simultaneous side coaching where the teacher directs the student performance without stopping the student, either by speaking, clapping the rhythm, or gesturing expressively to convey the shape of a phrase. This technique is unique in that the student is simultaneously playing and being coached;

- IIIa. Teacher demonstration of correct rhythm/notes when student was unable to play it correctly. The teacher performs the passage without consideration for expressive content;
- IIIb. Gestural conveying of information such as conducting or clapping time/beat, sometimes as a side-coaching strategy during student attempt, sometimes prior to student attempt;
- IIIc. Teacher practice discussion/demonstration of how to practice a particular passage during the week with explicit sequencing directions. (pp. 54-55)

In their findings, under Duke and Simmons' (2006a) category of Goals and Expectations, Parkes and Wexler (2012) agreed with original findings that teachers selected "goals that were musically and technically important" (p. 52). Under the category Effecting Change, the authors' findings were more limited. They observed many students struggling with intonation, rhythm, and technical issues; consequently, Parkes and Wexler's (2012) teachers modeled musical interpretation rather than allowing interpretive choice. Under the category, Conveying Information, Parkes and Wexler's (2012) findings were similar to Duke and Simmons (2006a), except that the teachers' performance modeling was sometimes slightly flawed (p. 54).

Parkes and Wexler (2012) focused their discussion on the differences between their findings and the original study, reporting that 28.48% of the behaviors they coded did not align with Duke and Simmons' (2006a) 19 common elements (2012, p. 55). Parkes and Wexler found more frequent and succinct positive feedback compared to Duke and Simmons study. They also found a lack of intensity, teacher tenacity, and rapid pace in the lessons they observed (p. 55). Parkes and Wexler wondered whether the teachers in their study made interpretive decisions for their students because the teachers

wanted students to become confident with pitch, rhythm, and technical issues before moving on to artistic interpretation, or whether the teachers were merely more “teacher-centric” (p. 56) in their methods.

Specifically drawing on their conceptual framework, Parkes and Wexler (2012) noted many instances of “side-coaching” (p. 56) where students played only short excerpts or passages, and the teacher would gesture expressively, clap, or give verbal instruction while the student was performing. The authors suggested that this coaching behavior was consistent with Vygotsky’s concept of scaffolding. Finding that side coaching also occurred during longer performances, the authors suggested that the teachers were gradually moving students to a higher proficiency level (p. 57).

Parkes and Wexler (2012) made several recommendations for further research: First, they recommended that more researchers should study the faculty at their own institutions, because teaching practices might differ by institution. Second, they recommended training unbiased observers in the use of Scribe or other similar video-analysis software to “leverage greater accuracy in the replication process” (p. 59). Finally, the authors recommended further replication of Duke and Simmons’ (2006a) study in the studios of less experienced teachers.

Profiles of Master Teachers

L’Hommedieu (1992) was among the first to investigate master teachers in applied music using a qualitative research design. The term ‘master teacher’ had been devised by Bloom (1985) to denote the renowned one-to-one teachers responsible for the final education of extraordinarily talented individuals in particular fields (1992, p. 5), and

despite research suggesting the effectiveness of this kind of one-to-one instruction (Anania, 1983; Bloom, 1984), L'Hommedieu was unable to find any observation studies of the behaviors of master music teachers in the studio context. The purpose of L'Hommedieu's project was to create a "pedagogical profile" of a master applied music teacher and develop a grounded theory to build a model of effective studio instruction (p.

6). Two main questions guided the study:

1. How do master studio teachers in music manage the process of instruction? How do they control-or fail to control-the variables that existing education research has identified as important correlatives of student achievement?
2. How are these teaching behaviors interpreted by the student and how well does this interpretation match the intended effect of instruction? (pp. 6-7)

In order to avoid confounding the effects of teaching behaviors with the effects of teacher and students attributes and the instructional context, L'Hommedieu devised two additional questions related to perceptions, values, and goals:

3. How do master studio teachers in music manage pre- and post-instructional decisions, such as student selection, student evaluation, and structure and content of the curriculum?
4. What are master teachers' instructional goals and philosophies? How do these goals and philosophies influence their pedagogical decisions? (pp. 7-8)

L'Hommedieu (1992) laid the groundwork for his study with an extensive review of existing research, which he categorized as: (a) research on teacher effectiveness; (b) theoretical models of school learning, and (c) literature on master teachers in music (pp. 13-14). The literature review supported the six theoretical and methodological assumptions of L'Hommedieu's investigation:

1. There is a small, identifiable group of unusually effective studio teachers (i. e., master teachers) with the subject expertise and pedagogical skill to stimulate the highest levels of accomplishment in exceptionally talented students.
2. Master teachers are responsible for levels of achievement above and beyond what could be explained by student aptitude and prior achievement.
3. The instructional efficacy of master teachers can be explained in terms of educational process variables. Many of the traditional static variables (subject-area expertise, educational background, and performance experience) used to select outstanding teachers may represent necessary conditions for effective instruction, but are not sufficient in themselves.
4. The teaching and learning behaviors that account for extraordinary levels of student achievement are systematic, albeit perhaps unconscious, and are thus amenable to observation and analysis.
5. A useful description of master teacher's pedagogy is possible through modified observational strategies used in teacher effectiveness research in general education.
6. Because the music education researcher is not a naïve observer of the studio teaching environment, a descriptive study should use, rather than ignore, the researcher's experience as a musician, teacher, and student. (pp. 103-107)

Although L'Hommedieu (1992) considered the results of a quantitative pilot study "shallow and disappointing" (p. 112), there were few resources available in music education on how to conduct qualitative case studies. L'Hommedieu adopted Eisner's (1985) concept of researcher as *connoisseur* to reflect his "selective" (1985, p. 222) view of master teachers in music and his ability to perceive what was "subtle, complex, and important" (p. 219) in the studio teaching environment. To further clarify his perspective, L'Hommedieu developed a conceptual framework based on Bloom's (1976) notion of quality of instruction. This included: (a) providing instructional cues, (b) managing student participation or engagement, (c) providing reinforcement, and (d) providing feedback and correction (p. 211). L'Hommedieu also referenced Bloom's

(1985) Talent Development project, where the education of elite artists, scientists, and athletes was found to involve a series of teachers, each of whom demanded greater technique and commitment. Bloom estimated that, at the top level in any field there were 10 master teachers.

L'Hommedieu (1992) reasoned that it was possible to observe master teachers' instructional design, implementation, and alteration "for the specific needs of individual students" (p. 125). Furthermore, because students of master teachers were advanced, L'Hommedieu assumed that they were similar in terms of "prior instruction, achievement, and commitment" (p. 125). This amounted to controlling external variables, allowing the researcher to focus solely on quality of instruction.

The sample for the study was selected by a survey of professional orchestra members and applied faculty of highly ranked schools of music and conservatories (p. 136). Although L'Hommedieu (1992) originally intended to study four master teachers, circumstances prevented extended observation in all but the flute teacher's studio. Thus, his study became a case study of one master teacher (Ferguson) based on lesson observations and teacher and student interviews. The researcher coded interview transcriptions and field notes according to Bloom's quality of instruction categories and also emerging categories (p. 148).

L'Hommedieu (1992) concluded that Ferguson's instructional goal was to treat students as professional musicians, with the belief that, even if they did not become professional orchestral musicians, their instruction would "spill over" into other aspects of music (p. 276). Toward that end, students were expected to assume full "responsibility

for their own musical development” (p. 277). Students were selected for the studio on the basis of a brief lesson, wherein Ferguson ascertained whether “the student could adapt quickly to instruction” (p. 277) and learn new material quickly. An indicator of student success and studio standing was their level of placement in an ensemble (p. 279). The curriculum included technical studies, etudes, recital repertoire and orchestral excerpts, with the balance of time spent on technical studies for younger students, and repertoire and excerpts for graduate students. While Ferguson’s instructional cues were primarily verbal, he also gestured and modeled through singing. He seldom modeled by playing flute, but when he did it was “breathtaking” (p. 282). Ferguson’s students were highly motivated to participate, maintaining “an extraordinarily high level of task engagement, even for one-on-one instruction” (p. 284). Ferguson seldom provided reinforcement but when used, it was verbal, understated, and very positive (p. 286). Ferguson’s corrections were primarily verbal and very detailed, similar to his instructional cues.

L’Hommedieu’s (1992) grounded theory of teacher effectiveness was explained in terms of four characteristics: “student selection, high level of subject area expertise, intuitive management of the quality of instruction variables, and an extremely high level of consistency” (p. 296). The researcher claimed that Bloom (1982) was only partially correct about student selection: the master teacher indeed looked for high levels of student performance, but also examined compatibility of the student’s learning with the teacher’s style of instruction, and the student’s ability to learn quickly (p. 297).

L’Hommedieu also noted that an institutional setting often filtered out all but the most able and committed students. Therefore, assuming that the master teacher’s criteria for

selection occurred after the institutional criteria have been met, “a high level of student achievement [was] virtually assured” (p. 298). Although L’Hommedieu agreed with Bloom (1985) that international prominence was essential for master teacher status, this characteristic must be combined with the student selection process and with the teacher’s effective management of quality instruction (p. 300). L’Hommedieu reiterated that the teacher’s management of quality instruction was “extraordinarily effective and efficient” (p. 300), and also “relatively invariant” (p. 301). Finally, L’Hommedieu recognized the consistency of Ferguson’s instruction. “Because Ferguson’s provision of feedback was largely invariant, “subtle changes in his provision of feedback and reinforcement could be perceived and validly attributed” (p. 304).

L’Hommedieu (1992) concluded that Bloom’s quality of instruction variables were a coherent model for observation and description of applied studio pedagogy, recommending their application in further study of teachers. He suggested that formal means to identify master teachers were unnecessary. L’Hommedieu also suggested a need for further research on specific aspects of studio teaching, e. g., the feedback process.

Whereas L’Hommedieu used Bloom to establish the conceptual framework of his study, Neill-Van Cura (1995) turned to David Gordon, an advocate for Neuro-Linguistic Programming (NLP; p. 7). With Gordon, the author developed eight questions to guide her observations and interviews of master violin teacher Dorothy DeLay:

1. What criteria are important to the master teacher when teaching violin?
2. What specific behaviors, perceptions, emotions, or experiences represent the criteria of importance when teaching violin?

3. How does the master teacher know when criteria important to violin playing have been fulfilled?
4. What does having these criteria important to violin teaching make possible for the master teacher?
5. What does the master teacher do to make each criterial equivalence happen?
6. What is the behavior of the master teacher while each criterial equivalence is happening?
7. When the master teacher sees each of the criterial equivalences happening, what is she feeling?
8. What does the master teacher see or hear when each criterial equivalence is happening? (pp. 7-8).

Development of an expert model relied on four data sources: observation and informal interviews with Miss DeLay and her students at the Aspen Summer Music School and The Juilliard School; a structured interview with the instructor, guided by the NLP model; and content analysis of prior case studies, including Epstein (1987), Gholson (1993), and Tsung (1993) (Neill-Van Cura, 1995, p. 15). The completed model included a belief template, which was “a guide to the motivation which influenced the master teacher’s strategies, feelings, and behaviors” (p. 44). According to the researcher, Miss DeLay’s beliefs ultimately determined the success of her instruction (p. 44).

Neill-Van Cura (1995) deduced five criteria and supporting criterion equivalences (in parenthesis) representing the beliefs of the master teacher: (a) understanding the individual needs of students (knowing details of the students’ life and schedule, cultivating students’ self-confidence through respect, increasing student ease and achievement by setting well-defined goals, and helping them feel encouraged); (b) the technical aspects of playing the violin (developing expressive and technical control and

appearing comfortable while performing); (c) an acceptable sound (playing with good intonation and exploiting the full range of instrumental color); (d) playing the music expressively (intentional expressive ideas and playing securely from memory); and (e) presentation and placement of students (students who tap the teacher's knowledge of the profession) (pp. 44-45).

According to Neill-Van Cura (1995), Miss DeLay knew students had fulfilled these criteria when she saw positive student response to her directions, goals, and advice; when she and a student worked together to evaluate and solve the student's physical, psychological, and personal problems; and when she believed in and esteemed her students and they responded with growth and career success (pp. 46-47). The researcher also was interested in what having the criteria did for Miss DeLay. The criteria brought her a "happy life" and made her studio a joyful place which encouraged creative learning without fear of reprisal (p. 47).

A further component of the NLP model comprised the strategies Miss DeLay used in lessons. Each strategy contained "evidence of the criterial equivalence, operations and behavior used to get the criterial equivalence and emotions the master teacher felt when seeing the critical equivalence" (Neill-Van Cura, 1995, p. 47). The master teacher's operations included: smiles and warm conversations; record keeping; systematic teaching; reducing tasks to smaller parts; involving family members as a support group; career mentoring; assigning individualized practice plans; attention to posture, tension levels, bowing, fingerings, positions, ear-training, and memorization; and helping students detail the nature and momentum of each work. Miss DeLay's teaching behavior

included: constant eye contact and assessment; questioning and advising students; communicating technical and personal information; providing positive feedback and encouragement; fostering student independence and interpretive choice; strategic planning of lessons and practice procedures; positive and negative modeling, nonverbal communication, imagery, demonstration, laughter, smiles, and humor; tenacious focus on intonation and ear training; and formulaically guiding students' career presentation. In addition, Neill-Van Cura described Miss DeLay's ability to teach from the second position; that is, evaluating body factors and performance matters as if she were the student. This particular behavior allowed DeLay to understand, replicate, and remediate student issues at a very fine level (p. 55).

In sum, Neill-Van Cura (1995) described Miss DeLay's success in terms of her belief in the power of a happy learning environment and her ability to clearly communicate, develop detailed instruction plans, and teach in the second position (pp. 88-91). Further, Miss DeLay helped students master the basics of violin technique, expressive interpretation, ear training, memorization, and stage deportment by focusing her beliefs, behaviors, and strategies on outcome attainment. According to Neill-Van Cura, the NLP model of Miss DeLay's expertise is worthy of emulation. More specifically, the author recommended that all applied teachers develop the positivity; self-confidence; communication skills; diagnostic ability; and technical, acoustical, and performance career knowledge modeled by Miss DeLay (p. 104). For that reason, Neill-Van Cura thought applied teacher training programs should include studies of expert instructors to hasten expertise development in novices (p. 110).

The purpose of Neill-Van Cura's (1995) project was to develop a Neuro Linguistic Programming model of Miss DeLay's personal beliefs and emotions as they related to her violin teaching. Though the current study examines elements of vocal pedagogy, the practices Miss DeLay used with positive results help establish descriptions of applied expertise. Neill-Van Cura described not only Dorothy DeLay's studio rapport, but of particular interest to this project, her teaching behavior. These behaviors - eye contact, verbal and non-verbal communication, modeling, and use of studio space- have the potential to also be components of expert voice instruction.

Summary

Researchers have developed accounts of teacher expertise to serve as models of applied teaching practice and standards for evaluation of applied teaching. Duke and Simmons (2006a) described the nature of applied expertise by observing teaching elements which directly related to positive change in student performance (p. 10). They found 19 common elements in most observed lessons taught by three expert applied teachers (strings, piano, and oboe). Wexler (2009) found it difficult to generalize from Duke and Simmons's account of three exceptional—but atypical—teachers; however, he was interested in idea of commonality across applied teachers of different instruments. Wexler surveyed applied music faculty, concluding that there was evidence to suggest commonality across teachers of different instruments in terms of teaching strategies and goals, values, and expectations. Parkes and Wexler (2012) partially replicated Duke and Simmons' (2006a) study and reported some differences in common elements used by applied teachers of less-elite students and those described in the original project.

L'Hommedieu (1992) and Neill-Van Cura (1995) applied qualitative methodology, conducting case studies to portray master instrument teachers' behaviors and belief systems. L'Hommedieu (1992) explained master teacher effectiveness in terms of selecting able and learning style compatible students; subject matter expertise; intuitive management of the quality of instruction variables; and great consistency. Neill-Van Cura (1995) studied Dorothy DeLay, concluding that the master violin teacher focused on five criteria: individual student's needs, violin technique, sound, musical expression, and final career placement.

While each of the studies reviewed in this section offered their findings as models for emulation and for advancing applied teacher preparation, they also recognized a need for further research to assemble more precise understanding about what master instrument teachers actually do to improve students' performance. Interestingly, Wexler referenced Goffi's (1996) suggestion that instrumental teaching strategies and goals may be "more similar to each other than to vocal teaching goals" (2009, p. 10). As another aside, referencing Clemmons' (2007) study of rapport in vocal lessons, Wexler wondered whether vocal instructors may "have developed a less authoritarian approach" than instrument teachers (p. 142). These ideas may be important, yet the literature evaluating applied instruction has provided little information either supporting or repudiating the notions. The studies reviewed in this section focused only on applied instrument teachers. In the next section, I review literature pertaining to expert voice instruction.

Elements of Expertise in the Applied Voice Studio

Attempting to establish the basis for the current study, I found much literature offering prescriptive accounts of successful teaching and biographies of great voice instructors of past and present day (Brown, 1996; Bunch, 1982; Caruso & Tetrizzini, 1909; Christy, 1974; Coffin, 1980; Doscher, 1988; Garcia, 1894; Lehman, 1902; Marchesi, 1970; McKinney, 1994; McQuade, 2006; Miller, 1977, 1983; Reid, 1950; Vennard, 1967; Ware, 1998). While these writings serve as an important source of information about curriculum, repertoire, performance practice, or technique, I limited my literature review to research-based studies describing expert vocal pedagogy. As Duke (1999/2000) cautioned his readers, such studies have been intended to have a limited focus. Specifically, these four studies are limited to: nonverbal communication (Levasseur, 1994), rapport (Clemmons, 2007), methods of teaching resonance, breath management, and registration (DuFault, 2009), and philosophies and teaching strategies (Blades Zeller, 2003).

Non-verbal Communication

According to Levasseur (1994), although applied voice teachers were known to communicate both verbally and nonverbally, there had been no thorough investigation of the role of nonverbal behavior in voice lessons (p. 1). The author asserted that research in other disciplines indicated the importance of nonverbal communication in social relationships like those enacted in private voice lessons. Consequently, the purpose of Levasseur's study was to examine the use of nonverbal communication in studio voice instruction. Her project also addressed the need to help teachers become mindful and

more skilled in communicating nonverbally with their students. From Levasseur's purpose statement guiding questions for the study could be inferred:

1. How do teachers use nonverbal communication in the voice studio?
2. How does nonverbal communication affect voice students' learning? (p. 3)

Employing qualitative methods, Levasseur (1994) gathered data in three cycles, using multiple sources: student questionnaires; lesson observation field notes; and interviews with voice teachers and one psychologist/voice student (p. 56). In addition, Levasseur evaluated essay descriptions of significant learning interactions (Flanagan, 1954) (Levasseur, 1994, p. 56; see also Critical Incident Study, p. 178). Levasseur's questionnaire contained three open-ended questions that asked voice students to describe the ways nonverbal behavior affected their lesson, their learning, and their relationship with their teacher (p. 58). Students were also asked to indicate the most important types of nonverbal behavior from the following choices: "touch, facial expressions, eyes, posture, dress, space, duration of time spent in an activity (pace), and expressive movement" (p. 58). The results of questionnaire analysis were intended to acquaint the researcher with students' views of nonverbal communication (p. 65).

Levasseur (1994) summarized student questionnaire responses into eleven statements about the effect of nonverbal communication on learning and studio relationships in voice lessons (p. 99):

1. Facial expressions send strong messages, both positive and negative, to students.
2. Positive nonverbal expressions show interest in the student and allow the student to accept criticism and take risks necessary for learning.

3. Trust and closeness are facilitated by nonverbal communication, for example, appropriate use of touch.
4. Body language is intimate in that it is used idiosyncratically in relationships in context.
5. Body language shows approval or disapproval.
6. Nonverbal communication sets the tone and pace of the lesson, both “affectively” and “cognitively.”
7. The nonverbal communication of teachers helps students determine if the teacher is believable or not or if the teacher is listening to the student with respect.
8. Teachers use nonverbal communication sensitively when they pace their teaching to the needs and abilities of the student.
9. Students are affected by the physical health of teachers.
10. Teachers use nonverbal communication to create an unsung “code” that allows lessons to proceed without many interruptions for explanation.
11. Teachers use nonverbal communication to illustrate conceptual and technical ideas. This includes imagery, props or pictures. (pp. 99-100)

From her field notes, Levasseur (1994) surmised that, in lessons, instructors verbalized and gestured more than students; the students were more passive in lessons. Additionally, the author surmised that students were at ease in the lesson situation (pp. 100- 101). Prevalent gestures included “touching to indicate areas which need attention, forward lean to indicate interest, and head nodding to show approval” (p. 101). Other gestures included pointing, smiling, and foot stomping to indicate accuracy or success, furrowed eyebrows to indicate troubling responses, or raised eyebrows to indicate listening. Levasseur observed all teachers using imitation, modeling, verbal communication, and accompanying energetic gestures-often with the hands-to provide

feedback (pp. 101-102). Teachers also used nonverbal behavior to create “safe conditions” (p. 102) for learning to take place, including unhurried lesson pacing, listening intently, maintaining eye contact, avoiding crowding the student, yet allowing suitable displays of affection. According to Levasseur (1994), rapport was distinguished by such gestures as mutual eye contact between teacher and student, smiling and laughing, head nodding, and student-centered pacing with few interruptions (p. 102-103).

Summarizing the interviews, Levasseur (1994) further indicated the importance of nonverbal behavior in creating comfortable learning environments in which risk-taking was encouraged (p. 103). The author reported that voice teachers develop distinctly personal gestures to clarify concepts and convey information (p. 104).

Based on her findings, Levasseur (1994) made general recommendations for vocal teaching: First, nonverbal communication is dynamic and interacts with verbal communication; thus, teachers must take in and understand the entire communicative event. Second, if teacher training in nonverbal communication is to occur, it should be conducted with the goal of bringing subconscious behaviors into conscious thought and awareness. Third, teachers should use nonverbal communication strategically and predictably to be effective. Fourth, student responses to nonverbal communication will vary; therefore, teaching success depends on adjustment of nonverbal communication to each student. Finally, skills of rapport and nonverbal communication are essentially inseparable (p. 128).

Rapport

After Abeles (1975) and others (Abeles, Goffi, & Levasseur, 1992; Chang, 2001;

Goffi, 1996) discovered the importance of rapport between applied lesson teachers and their students, Clemmons (2007) saw a need to more clearly define and describe the components of rapport in applied voice instruction (p. 13). The purpose of her project was to investigate rapport in the lessons of four National Association of Teachers of Singing (NATS) Master Teachers. Four questions guided Clemmons' study:

1. What teaching techniques or strategies for rapport are similar across the teaching of four master teachers?
2. What techniques or strategies for rapport are teacher-specific?
3. What personal techniques or strategies for rapport are student-specific?
4. What do students perceive is the impact of rapport? (p. 14)

Clemmons' conceptual framework referenced theories of Self-Determination (Deci & Ryan, 1985), scaffolding (Woods, Bruner & Ross, 1976), authenticity (Cranton, 2004), and primitive emotional contagion (Halverson, 2004). Her aim was to discover how relatedness, strategies for scaffolding, authenticity, and emotional contagion intersect with rapport and promote student success (2007, p. 52).

Self-Determination Theory is a theory of motivation. Although many motivation theories are concerned with differences between intrinsic and extrinsic motivation, Deci and Ryan (1985) theorized that motivation in educational contexts was mainly extrinsic. Extrinsic motivation, however, could be externally regulated or internally regulated. When individuals undertake behaviors that stem from internally regulated extrinsic motivation in the voice studio, they typically have adopted their teacher's values. Thus, "The primary reason people are likely to be willing to do the behaviors is that [the behaviors] are valued by significant others to whom they feel (or would like to feel)

connected" (p. 64).

Scaffolding theory (Woods, Bruner & Ross, 1976) was adapted from Vygotsky's Proximal Learning theory. Clemmons (2007) referred to six scaffolding strategies: (a) recruitment to interest the learner; (b) reduction of degrees of freedom to simplify the task; (c) direction maintenance to keep moving the student toward the goal; (d) marking critical features of the task; and (e) demonstration or modeling (Woods, Bruner & Ross, 1976, p. 98). Clemmons (2007) also considered the characteristics of authenticity (Cranton, 2004) in teachers: self-awareness, awareness of others, relationships with learners, awareness of context, and a critical approach to practice (pp. 11-12). She emphasized that the quality of teachers' relationships begins with self-understanding. Finally, Clemmons applied Halverson's (2004) *primitive emotional contagion theory*, which suggests that a leader's emotional state shapes followers' emotions and behaviors, often subconsciously.

In order to examine rapport in terms of the four theories, Clemmons (2007) created portraits (Lawrence-Lightfoot & Davis, 1997) of four prominent National Association of Teachers of Singing (NATS) Master Teachers in the Summer Intern Program. Pseudonyms were assigned to each of the voice teachers. Clemmons' data comprised field notes, transcribed interviews, and survey of NATS Master Teachers for their thoughts about studio rapport (p. 56).

First, Clemmons described Clara Thornhill as intentionally empowering students to succeed, building studio relationships founded on trust and respect, with clear goals and boundaries. She mentioned Thornhill's ability to focus attention on each individual

singer (pp. 102-103). Next, Clemmons portrayed Mac Greene as caring, energetic, attentive to students, and highly detail oriented. He was a teacher who motivated his students to meet high standards of excellence through loving respect and an infectious love of singing (pp. 130-131). Clemmons pictured Annie Laurel as warm, articulate, well-prepared, frank, and demanding (p. 163). Laurel held students to high standards, and although she viewed the teacher-student relationship as a partnership, she was the “senior partner.” (pp. 163-164). Finally, Clemmons described Dr. James St. John as a powerful personality, intense, energetic, yet respectful and loving towards his students (pp. 194-195). He was interested in attending to students as “whole persons,” focusing his considerable analytical and auditory abilities on each individual, and including all studio members in family-style lesson observations (p. 195).

As a complementary data source, Clemmons (2007) surveyed all 36 NATS Master Teachers, asking nine open-ended questions. Twelve Master Teachers completed the questionnaire, resulting in a 33% response rate (p. 196). The questions asked teachers to describe: (a) specific strategies for rapport development; (b) what made rapport difficult to establish; (c) what students valued in their relationships with a voice teacher; (d) their relationship with students; (e) their perceptions of whether their students felt the teacher’s belief in them; and (f) whether their relationship with students affected student motivation (pp. 197-205). Additional questions were: (a) whether and how a teacher perceived as “tough” might also have good studio rapport; (b) whether teachers experienced difficulty balancing students’ interest with students’ fears; and (c) whether the teacher’s belief in a student empowers student success (pp. 207-209). Clemmons’

summary of responses to the questionnaire indicated the importance of good listening, seeing students as more than singers, working in partnership with students, expressing clear goals, basing studio rapport on teacher expertise, and the need to build respect and trust in an atmosphere of honesty and kindness (pp. 211-212).

Clemmons' (2007) cross case analysis addressed the four research questions in turn. To address the first question, Clemmons reported four distinct observations related to similarity of rapport among the teachers:

1. Expertise and self-confidence on the part of the teacher is foundational to rapport.
2. A feeling of safety and mutual respect within the studio gives the student a feeling of security and trust that is necessary for successful relationships.
3. Clear expectations and high standards linked with distinct relational boundaries help students feel and be successful.
4. An enthusiastic, affirmative teaching style infects students with enthusiasm and self-confidence. (p. 218)

The second question of this study concerned the teachers' unique techniques for building rapport. Clemmons (2007) found that unique teaching techniques existed, although they did not appear to make a difference to the quality of rapport. The differences among teachers included: (a) the titles and names by which teachers asked to be addressed; (b) physical stance during the lesson; (c) studio environment; (d) the style of critique; and (e) the amount and nature of time teachers spent with students. Thornhill and Green asked to be addressed formally, while St. John and Laurel did not. Thornhill sat during lessons, Laurel stood, Greene constantly moved about, and St. John alternated between standing and sitting (p. 237). The custom in St John's studio for students to

observe one another's lessons stood out as an important difference in studio environment. The students contended that this created a family atmosphere, and that such camaraderie was motivating. In terms of critique, Greene freely offered praise while Thornhill and Laurel praised students less often. St. John's style of critique, however, was described as abrasive, and his students sometimes described their relationship with him as "frustrating." (pp. 239-240). St. John also stood out in terms of the time he spent with students. There was a studio dinner each week, and they frequently had lunches together after lessons. Although the other teachers admitted to having a holiday party or an occasional meal, it was not a regular occurrence. Clemmons reiterated that these teacher-specific strategies did not adversely affect studio rapport or student success because "they were authentic choices, and the teachers were comfortable with them" (p. 241).

Regarding rapport, a fundamental theme emerging from the data was the teacher's responsibility to initiate the interpersonal relationship and the student's responsibility to respond. This theme was underlying as Clemmons (2007) observed that rapport was developed when teacher and student brought equivalent energy to the lesson. Second, the student's respect for the teacher served as a foundation of rapport (p. 245). Clemmons indicated that students who were "attentive . . . respectful, trusting and hard-working tend[ed] to be the most successful and also have the best rapport" (p. 247). Finally, Clemmons (2007) addressed the fourth research question about benefits to students using only student interview data. Responses related to her fourth research question fell into five "primary categories: (a) feeling safe, (b) feeling cared for, (c) being empowered, (d) being motivated by the relationship itself, and (e) feeling valued and valuable" (p. 247).

Clemmons (2007) discussed findings in relationship to her conceptual framework and previous research on applied music teaching. First, Clemmons' findings aligned with Neill-Van Cura's (1995) description of Dorothy DeLay's juxtaposed high standards and genuine care for violin students. Second, Clemmons referred to a study wherein Abeles (1975) found rapport to be the most important aspect of applied lesson effectiveness. From that study, Abeles created a tool to assess rapport. Among the qualities assessed with the tool were: instilling confidence, inspiration, encouragement of student self-expression, bringing out the best in students, avoiding over-bearance, interest in the student, and patience (Clemmons, 2007, p. 255). The master teachers in Clemmons's study demonstrated all of these qualities. Third, Clemmons suggested that all five of Cranton's (2004) descriptors of authenticity, including self-awareness, awareness of others, defined relationships, contextual awareness, and critical reflection (pp. 11-12) fit the four master teachers (Clemmons, 2007, p. 261). Clemmons findings about feelings of safety in the studio environment again aligned with Dorothy DeLay's happy but exacting pedagogy (Neill-Van Cura, 1995) and also with Blades Zeller's (2003) portrayal of expert voice studios as "nurturing zones" which were "crucial to the self-discovery process" (p. 142; Clemmons, 2007, p. 266).

The author suggested that rapport might be better understood in relationship to Halverson's (2004) *primitive emotional contagion theory*. Clemmons's (2007) findings indicated that emotional contagion took place in all four studios, where the master teacher's energy infected their students in a positive way (p. 270). Finally, Clemmons (2007) reflected on how rapport motivated students in terms of Self-determination

Theory and specifically to Deci and Ryan's (1985) three basic psychological needs of relatedness to other people, autonomy, and competence (Clemmons, 2007, p. 270). In terms of relatedness, the author suggested that feeling respected, cared for, and connected to the teacher motivated the vocal students to "want to be more, to do more" (p. 271). The students in Clemmons's study experienced autonomy when they chose repertoire or which competitions to enter (p. 272). In terms of competence, Clemmons surmised that the four expert teachers were able to "balance challenge with success and therefore create desire and motivation within the student" (p. 274).

Focused Study of Registration, Resonance, and Breath Management

According to Dufault (2008), voice teachers have found their field's inexact and inconstant terminology challenging, a problem compounded by a lack of shared technical and pedagogical information. Furthermore, the author asserted that, in vocal pedagogy research, historical studies tended to be unclear, contemporary studies often presented personal opinions, and scientific research contained complicated terminology.

Consequently, voice teachers lacked guiding principles for determining the best pedagogical standards from the available research (p. 3). Dufault reasoned that voice teachers whose students consistently won competitions and achieved performance careers could be identified, and these exemplary teachers could serve as pedagogical models (p. 3). Therefore, the purpose of Dufault's study was "to determine how three exemplary voice instructors address[ed] specific vocal pedagogy with their students" (p. 15). Three questions guided her study:

1. How do three exemplary voice teachers address the following issues while teaching voice lessons: Technique, Artistry, and Musicianship?

2. Do they adjust their teaching style for the needs of each individual? If they do, how are the adjustments made?
3. What are the common threads of advice that exemplary voice teachers have to share with beginning voice teachers and aspiring singers? (p. 15)

To identify expert pedagogues, Dufault (2008) contacted winners of the Metropolitan Opera National Council Auditions for the names of their voice teachers. These contacts produced a list of 119 voice teachers, from which Dufault chose eight voice teachers, each of whom had taught at least three winners. Three teachers of multiple winners—David Adams (tenor), Patricia Misslin (soprano), and Stephen King (baritone)—agreed to participate in the study (p. 54). Data were generated from instructor interviews, interviews with five of each teacher's students, and video-recorded observations of each expert pedagogue teaching five lessons. Dufault coded lesson data first with a system adapted from Koob (1986), originally designed for violin lesson observation. The research and interview questions were also used to create codes, which included:

Advice for new teachers, advice for students, best qualities, breath management, characterization, common vocal issues, dynamics, favorite singers, important things learned, lesson description, mentors, modeling, musical phrase/legato, new students, technique tension, performance difficulties, physical gestures, pitch, poetry/text, professional career, prospective students, registration, resonance, and rhythm. (p. 67)

Dufault presented her findings in three individual case studies, stating, "It needs to be recognized that these teachers vary greatly. . . . They have found what works for them and their students" (p. 156). She then addressed each research question in turn, comparing the three cases.

Dufault (2008) first addressed three areas of technique that Blades Zeller (1993)

found controversial: breath management, resonance, and registration. The author concluded that breathing should be tension-free and unaffected; therefore, over inhalation should be avoided because it produced tension. Similarly, breath should not be held, but should immediately be released utilized in a narrow, moving stream. Abdominal muscles also should not be rigid. Finally, the singer's energy is linked to continuous air movement (pp. 157-158).

In regard to resonance, Dufault (2008) concluded that the teachers generally used imagery to help students achieve a clear, natural and focused tone. They selected vowels that encouraged free vocal cord vibration and air flow, and they strove with each student to connect vowels, free of tongue or jaw interference (p. 160).

About registration, Dufault (2008) concluded that all singers experience register changes; therefore, teachers should have accurate knowledge about registration. One indicator of solid vocal technique is the singer's ability to shift registers. Dufault advised all voice teachers to emulate Adams, Misslin, and King by gaining knowledge about registration and formulating an effective personal approach by experimenting with a range of methods (p. 162).

Continuing to address her first research question, Dufault (2008) also considered how expert teachers addressed issues of artistry and musicianship in lessons. The teachers expressed their views about the attributes required for success as a professional singer. These included: intellect, ability to learn languages, a compelling and engaging sound, musicality, a natural feel for rhythm, persistence, and commitment (p. 162). Additionally, the pedagogues expressed that, in light of dwindling performance

opportunities, singers needed to be physically attractive, politically aware, accepting of criticism, and lucky (p. 163). While all three teachers held high standards for musicianship, Dufault found that Misslin's pedagogy concentrated on musicianship, whereas Adams and King addressed musicality after their students' attained technical proficiency. All three teachers directed attention to rhythmic pulse and forward motion, dynamics, and legato phrasing.

Dufault (2008) briefly discussed the findings for her second and third research questions. In terms of individualized vocal instruction, all three participants displayed exceptional diagnostic skills. They discerned students' immediate needs and were able to adjust their teaching to ensure student success (p. 166). Furthermore, they communicated nonverbally, including maintaining eye contact with students, laughing, and sustaining an open posture (p. 168). Dufault compiled the instructors' advice for fellow voice teachers into a list that included: reading and conference attendance, gaining familiarity with different genres and levels of repertoire, determining students' voice type judiciously, being flexible and patient, listening carefully, and attending to the middle voice first (pp. 168-170). Dufault found dissimilarity in the teachers audition processes. Adams and King both provided auditioning students with a complete assessment of their vocal strengths and weaknesses. In contrast, Misslin avoided voicing negative critiques in the audition process (p. 170). Finally, Dufault presented the teachers' advice for singers: select voice teachers carefully, audition only when ready, and make constructive use of criticism (pp. 171-172). In spite of their varied methods, Dufault (2008) concluded that Adams, King, and Misslin were pedagogically similar in three areas: (a) developing

strong relationships with their students, evidenced by their students' confidence and commitment; (b) adapting their teaching to the needs of individual singers; and (c) evidencing high levels of intelligence in multiple areas (pp. 174-175).

Prominent Voice Teachers' Descriptions of Applied Studio Teaching

Blades Zeller's (2003) book, *A Spectrum of Voices, Prominent American Voice Teachers Discuss the Teaching of Singing*, expanded on her 1993 dissertation. The international success of American-trained opera singers and status of American voice teachers prompted Blades Zeller to wonder how professional American vocalists were taught and, more specifically, how elite American vocal pedagogues taught (2003, p. vii). The purpose of Blades Zeller's project was to interview an extensive group of expert voice teachers in order to assemble a clear presentation of their thoughts and studio strategies (p. xii).

Blades Zeller (2003) drew on Patton (1987) to construct and order interview questions optimizing recall and response accuracy (p. x). The first eight questions were ones that Blades Zeller had used for her dissertation research:

1. Describe your approach to teaching the following concepts of vocal technique: (a.) Posture; (b.) Breathing and breath support (appoggio); (c.) Tonal resonance (i.e., voice "placement" or "focus"); (d.) Diction; (e.) Registration; (f.) Unification (i.e., evenness of voice throughout the range); (g.) Tension—eliminating tension problems
2. Do you make use of certain images that help students grasp these concepts? If so, what are they? How do you explain them? When and how did you first become acquainted with these images?
3. With whom did you study? What aspects of their teaching(s) have you incorporated into your own approach?
4. What kinds of auxiliary training do you recommend to your students?

5. Whose work do you admire?
6. How do you stay current in the field?
7. What is your opinion of today's professional career-track singer? Do you feel they are in general of a high caliber in vocal performance? What are some of the attributes you feel contribute to the success of a young professional singer?
8. In your opinion, do you think there is an "American sound" or "vocal stamp," characteristic of American-trained singers? If so, how would you describe it? Is it indicative of an "American school" of singing? (pp. x-xi)

A second set of interview questions were designed to offer a fuller view of voice teaching:

1. (a) How do you approach the first lesson with a new student? (b) How do you structure a typical lesson? (c) How do you guide a student's practice—what advice do you give?
2. When you hear a student audition, what do you look and listen for? What is it that for you sets that student apart?
3. What are your personal goals and objectives in your own teaching? What are your priorities?
4. How do you nurture and guide the student's "self-discovery"?
5. In his book *The Performer Prepares*, Robert Caldwell writes: Performance work—the time spent to craft a rich inner experience to take into the performance—is essential because a correct interpretation played with correct technique is simply not enough to build a powerful performance . . . the performer must build compelling inner experiences before-hand and take them into performance. How do you strive to help the student find that complete union of music and inner experience that results in a powerful performance?
6. What attributes do you feel typify the "outstanding" or "exemplary" vocal pedagogue? (p. xii)

Selecting expert pedagogues, Blades Zeller (2003) sought nominations from voice teachers as well as from officers of the National Association of Teachers of Singing

(NATS). Experts selected for phone interviews included: Marcia Baldwin, Edward Baird, Oren Brown, Lindsey Christiansen, Jack Coldiron, Barbara Doscher, Shirlee Emmons, Leslie Guinn, Helen Hodam, Cynthia Hoffman, Barbara Honn, Marvin Keenze, Bruce Lunkley, William McIver, Richard Miller, Dale Moore, Laura Brooks Rice, Helen Swank, Joan Wall, and Carol Webber. The author noted that the list was not meant to be comprehensive of all expert pedagogues.

Blades Zeller (2003) organized the volume in three sections: 1) “Vocal Concepts,” 2) “Training Singers: Practical, Artistic, and Professional Development,” and 3) “Teachers’ Professional Training” (p. xv). Material covered in the second section about professional singers’ attributes and the idea of an American school of voice, were not relevant to the present study. In the first section, “Vocal Concepts,” Blades Zeller (2003) began by describing the participants’ approaches to posture. Most teachers considered posture work foundational to other areas of voice work, especially to good breath management (p. 1). Strategies for teaching posture included: stretching; supine or standing body alignment exercises; use of imagery such as a diving board, peace at the core, or tight rope walker; and having students train in outside activities, such as Aikido, Tai Chi, Feldenkrais, yoga, dance, and Alexander Technique (pp. 6-9). Blades Zeller found an unexpected level of instructor consensus on the topic of breathing (p. 9). The teachers agreed on the importance of good posture for breath support; the idea of breath as energy for sound production; the physical functions of diaphragmatic contraction and rib cage expansion in making a vacuum for airflow; and the need to balance breath flow and support, regulate breath to phrase length, and integrate air renewal into sound release

(pp. 9-10). Some teachers did not favor the term “breath support,” instead referencing “breath balance” (p. 19), “vibration” (p. 22), “breath energy,” and “flow phonation” (p. 28). Strategies for teaching breath coordination and onset included: staccato and sustained exercises on vowels, sibilants, and fricatives; sighs, lip trills, and panting; various body positions (bending, slouching, and sitting); use of balance boards and elastic bands; imagery, such as balloon, belt, breath as color, warmth, or fragrance; and providing information and reference materials about anatomy and physiology of breathing (pp. 20-29).

In terms of vocal tone, Blades Zeller reported six areas of teacher consensus:

1. Vocal sound consists of two qualities:
 - a. Projection (also called “ring” or “ping”)
 - b. Resonance (amplification, warmth, color)
2. Tone is sensation based
3. Tonal “core” (sometimes called “Focus” gives uniformity of sound and projection throughout the range.
4. Tone results from good coordination of breath management, vibration, and resonance. Breath is utilized in tone, and resonance responds to a balance of breath and phonation.
5. Beautiful tone results from the proper adjustment between the vibrators (sound source, i.e., vocal folds) and vowels (the resonance adjustment).
6. Vocal pedagogues teach to certain tonal preferences. (p. 29)

The pedagogues described various strategies for teaching tone: understanding the function of resonators; working for freedom of jaw and tongue; connecting tone to breath energy; using nasal consonants ([n], [ŋ], [m]) pure vowels, the use of speech and non-singing sounds; and helping students connect sensation to good tone quality (pp. 38-41).

The concept of registration drew agreement about the connection between resonance and registration, and the need to develop freedom and smooth coordination during register changes, although teachers held different opinions about the number of registers that exist and terminologies used to identify them (Blades Zeller, 2003, p. 41-48). Strategies for teaching registration included: initial strengthening of the middle voice; working up and down with scales and arpeggios, using pure vowels as a touchstone; modifying vowels at transition points; balancing resonance and breath pressure; and *messa di voce* exercises (pp. 48-56). According to Blades Zeller, developing evenness throughout the range was a concept difficult to separate from registration (p. 56). Teachers observed that vocal evenness develops from attaining balance in resonance, breath pressure, and laryngeal positioning, and involves a “mix” all through the range (p. 56). Most exercises that the pedagogues used to teach evenness of range were similar to those used for registration (pp. 60-62).

Blades Zeller (2003) summarized from the pedagogues’ remarks that diction was an important component of vocal technique, and it was more readily described than evenness, resonance and registration (p. 62). From the teachers’ discussions, the author reported five general notions about diction:

1. Good diction should not compromise the voice, but is the result of freedom within the instrument.
2. Good diction results from the balance of certain critical factors, including distinguishable vowels; clear initial and ending consonants; firm, flexible articulation; and relaxed tongue muscles.
3. Poor diction can be a diagnostic tool: it often indicates problems elsewhere in the instrument.

4. Diction and articulation result from acoustical factors, which rely on proper shaping in the resonator tract.
5. Diction encompasses flow of language and the idiomatic precision of each language as it is sung. (p. 62)

Describing their strategies for teaching diction, several teachers stressed the need to develop a low and uninvolved laryngeal position and an active yet relaxed tip of the tongue. Other strategies included: work on isolated vowels and consonants and consonant and vowel combinations; working tongue and lip action without jaw involvement; learning to use the International Phonetic Alphabet (IPA); and rhythmic chanting of the text (pp. 69-72).

While Blades Zeller (2003) did not specifically question the teachers about vowel uniformity, the topic often surfaced in their remarks about other vocal concepts (p. 72).

From these comments, the author drew five conclusions about vowels:

1. Finding ideal vowel formation gives projection and ease to the instrument.
2. Because of acoustical considerations, vowels must adjust to increases in pitch. There is an ideal resonance adjustment for every pitch and every vowel; tonal sensations respond to these changes.
3. Sung vowels require treatment different than spoken vowels.
4. Beautiful vowels depend on a number of factors and will have certain characteristics.
5. Vowels are available to expressive impulses and expressive choices. (p. 72)

Strategies for teaching vowels were not specifically described.

Because tension adversely affects vocal technique, teachers devote a considerable amount of lesson time to relaxation work (Blades Zeller, 2003, p. 77). Areas most prone

to tension included: lips, tongue, throat, jaw, neck, shoulders, lower back, abdominal muscles, and hands (p. 77). The instructors described various strategies to release tension: correcting students' posture and breathing; moving the affected area; having students check tension by looking in mirrors; self-massage while singing; working with dentists and body movement trainers (e.g., Aikido, Pilates, Tai Chi, yoga, and Feldenkrais); cueing relaxation with words and imagery ("peace at the core," diving, and juggling); using diction exercises; and distracting students from patterns of tension with extraneous physical activities (pp. 77-86).

At the conclusion of the first section on Vocal Concepts, Blades Zeller (2003) was interested in whether teachers used imagery at a basic, technical level of voice instruction. Most of her participants used imagery, although a few instructors considered imagery inappropriate for teaching technical issues, and still others sought a balance between imagery and physiological explanation (pp. 86-93). Examples of imagery included: the idea of release, swimmer's breath, colors, shapes, smoke stack, Slinky, postural nobility, the voice as velvet, bubbles in champagne, electrical cord, smelling something pleasant, tastes, stereo tuning, and imagined vocal placements (pp. 94-99).

In the second section of her book, "Training Singers: Practical, Artistic, and Professional Development," Blades Zeller (2003) considered the teachers' audition standards, which included:

1. Vocal potential
2. Quality and core of the sound
3. Musical sensitivity

4. Expressiveness (also called “the need to communicate/desire to express”)
5. Technical proficiency
6. Performance personality and poise
7. Vocal and performance strengths and weaknesses. (p. 102)

Some teachers mentioned a need to modify audition criteria for the type of audition, the level of competition, or the nature of the roles and rewards. They also commented on the challenges of assessing the potential of younger students.

Next, Blades Zeller (2003) described how her participants approached a first lesson and a typical lesson, drawing up composite descriptions of each. The first lesson included a period of questions to get acquainted, put the student at ease, and consider the student’s goals for voice lessons (p. 110). The student would then sing some exercises so the teacher could assess voice qualities, and the lesson might end with the teacher assigning vocal repertoire and exercises for regular practice. A typical lesson generally included a review of the week’s progress and problems, technical exercises, and a lengthy period of work on repertoire (p. 111). Blades Zeller next explored the topic of practice, asking the teachers “How do you guide a student’s practice?” (p. 127). Their responses indicated the importance of timely and focused practice. The instructors agreed on the importance of scheduling short segments of “vocal work and silent music study” spread throughout each day, and some demonstrated “how and what to practice” (p. 127).

Regarding expressive artistry, the pedagogues agreed that a singer must be able to communicate and balance the expression of both poetry and music; maintain a love of singing supported by drive and commitment; and free their creative powers of invention

to enliven their musical and dramatic performance (p. 137). The author next asked the instructors “How do you nurture and guide the students’ ‘self-discovery’” (p. 139). Responses were varied, but recurring ideas included: communicating respect for each individual, providing supportive feedback, helping students develop reliable technique, allowing students to make mistakes while developing their unique voice, and fostering a comfortable climate where students are willing to take risks (pp. 139-146). Referencing Caldwell (1990), Blades Zeller then asked the instructors “How do you strive to help the student find that complete union of music and inner experience that results in a powerful performance?” (2003, p. 146). In response, teachers described a need to engage students’ creative imagination with dramatic and reflective activities; encourage concert and gallery attendance, and develop deep understanding of song texts and the composers’ and poets’ intentions (pp. 146-157). In addition, some teachers referenced the importance of developing solid vocal technique as a precursor to free, uninhibited performance artistry (pp. 150-151). The author’s next question asked teachers to describe the “auxiliary training” they endorsed (p. 157). The instructors frequently recommended: training in dance and movement, Feldenkrais, Alexander Technique, acting, piano, sight reading, and emersion in performing and visual arts, languages, and literature (pp. 157-158). The remainder of Blades Zeller’s second section dealt with: attributes needed for singing career success (p. 165), opinions on “today’s professional ‘career-track’ singers” (p. 174), and whether there is an “‘American sound’ or ‘vocal stamp’ characteristic of American-trained singers” (p. 184) - information which does not directly relate to this study.

Blades Zeller’s (2003) book culminated with a section devoted to expert voice

teacher training and professional development. Here, the author was concerned with creating a picture of expertise as a model for “development in the field of vocal pedagogy” (p. 195). Asked to describe their own training, most of the instructors had been taught by American voice teachers in schools, colleges, conservatories, and private studios (p. 197). Several had trained under luminaries of voice (e.g., Berton Coffin, Cornelius Reid, Margaret Harshaw, and William Vennard) and honed their skills as professional singers and teachers. All of the voice teachers worked to stay current in their discipline by reading journals and scientific or pedagogical texts, active membership in professional organizations, research, and by performing (p. 207). Blades Zeller also reported that these expert teachers all possessed and communicated well-defined goals and standards. These included: encouraging student independence, developing healthy, sustainable vocal technique, inspiring confidence, imparting excellent language skills, assigning appropriate and varied repertoire, and teaching with honesty, clarity, and flexibility, (p. 212).

As a final point, Blades Zeller (2003) asked teachers to describe the attributes of an excellent voice instructor (p. 219). Their responses included: excellent listening skills, aptitude for observing and diagnosing technical issues, knowledge of anatomy and physiology, commitment to communicating clear goals and high performance standards, facility with languages, ability to help students develop a personal interpretation of text and music, genuine interest in improving teaching, creativity, flexibility, perseverance, honesty, and integrity (pp. 219-221).

Summary

Research describing elements of expert voice instruction are somewhat rare. Levasseur's (1994) study was a pioneering investigation into the affective and cognitive use of nonverbal behavior in voice studios. The author's findings, particularly those drawn from her field notes, were referenced in several later studies of studio music instruction (Clemmons, 2007; Dufault, 2008; Wang, 2000). These findings imply that non-verbal, as well as verbal teaching strategies may have an influence on proximal student learning. In turn, Clemmons suggested that in the college applied studio context, rapport must be present for voice lessons to be successful. She carefully detailed the strategies of establishing rapport, as well as the impact of rapport on college voice students, suggesting that rapport founded on teacher expertise, enthusiasm, clear expectations, and high standards generates student trust and self-confidence for learning success. As one of very few studies of skilled vocal instructors, Dufault's (2008) project described three expert teachers' approaches to registration, resonance, and breath management. Expert knowledge of voice was evidenced through diagnostic skill, imagery, clear verbal and nonverbal communication, and levity. A fundamental aim of Blades Zeller's research was to determine some level of agreement among prominent American voice teachers regarding their instructional strategies. Blades Zeller's research offers greater understanding about exceptional vocal pedagogues, characterizing their teaching strategies in clear and applicable terms. A next logical step after Blades Zeller (2003) would be to observe common elements in the lessons of expert voice instructors, with a view toward considering the interactivity of those elements.

Chapter Summary

Researchers have recognized the centrality of applied lessons in music education and begun addressing a lack of understanding about best practice in studio pedagogy. Within this literature, a few studies stand out, where researchers have sought elements of applied pedagogy that improve student performance in the context of a single lesson (Duke & Simmons, 2006a; Parkes & Wexler, 2012). Results of these projects suggest that many common elements can be found when pedagogues are expert and students have been selected for elite institutions; however, such common elements are not always found when students are at lesser stages of technical development (Parkes & Wexler, 2012). Although Blades Zeller (2003) sought commonalities in teaching across expert voice instructors, she did not observe the instructors' teaching; neither did she relate the commonalities of voice teaching to Duke and Simmons (2006) findings. This represents a gap in the literature that I aim to fill with the present study.

CHAPTER THREE: METHODS

The purpose of this study was to characterize expert voice teaching while evaluating the generalizability of Duke and Simmons' (2006a) 19 elements of expertise to applied voice instruction. The following overarching question guided the study:

How can expert voice teaching be characterized?

More specifically, using Duke and Simmons' (2006a) study of instrumental music teaching expertise as a point of departure, I wanted to understand:

To what extent does voice teaching observed in the present study align with Duke and Simmons' (2006a) 19 Common Elements of Expertise ?

My research was motivated by an interest in Duke and Simmons' (2006a) 19 Common Elements of Expertise. Noting the absence of voice teachers in their study, I wanted to discover the extent to which such elements were also common among expert vocal instructors. To that end, I observed the lessons of three voice teachers, identified rehearsal frames (Duke 1999/2000; 2008), transcribed behavior-attributes within each frame, assessed alignment with Duke and Simmons' results and commonality across studios, and developed descriptions for new common elements. This chapter describes my study methodology in the following sections: overview and rationale of research design, researcher positionality, participants, data collection, data analysis, and trustworthiness. Boston University Institutional Review Board approved the protocols in this study as ensuring ethical treatment of human subjects.

Overview of Research Design

A collective case study design was apt for this project, permitting me to search for attributes and behaviors common to the instruction of three expert voice teachers.

According to Stake (1995), case study design allows researchers to gain understanding about complex relationships as they exist in natural settings (p. 37). Rather than detailing each voice teacher as a case, my “bounded case” (p. 41) was expertise as informed by all three instructors and connected to my research questions (p. 77).

Researcher Positionality

My personal interest and background in singing and in vocal pedagogy influenced my position towards this study’s topic area and participants. First, my background and experience allowed me to notice that Duke and Simmons’ (2006a) project lacked voice teacher participants, and allowed me to raise questions about their findings. Thus, my background factored into the formulation of this study’s research purpose and questions. My familiarity with the discipline was a positive factor in securing participant recommendations and in evaluating the professional accomplishments of nominated voice teachers. As an experienced “connoisseur” (Eisner, 1985, p. 219), I was qualified to recognize students’ achievement of proximal goals and describe related teaching behaviors. However, because I am a voice teacher, my positionality towards this study’s instructors could not be completely neutral. In an effort to create some critical distance, I chose voice teacher participants with whom I had never worked or supervised, and I had no prior relationship with any of the voice students I observed in lessons. I took care to maintain critical reflection in terms of my own assumptions, worldview, and past

experiences (Merriam, 2009, p. 219), especially those involving vocal and instrumental teachers. One strategy I used to maintain critical reflection was regular debriefing sessions (Phillips, 2008, p. 88), discussing my analysis and interpretations with my dissertation adviser.

Identification of Participants

I chose to include three participant instructors, the same number observed by Duke and Simmons (2006a) and other follow-up studies, such as Parkes and Wexler (2012). Though singing instruction is carried out in various genres of song literature and in accordance with different schools of vocal performance (Miller, 1996), I elected to focus on experts in *Bel Canto* technique. *Bel Canto*, or “beautiful singing,” denotes a tradition of vocal production originating in the golden age of opera, representing classically trained voices (Dufault, 2008). My criteria to identify voice teacher expertise were used previously in other studies of applied music teaching researchers (Blades Zeller, 2003; Clemmons, 2007; Dufault, 2008; L’Hommedieu, 1992). These included: (a) colleague endorsement, (b) longevity in voice teaching greater than five years, and (c) professional accomplishment. Such criteria were reasonable in light of Berliner’s theorization on the expert pedagogue. First, Berliner (1986) claimed that reputation “may be taken as an indicator” of expertise, despite “faults inherent in reputational measures” (p. 8). Furthermore, Berliner (1988) reasoned that “the expert stage of pedagogical development” is entered by a small rank of teachers in “around the fifth year of teaching” (p. 2). For Berliner (1986, 1988) experience played a role in expertise, particularly in expert teachers’ capacities to automate routines, and make inferences about student’

behavior and cognition, especially their misunderstandings.

I contacted applied voice faculty by email to draw nominations of expert vocal pedagogues (see Appendix B Email Survey). In the email, I introduced myself, explained my dissertation purpose, and requested assistance in identifying expert voice teacher participants. I asked recipients to reply with names, institutions, and email addresses of individuals exemplifying expert applied voice instruction. The email was sent to current and former applied voice faculty at California State University East Bay; California State University at Sacramento; San Francisco State University, San Jose State University, University of the Pacific, California State University Sonoma, College of Marin, San Francisco Conservatory of Music, The University of California at Berkeley, and The University of California at Davis. I also emailed National Association of Teachers of Singing (NATS) regional governors ($n=2$) and directors of area performance organizations ($n=5$). I limited my participant search to Central and Northern California for reasons of geographical proximity.

I received nominations from voice faculty at California State University East Bay; California State University at Sacramento; San Francisco State University, San Jose State University, University of the Pacific, California State University Sonoma, College of Marin, and The University of California at Berkeley. Directors of performance organization directors and the NATS governors of the Capitol and Bay Area regions also submitted nominations. Through this process, I obtained 16 nominations of expert voice instructors, and five of these individuals were endorsed multiple times. After reviewing web-based biographical information for the nominated teachers, I determined that all 16

met my criteria for professional accomplishment-reputation and longevity. I contacted six individuals whose professional biographies were most interesting to me in terms of their voice teaching experience and longevity, institutional affiliations, professional accomplishments, and peer recognition. I invited these six teachers to participate in my study by email (see Appendix C Recruitment Letter) and I followed up with telephone contact, asking permission to observe and digitally record voice lessons on two occasions at their preferred studio location. I also outlined the time commitment for observation, interview and member check, and explained how student confidentiality would be protected. Four instructors responded positively to my request, though a scheduled sabbatical leave prevented one teacher from taking part in my research, thus leaving me with three study participants.

Instructor Participants

All three participant instructors granted permission to have their names used in all research documents. My study participants, Erie Mills, Joseph Frank, and Eric Howe, are distinguished vocal pedagogues and performers. Professors Joseph Frank (tenor) and Erie Mills (coloratura soprano) are internationally known opera and concert performers. Professor Eric Howe (baritone), also an active performer, specializes in vocal physiology and vocal pedagogy. The participants provided biographical summaries, as follows:

Joseph Frank. Since his 1974 San Francisco Opera debut, tenor Joseph Frank has specialized in the lyric character tenor operatic repertoire. In a career spanning over 40 years, the tenor has garnered acclaim in over 80 roles. Metropolitan Opera and European debuts followed in 1979 and he currently appears regularly with other leading

opera companies here and abroad including the opera companies of Los Angeles, Houston, Seattle, Washington, Orange County, San Diego, Santa Fe, London, and Paris. As a concert specialist, he has performed with the Philadelphia Orchestra, the Buffalo Philharmonic, the symphonies of Detroit, Houston, Indianapolis, and Atlanta under such luminaries as James Levine, Christoph Eschenbach, Julius Rudel, Eduardo Müller and Emil Tchakarov. Mr. Frank opened the 2011-2012 San Francisco Opera Season as *Altoum* in Puccini's *Turandot*. Other recent engagements include *Salome* for the San Diego Opera, and *Pong* in *Turandot* for the Austin Lyric Opera. Other performances include *Monsieur Triquet* in *Eugene Onegin* for the Pittsburgh Opera and *Horace Adams* in the San Diego Opera production of *Peter Grimes* conducted by Steuart Bedford. 2008 engagements included the premiere of Ricky Ian Gordon's revised *The Grapes of Wrath* as *Grampa Joad* for the Pittsburgh Opera and *Prince Orlofsky* in *Die Fledermaus* for Austin Lyric Opera. For San Diego Opera, Frank performed in both *Boris Godunov* and a new production of *Wozzeck* by director Des McAnuff (*Jersey Boys*). Other noteworthy appearances include the *Tanzmeister* in famed film director William Friedkin's production of *Ariadne auf Naxos* and a new production of *Tosca*, both for the Los Angeles Opera; *Turandot* at the Hollywood Bowl; Los Angeles Opera's world premiere of *Nicolas and Alexandra* and *Fanciulla del West*, both with Placido Domingo. Future engagements include *Pong* in *Turandot* for Hawaii Opera Theater, *Boris Godunov* for the Zagreb National Theater. Mr. Frank received a Bachelor of Music, Masters of Music, the coveted Performers Certificate from Indiana University and an Opera Diploma from the Curtis Institute of Music.

He is currently Director of the School of Music and Dance at San Jose State University where he teaches applied voice, Art Song, and had has been principal undergraduate music adviser. 2012 marked the 20th anniversary of his tenure with the School of Music and Dance at San Jose State University. In 2006, he was the recipient of the Dean's Faculty Recognition Award for Outstanding Artistic Achievement for the College of the Humanities and the Arts. Professor Frank regularly gives master classes in voice and opera and has been an adjudicator for numerous musical organizations throughout the country. His students have pursued their studies at prestigious graduate schools such as the Mannes College of Music, the Academy of Vocal Arts, and the Moores School of Music at the University of Houston. Graduates have gone on to be Resident Artists for the Orlando Opera, the Des Moines Metro Opera, the Caramoor International Music Festival and the Amherst Early Music Festival. Others have been the recipients of the *Mario Lanza Competition*, the *Licia Albanese-Puccini Foundation* and the *Heinz Rehfuss Singing –Actor Competition*.

His discography include DVDs of *Der Rosenkavalier*, and *Ariadne auf Naxos* (Both from the MET), *Turandot*, (from San Francisco Opera), CDs of *Boris Godunov*, *Adriana Lecouvreur*, *Madama Butterfly*, *I Pagliacci* and *Turandot*. (Personal email from Professor Frank) (also see: <http://www.josephfranktenor.com/bio.html>).

Eric Howe. Eric Howe, baritone, is a frequent guest soloist, chorister, conductor, and piano and organ accompanist. He is also in demand as a clinician and adjudicator. Mr. Howe has taught voice for over 30 years. He currently teaches private students in Oakland, California, as well as teaching vocal physiology and vocal pedagogy courses at

Holy Names University. Mr. Howe taught the vocal pedagogy and vocal physiology courses for seven years at the San Francisco Conservatory of Music. At Holy Names University he also teaches applied voice lessons, Introduction to Music Pedagogy, and supervises graduate projects. Mr. Howe has also taught conducting, applied organ, and conducted the Holy Names University Chamber Singers. His current students sing in professional and semi-professional situations in the San Francisco Bay Area and former students are singing professionally around the world.

Mr. Howe has served on the Board of Directors of the National Association of Teachers of Singing as California-Western regional governor. He is past president of the San Francisco Bay Area National Association of Teachers of Singing chapter and chaired its annual Singing Festival. Mr. Howe's previous faculty positions include San Francisco State University, Columbia College (Chicago), Indiana University-Purdue University at Indianapolis, and the University of Notre Dame (South Bend, Indiana). He holds a Bachelor of Music degree from Westminster Choir College, and a Master of Music degree from Indiana University *cum laude*, where he has also completed coursework towards a DMA in vocal performance. (Personal email from Professor Howe) (Also see: <https://www.sfcv.org/music-teachers/eric-howe>).

Erie Mills. Erie Mills has received critical and popular acclaim throughout the world, dazzling audiences with her sparkling coloratura voice, captivating personality and vivid portrayals of operatic roles. She has performed the world's major opera houses, including the Metropolitan Opera, La Scala, Vienna Staatsoper, English National Opera, San Francisco Opera, Santa Fe Opera, New York City Opera, and many others. As a

concert artist, Ms. Mills has appeared with the orchestras of Chicago, St. Louis, Cleveland, Boston, Los Angeles, San Francisco, the St. Paul Chamber Orchestra, and the VARA Radio Orchestra at the Concertgebouw in Amsterdam. On recording, Ms. Mills may be heard on RCA's recording of *Sondheim's Follies*, New World Records' Grammy award winning *Candide*, Newport Classics recordings of Handel's *Muzio*, Scarlatti's *Ishmail*, and her solo CD of American song, "*Always it's Spring*" for VAI. Her performance of *Cunegonde* at the New York City Opera was seen on a national telecast on PBS' "*Live from Lincoln Center.*"

From 1998 to 2008 Erie Mills was on the voice faculty at San Jose State University. Since 2004 she has worked as the English diction specialist for Opera Theatre of St. Louis and the Santa Fe Opera. From 2004 to 2010 she served as the first singer member of the board of directors of Opera America. In the fall of 2010 she joined the board of directors of the Sullivan Foundation. Ms. Mills has adjudicated for the National Association of Teachers of Singing and throughout the country for the Metropolitan Opera National Council. She is a graduate of The College of Wooster in Ohio, University of Illinois, and the Houston Opera Studio. (Personal email from Professor Mills) (Also see: http://eriemills.com/erie_mills_files/bio.html).

Student Participants

The primary data for this study were collected as I observed the three voice teachers in their normal instructional settings. All three instructors preferred to personally contact students and schedule lesson observations. Each requested copies of my Student Recruitment Email and Consent Form (see Appendices D and E) for

distribution. Students ($n = 12$) included undergraduate and graduate music majors, amateurs, and semi-professional and professional singers, all over 18 years of age. Student voice types included: coloratura soprano, soubrette soprano, lyric soprano, dramatic mezzo soprano, countertenor, tenor, baritone, and basso profundo. When referenced in research documents, the students were identified by a pseudonym.

Data Collection

In this section I describe my data collection methods. These included observing and recording lessons, logging field notes, and interviewing participants. Data collection and timeline are represented in Table 1.

Lesson Observation and Recording

Each voice teacher allowed me to observe and record lessons in one of their regular studio locations; all three studios were large enough to accommodate my observation and recording unobtrusively. Upon arrival I set up my recording equipment, a Canon VIXIA HF R300 digital camera and tripod. As each student entered, the teacher introduced me, reminding students that I would be observing and recording their lesson. During the introduction, I collected each participant's signed consent form. I began recording before teaching commenced, capturing all lesson contents from initial greetings to farewells. Lesson lengths varied from 60 to 120 minutes, but to facilitate later review, I recorded lessons in 30 minute segments, saving each teacher's lessons on a separate memory card. I visited each studio twice and recorded close to 20 hours of voice instruction. During the first session, I recorded four lessons (eight segments) with Joseph Frank, three lessons (six segments) with Eric Howe, and two lessons (eight segments)

with Erie Mills. During the second session, I recorded two lessons (four segments) with Joseph Frank, four lessons (eight segments) with Eric Howe, and two lessons (four segments) with Erie Mills.

Field Notes

While observing lessons, I recorded field notes describing the participants, studio facilities, teaching resources, and lesson activities. I logged field notes primarily to expand upon and to help me recall more clearly what took place during each lesson. I also recorded personal reflections during studio visits, noting my own thoughts and emotions as a means of reflexivity (Phillip, 2008, p. 84). Field notes were handwritten in a notebook and were subsequently entered into Word document formatting and saved on two password protected computers.

Interviews

Teacher and student interviews were intended to help clarify lesson observations and provide additional information from the participants' points of view. I conducted all interviews privately and in person, recording the contents on an Olympus DP-201 Note Corder and jotting additional observations to be included as field notes.

Instructor interviews. I interviewed each voice teacher during my first studio visit. Each interview was conducted privately in the studio and lasted 20 to 30 minutes. The initial questions were general and progressed to more specific queries about experience (see Appendix F Interview Script). After addressing the scripted questions, each teacher extemporaneously discussed topics related to vocal performance, pedagogy, and career experiences.

I transcribed audio-recorded interviews verbatim, saving each as a Word document on two password protected computers. Subsequently, I emailed a copy of the interview transcript (see Appendix G, Instructor Interview Transcript) to each instructor to check for accuracy and provide additional comments as needed (see Appendix H, Instructor Member Check Request and Response). None of the instructors requested changes, so the transcripts were added to the data set.

Student interviews. I interviewed voice students after their first observed lessons in spaces adjoining each studio. Before beginning the interview, I thanked each student for allowing me to observe the lesson, and I arranged a member check of the interview transcription, confirming their contact information. Student interviews were generally confined to the scripted questions, lasting about 10 minutes.

I transcribed audio-recorded interviews verbatim, saving them as Word documents on two password protected computers. Similar to instructor interviews, I emailed a copy of the interview transcript to each student to check for accuracy and provide additional comments as needed. One student clarified his response to the question, “What part of the lesson did you enjoy least?” I edited that student’s interview transcript to reflect the changes, recording his comments as additional research notes. All other participants confirmed the accuracy of their interview transcripts and made no additions, so the transcripts were added to the data set (see Appendix I Example Student Interview Transcript).

Table 1

Data Collection Timeline

Instructor Observation	Students	Interviews
Erie Mills		
July 6, 2012	E1, E2	Mills, E1, E2
November 14, 2012	E2, E3	E3
Eric Howe		
September 21, 2012	H4, H5, H6	Howe, H4, H5, H6
October 26, 2012	H4, H7, H8	H7, H8
Joseph Frank		
September 26, 2012	F9, F10, F11, F12	Frank, F9, F10, F11, F12
October 31, 2012	F10, F11	

Note. Chronology of post-observation procedures: lesson video review, rehearsal frames identification and transcription; interview transcription; interview transcript member check; teachers emailed transcribed rehearsal frames from final lesson for verification of target goals and student achievement of target goals; member check approvals, target goal verifications, and edits received from all participant instructors and students; edits entered into the data set.

Data Analysis

My data set included digital lesson videos, participant interview transcriptions, and transcribed field notes. My process of analysis was inductive and comparative, using aspects of the constant comparative method (Glaser & Strauss, 1967) referenced in Merriam (2009, p. 175). These included: (a) comparing behaviors-attributes in the data set with others in the same or different sets, (b) drawing codes from these comparisons, (c) grouping codes, and (d) constructing, comparing, and classifying behavior-attribute categories (pp. 199-200). Specific procedures for data transcription and analysis are

described in the following sections.

Transcribing and Describing Rehearsal Frames

My primary data were digitally recorded voice lessons. Using Duke's (1999/2000; 2008) idea of a rehearsal frame to segment the data, I watched each 30-minute lesson video and identified when the teacher indicated lesson targets or proximal goals.

Teachers might have set the targets verbally through stated directives or feedback, non-verbally through modeling or gestures, or a combination. After identifying a lesson target, I watched video footage to assess when a teacher validated goal achievement. In most every case, the instructors provided clear verbal (e.g., "yes," "okay," or "good") or non-verbal (e.g., nods, smiles, or clapping) validation and confirmation of the student's target attainment and subsequently decided to set a new target (Duke 2008).

Nevertheless, I also watched for discernible student goal attainment in rare instances where observable teacher validation-new goal setting was lacking. Thus, in this study, instructors' verbal or non-verbal target-setting opened a rehearsal frame and teacher-validated goal achievement-new goal setting or researcher-assessed student goal achievement ended it. Once rehearsal frames were identified, I focused my attention specifically on teaching, transcribing all of the teacher's words and described all of the teacher's actions within the frame. I also transcribed the student's responses to the teacher, which typically were sung, but also included verbal responses, such as asking questions that allowed teachers to clarify concepts.

To summarize, I used the following procedures to characterize expert voice teaching behavior-attributes:

1. Viewed the video, noting when teachers verbally stated or non-verbally indicated a proximal goal.
2. Observed student trial(s) until teacher confirmed goal attainment and/or set a new goal, or the student demonstrated goal achievement.
3. Designated the video segment between the verbal or non-verbally indicated lesson goal and the student's achievement of the goal by teacher validation or researcher assessment as a "rehearsal frame" (Duke, 1999/2000; 2008).
4. Reviewed each rehearsal frame multiple times to transcribe verbatim all verbal statements and describe all non-verbal actions within each rehearsal frame.
5. Transcribed the student's response to the teacher (typically sung) but also including verbal responses that prompted further clarification from the teacher.

I reviewed each 30-minute lesson segment three times to confirm and expand upon my observations. I observed all lessons segments in chronological order by instructor, evaluating a teacher's entire observation session (four to eight 30-minute recordings) before viewing another instructor's videos. This allowed me to acquaint myself with each teacher's personality, pedagogical style, studio language, and characteristic behavior. I entered all transcribed rehearsal frames into Word document formatting, saving them on two password protected computers.

I returned the transcribed rehearsal frames from the final lessons that I observed to each teacher, asking him or her to verify my accuracy in identifying target goals and

achievement of target goals in the student's performance. All three teachers confirmed the accuracy of their transcribed rehearsal frames, and also commented extemporaneously that it was valuable to reflect on the documentation of their pedagogy. Joseph Frank made one correction: "Going to the Virgin" was changed to "Praying to the Virgin." Eric Howe corrected the spelling of *passaggio*. No further editing was requested, and all transcribed rehearsal frames were added to the data set.

Coding Transcribed Rehearsal Frames

I sought to attach at least one code to each transcribed verbal statement or description of non-verbal action. Like Duke and Simmons (2006a), the codes I used were either "descriptions of direct observations of events" or "inferences about teachers' thinking" and attributes based on observation (p. 11). Stake (1995) suggested that previous theoretical and empirical research may provide relevant categories for data coding (p. 30), so for my first round of coding I familiarized myself with Duke and Simmons' (2006a) descriptions of the 19 elements of expert teaching, as well as their example videos (Duke & Simmons, 2006b). I generated etic codes based on each of the 19 elements. For example, from the element of expert teaching about modeling, "The teachers play examples from the students' repertoire to demonstrate important points; the teachers' modeling is exquisite in every respect" (Duke & Simmons 2006a, p. 15), the following codes were generated: *expressive modeling through singing, gesturing, or playing; technically excellent modeling; and faithful imitation of the student juxtaposed* (p. 15). I then shortened those codes to make them less cumbersome: *expressive modeling, excellent modeling, and juxtaposed imitation*. Similar procedures of identifying

possible codes and subsequently shortening them were used for all of Duke and Simmons' elements. My codebook, containing these shortened codes, may be found in Appendix J.

The processes of creating and then applying codes derived from Duke and Simmons (2006a, 2006b) was one of sorting data into etic categories (Merriam, 2009, p. 29). I evaluated each transcribed segment of speech and each non-verbal action with the goal of applying at least one code derived from Duke and Simmons' elements (2006a). For example, professor Mills verbalized: "so get off of ties, bigger beats in the melismas; instead of thinking *ogni note*, at least eight." This transcription fit Duke and Simmons' clear technical ideas, unhesitating speech, and knowledge/experience-based judgements, so it was coded accordingly.

Furthermore, as noted in my codebook (Appendix J), I was attentive to Duke and Simmons' (2006a) standard of commonality: behavior-attributes observed "in nearly every lesson taught by all three teachers" (p. 11). I tracked the occurrence of behavior-attributes codes derived from Duke and Simmons' elements in each voice lesson taught by each teacher. Thus, I also documented those codes that appeared less frequently. As I completed this phase of coding, not all of the codes initially generated had been employed. In addition, some statements or actions had no code attached.

Constructing New Codes and Categories

These two discrepancies led me to consider that, while Duke and Simmons' (2006a) version of teaching expertise was applicable in many ways to voice teaching, not all of the behavior-attributes of voice teaching could be accounted for in their scheme.

This provisional thinking led me to code every rehearsal frame a second time, using an emic coding process: that is, allowing new codes to emerge from the data. Referencing Glaser and Strauss (1967), Merriam (2009) submitted that analysis for new codes often generates categories that are more relevant and “*responsive to the purpose of the research*” (p. 185, emphasis in original).

The second phase of analysis included: open coding (Merriam, 2009, p. 178), axial coding (p. 180), and spoke outlining (Mack & Skjei, 1979). First, I re-coded all the transcribed rehearsal frames, labeling each segment of speech and non-verbal action with words describing direct observations or inferences about the instructor’s thoughts. I then reviewed the results of this open coding, sorting the data into related groups (Merriam, 2009, p. 178). Next, I used axial coding to construct “categories” (p. 178) of new voice teaching behavior-attributes. This involved reviewing and comparing all coded and grouped rehearsal frame transcriptions to identify recurring themes (p. 181). For example, one rehearsal frame transcription contained the following segments of speech, “Smile . . . look in the mirror. See the teeth? . . . cheeks up.” I labeled this data segment with codes: *anatomy adjustment: smile, mirror, directs student mirror observation: teeth-lip position*, and *anatomy adjustment: cheek*. I later sorted these codes into two groups: 1) *mirror* and *directed mirror observation* and 2) *facial anatomy adjustment: smile*, *facial anatomy adjustment: teeth-lip position*, and *facial anatomy adjustment: cheek adjustment*. In subsequent transcription evaluation and coding, similar segments of speech and described actions appeared consistently across all three teachers’ videos. Consequently, I constructed two behavior-attribute categories: *use of mirror* and *attention*

to anatomy and physiology. As I identified new categories, I continued this iterative process, returning to each transcript numerous times to ensure consistency, and subdividing, subsuming, or retaining categories as warranted (Merriam, 2009, p. 180). At the completion of my open and axial coding, I had re-coded, grouped, and categorized every transcribed rehearsal frame. As I completed the second phase of coding, there were some statements or descriptions without a new code attached.

At the completion of the first and second phases of analysis, no segments of data remained uncoded. Taken together, the etic and emic codes accounted for every transcribed statement and description. Approximately a third of the data segments received an etic code alone, a third received an emic code alone, and a third received two codes.

Again, as noted in my codebook (Appendix J), I tracked segments of speech or described non-verbal behaviors assigned emic codes in each voice lesson taught by each teacher. Thus, I was attentive to Duke and Simmons' (2006a) standard of commonality: behavior-attributes observed "in nearly every lesson taught by all three teachers" (p. 11).

Classifying new categories. I used spoke outlining (Mack & Skjei, 1979) to confirm and develop broad classifications for new voice teaching behavior-attribute codes. Mack and Skjei recommended this non-hierarchical ordering to identify "patterns of interrelationships" (p. 104). My spoke outlining process included the following steps:

1. Wrote research question in the center of the page (How can expert voice teaching be characterized?);
2. On spokes radiating from the central research question listed potential broad

category classifications (e.g., Embodied Instrument, Technical Focus, Language-Text) derived from review of new categories;

3. On lines branching from each potential broad category classification spoke listed all related new categories;
4. Assessed all potential broad category classifications, category branches, and supporting data for redundancy, insufficient support, and additional emerging classifications;
5. Subsumed, subdivided, or retained broad category classifications as warranted (Mack & Skjei, 1979, pp. 105-108).

At the completion of this process I had established new behavior-attribute categories and identified broad category classifications of expert voice teaching that were sufficiently “sensitizing” to the meaning of the data and “conceptually congruent” in terms of level and fit (Merriam, 2009, p. 186). These new elements of expert voice teaching were based on maximum data assignment, clarity of classification, and plausibility “given the data from which they emerged” (Merriam, 2009, p. 188).

Creating new element descriptions. Duke and Simmons (2006a; 2006b) developed detailed descriptions for each common element of expert applied teaching. I wanted to create similar descriptions of the important features of each new common element of expert voice teaching. I created narratives that characterized the key features of each element based on review of my lesson data and participant interview and field note transcription analysis and spoke outlining (Mack & Skjei, 1979) results. I also considered the results of other expert vocal pedagogy (Blades Zeller, 1993, 2003;

Clemmons, 2007; Dufault, 2008; Levasseur, 1994) and applied (Duke & Simmons, 2006a, L’Hommedieu, 1992; Parkes & Wexler, 2012) research, and debriefed my ideas with my dissertation advisor. At the completion of this process, I had created narratives describing the principle features of each new common element of expert voice teaching.

Trustworthiness

Merriam (2009) discussed strategies to advance the trustworthiness and validity or “credibility” (Lincoln & Guba, 1985) of qualitative research. According to Merriam, Lincoln and Guba’s idea of credibility avoids the problem of basing internal validity on the correspondence of research findings with reality—reality being difficult to define (p. 213). Instead, credibility ascertains whether a study’s findings are “*credible* given the data presented” (p. 213; italics in original). Merriam cited LeCompte and Preissle (1993), suggesting that participant observation conducted in natural settings more accurately reflects participants’ experiences than do laboratory settings, and the language that participants use in interviews more concretely represents the lived-experiences of participants than does the language of survey instruments (p. 215). Thus, credibility or internal validity is a strength of case studies. Still, Merriam advised the application of further means of boosting credibility: triangulation, member checks, declaration of the researcher’s positionality and peer review. I have already demonstrated multiple member checks and discussed my positionality.

I used data source triangulation (Stake, 1995, p. 112), observing and recording voice lessons taught by three different teachers of distinct personality, professional experience, and voice type, teaching in separate studio locations. According to Stake,

methodological triangulation is one of the most recognized triangulation protocols (p. 114) used to enhance research credibility. I evaluated field notes and interview data looking for verbiage similar to Duke and Simmons' (2006a) language, as well emergent codes. I used the results of field note and interview transcription analysis to "confirm and illuminate" (Stake, 1995, p. 114) coding results.

In peer review, or peer debriefing (Cresswell, 2003, p. 197), discussions between peer and researcher determine the reasonableness of the interpretations in light of the study's accumulating evidence. Throughout the process of data analysis and interpretation, I emailed my data coding, emerging interpretations, and sections of my writing to my dissertation adviser for review sessions, wherein we discussed the reasonableness of my interpretation. I also uploaded three lesson videos (one taught by each teacher) to a shared drive, and my adviser independently analyzed the lessons for expert teaching behaviors, degree of alignment with Duke and Simmons' (2006a) 19 elements, and commonality across voice instructors. A comparison of our results showed sufficient agreement to support the trustworthiness of my independent observations and analysis.

Merriam (2009) also discussed the reliability or consistency of qualitative research, noting that reliability is typically defined as replicability of results (p. 220). This is problematic in qualitative research, where no single "benchmark" interpretation exists for replication study comparison because various interpretations of the same data are possible. As a result, Merriam suggested that it is more important for qualitative researchers to demonstrate that their findings make sense in light of the accumulated data.

In other words, “the results are consistent with the data collected” (p. 221). Instead of replicating results, qualitative researchers clarify all of their procedures and decision points, making all aspects of data collection, coding, and interpretation explicit. This is typically referred to as an audit trail (p. 222). I have created an audit trail by clearly describing my methods of data collection, coding, category construction and classification, determining commonality, and creating new element narratives.

Finally, Merriam (2009) discussed external validity, which in qualitative research is often called “transferability” (Lincoln & Guba, 1985) or generalizability. Unlike studies that rely on statistical generalizability, qualitative studies most often refer to “reader or user generalizability” in which “the person who reads the study decides whether the findings can apply to his or her particular situation” (Merriam, 2009, p. 226). To enhance reader generalizability in the present study, I have provided biographical descriptions of the voice teachers in the current chapter, I have used thick description of findings with adequate supporting data quotes (p. 227) in subsequent chapters.

Chapter Summary

In this chapter I described my study design, researcher positionality, participants, data collection, data analysis, and methods of enhancing trustworthiness. This was a collective case study, observing common elements in the pedagogy of three expert voice teachers: Erie Mills, Joseph Frank, and Eric Howe. Their expertise was based on peer nomination, career accomplishment, and teaching experience and longevity. I observed and digitally recorded almost 20 hours of voice lessons, interviewed all participants, and logged field notes. The recorded lessons served as my primary data. Using Duke’s

(1999/2000; 2008) idea of rehearsal frames, I reviewed each video to identify voice teachers' goal setting and indicators of students' goal achievement. I transcribed all verbal statements and described all non-verbal actions within each rehearsal frame. I coded this data in two phases, first attempting to assign etic codes derived from Duke and Simmons' narratives to each transcribed segment of speech and non-verbal action. I took a more organic emic approach in the second analysis, allowing codes to emerge from the data using open coding and assigning these codes to categories by means of axial coding (Merriam, 2009, p. 177). I employed spoke outlining (Mack & Skjei, 1979) to confirm and classify new behavior-attribute categories. Throughout data analysis, I tracked commonality of Duke and Simmons' (2006a) and new behavior-attribute categories, using their standard of appearance "in nearly every lesson taught by all three teachers" (p. 11). Finally, I determined new behavior-attribute "elements" (p. 10) based on maximum data assignment, clarity of classification, plausibility (Merriam, 2009), and commonality. To create descriptions of each new common element, I reviewed my data analysis and spoke outlining (Mack & Skjei, 1979) results, reflected on related vocal pedagogy (Blades Zeller, 1993, 2003; Clemmons, 2007; Dufault, 2008; Levasseur, 1994) and applied (Duke & Simmons, 2006s; L'Hommedieu, 1992; Parkes & Wexler, 2012) research findings, and discussed my ideas with my dissertation advisor.

In Chapter Four, I present results of my first analysis, coding transcribed rehearsal frames for etic codes derived from Duke and Simmons' (2006a) element narratives. Because the first etic coding was insufficient to represent all the data, I carried out an

emic second analysis of the lesson data. Results of my second analysis of transcribed rehearsal frames for new elements are reported in Chapter Five.

CHAPTER FOUR: FINDINGS FROM FIRST ANALYSIS

The purpose of this study was to characterize voice teaching expertise, using Duke and Simmons' (2006a) descriptions of 19 common elements of expertise as a point of departure for that characterization. This was a collective case study, observing common elements in the instruction of three expert voice teachers: Erie Mills, Joseph Frank, and Eric Howe. I observed and digitally recorded close to 20 hours of voice lessons, interviewed all participants, and logged field notes. The lesson recordings served as my primary data. Employing Duke's (1999/2000; 2008) idea of rehearsal frames, I reviewed each video to identify when the teacher set a target goal and signaled goal attainment. Then, for each rehearsal frame, I transcribed all verbal behavior and described non-verbal behavior, such as gestures and facial expressions. I coded this data in two phases.

For a first phase of data analysis, I created etic codes derived from Duke and Simmons' (2006a) 19 elements of expertise, and I sought to attach at least one of those codes to each transcribed statement or described behavior. Furthermore, I determined the extent to which each etic code appeared in each lesson taught by each of the three teachers, addressing Duke and Simmons' (2006a) standard of commonality. Thus, I began to address the extent to which voice teaching expertise aligned with Duke and Simmons' (2006a) 19 Common Elements of Expertise.

In this chapter, I have used the original narratives associated with the 19 elements to organize findings. Findings were of two types: (a) voice teaching that aligned with all key points of Duke and Simmons' original narratives about expertise, and (b) voice

teaching aligned with original elements but with minor variations. I have provided illustrative examples from transcribed rehearsal frames. Although the voice teachers' lessons offered many possibilities for illustration, I have attempted to use those that can be most clearly articulated through text. One illustration might suffice for each element, yet the standard that Duke and Simmons (2006a) introduced was commonality—the elements of expertise needed to appear in “nearly every lesson taught by all three teachers” (p. 11). Therefore, I have included a transcribed rehearsal frame from each voice teacher (three in total) to illustrate each of Duke and Simmons' elements. Each transcribed rehearsal frame begins with the teacher's proximal goal setting and ends when the student achieved the goal. I conclude each element description with a brief summary of the voice teachers' behaviors and attributes in the present study. Overall, I found complete alignment with eight of Duke and Simmons' (2006a) elements, and alignment but with minor variation on another six elements. I present my findings for the alignment of this study's voice teaching with Duke and Simmons' elements their organizing categories: Goals and Expectations, Effecting Change, and Conveying Information.

Voice Teaching Completely Aligned with Duke and Simmons' (2006a) Elements

Goals and Expectations: Clear Auditory Images Guide Judgements

Duke and Simmons (2006a) noted that their three instrumental teachers had “a clear auditory image of the piece that guides their judgments about the music” (p. 11).

More details about this element of expertise follow:

These teachers convey clear ideas about how technical demands should be executed to produce appropriate stylistic character and musical interpretation.

There is little hesitation in their speech, which suggests that they have in their minds vivid auditory images of the pieces they teach. They seem to know exactly what they expect to hear when students perform. Their technical and musical judgments are made based on historical and theoretical knowledge and on direct performance experience. When lessons deal with repertoire teachers have not previously encountered, they are able to guide students by generalizing knowledge from familiar pieces in a way that makes instruction as valuable as instruction with familiar repertoire. (Duke & Simmons, 2006a, p. 11)

As demonstrated in the following three examples, the current study's findings were similar to Duke and Simmons' results in that all three voice teachers appeared to have "a clear auditory image" (p. 11) that guided their musical and technical judgments.

Erie Mills:

During the second observation session in a lesson with a soprano (opera chorus member), Mills stopped the student's performance of Handel's *Let the Bright Seraphim*: "Good, good and the same thing [plays, models a phrase at pitch, repeating the octave leap, which occurred between the syllable "tal" of immortal, and the syllable "harps"] *Touch their immortal harps: tal ha, tal ha, tal ha; just get there.*" [Student asks a question] "Did I do that better on the A or not?" Mills responds "Yeah, it was better the first time, not as good this time, so [plays melody line for *Let the cherubic host*, models the octave interval which occurred between the first and second syllables of the word "behold" four times] [bi ho, bi ho, bi ho, bi ho] Just think of vowel to vowel. [Bi ho, bi ho], can we just do that?" [Plays starting pitch]. Mills set the target—she wanted the phrases upper octaves to sound accurately in time.

Student: Repeats the phrase

Mills: [Halts] "But get there sooner! It's like squeezing toothpaste out of a tube [gestures slowly squeezing hands] and I want [gestures crisp, angular hand movements, models the octave twice] [bi ho,

bi ho] like you're going up a staircase [gestures stair-stepping hand over hand movement] . . . and not on an escalator.”

Student: Performs the octave leap on [bi ho]

Mills: [Watches, gestures quickly opening hand] “Yeah, open. The point is even though it's super-doooper legato we want [models the phrase at pitch] *Let the cherubic host*, [models the octave leap twice, gestures crisp up and down hand movements] [bi ho, bi ho]. If you take that much time you're already, the beats already gone [gestures waving motion] and we don't hear the vowel or the note. So get there, I mean just make it like a real, like it's not very musical [models the phrase and the octave leap four times, gestures robotic arms] *Let the cherubic host*, [bi ho, bi ho, bi ho, bi ho]. I mean just like it's a real automaton thing instead of artsy. No art just bing, bing, bing, bing [gestures] like you're stepping up a step [stamps foot] and the step is too high [gestures hand over her head] so you go woo, [mimes falling back] like that, instead of creeping along. Start the B section again.” [Plays starting pitch, accompaniment chord]

Student: Starts the section, “*Let the*”

Mills: [Halts] “No, it's [models at pitch, flipping the ‘l’] *let, let*. Don't let the ‘l’ get in your way, it's hard because [makes a long ‘l’] it's just the ‘l.’”

Student: Repeats the phrase, this time performing a flipped ‘l’ and quick vowel to vowel octave leaps. Follows Mills' nod and continuing accompaniment to the end of the B section

Mills: [Watches, plays accompaniment, smiles, nods] “Good, yes much better, much better. Those skips in this kind of music, those skips are very, well it's the same in Mozart though too, so they just have to be much more automaton instead of artistic because otherwise you don't make it and then you gotta go on. We want vowel to vowel to vowel to vowel [gestures, chopping hands] Good, let's go back.”

With that approval, both teacher and student recognize that the target goal for timing octave leaps has been achieved.

Joseph Frank:

During a second observation session lesson with a basso profundo (junior undergraduate) performing Melchior in Menotti's *Amahl and the Night Visitors*, Frank stopped a section of recitative: "It's like you're doing Mozart recitative here, the only difference is you're actually singing your own language so it should sound like that." Frank set the target, he wanted the student to perform a recitative in English with appropriate word stress.

Frank: [Expressively models the passage at pitch] "*Thank you good friends, for your dancing and your gifts.* Yes he's written the words out according to what he wants rhythm-wise, but you have to make them sound like they belong there. Okay." [plays accompaniment chord]

Student: Repeats the phrase

Frank: [Halts, models phrase at pitch, with beautiful tone and natural word cadence, emphasized clear diction on '*for your*'] "*For your, for your, for your dancing and your gifts.* I know you know what you're singing."

Student: Repeats the phrase, this time imitating Frank's word cadence and communicating the meaning of the text

Frank: [Nods] "Good."

The student has achieved the goal of performing a recitative in English with technically accurate word stress.

Eric Howe:

During a first session lesson with a coloratura soprano (graduate student), Howe halted the student's performance of Bach's *Heute Noch, Lieber Vater*: "So can we make more of a [gestures graceful arced hand lift] sigh of that instead of [gestures heavy fist,

speaks loudly] *Ach!* Howe set a target—he heard the student perform with a heavy tone quality on the phrase *Ach, ach, ach ein mann*, which included rapidly executed octave leaps.

- Howe: “It’s a little over hyper in your body. Why don’t we do *Lieber Vater, tut es doch.*” [Models the phrase in the baritone range]
- Student: Repeats the phrase, but still performing heavy octave leaps
- Howe: [Halts] “Right there. I’d like you to that on a roll, just that one phrase.”
- Student: Performs the passage on a lip trill
- Howe: “Let’s put that in that narrower place for a second.” [Gestures index fingers close together]
- Student: Repeats the passage on a lip trill, this time with a clearer, lighter tone
- Howe: “Good, now sing *Heute.*”
- Student: Performs *Heute noch*, producing a lighter clearer tone on the intervallic leaps
- Howe: “Just to let that inform the voice . . . That got to a cleaner tone as the basis for the sound. Let’s do from [models an octave below pitch] *dieser steht.*”
- Student: Repeats the A section, this time performing the octave leaps with a lighter clearer tone
- Howe: [Nods] “Yes! Does that feel a little or sound a little different to you? It just cleans things for you; you got a little too heavy before.”
- Student: [Nods] “Yes. I get big here, I just get big. I think of it as spacey and big and so then I have to narrow it and bring it back down.”
- Howe “And see here [points to the score], you skipped the whole *passaggio*; and so it works so easily. You have to let that be a little more collected.”

The student recognizes that she has achieved the target goal of performing melodic leaps with lighter tone quality.

In the present study, all three voice instructors expressed clear technical and interpretive ideas and uttered correctives without hesitation, suggesting that they taught with precise auditory images in mind. Their technical and interpretive judgements appeared to be based on theoretical, historical, and experiential knowledge. If they were dealing with less familiar repertoire, all three voice teachers confidently generalized knowledge from well-known works.

Goals and Expectations: Insist on Consistent Sound Quality

Duke and Simmons (2006a) observed their three expert instrumental instructors “demand a consistent standard of sound quality from their students” (p. 12). Their complete element narrative follows:

In every lesson, the teachers are resolute in their insistence that their students produce only high quality sounds (tone quality), the product of consistently correct fundamental technique. Irrespective of the lesson target addressed at a given moment, the teachers’ attention remains focused on the quality of students’ sounds. When students use faulty technique and produce sounds that are below the expected level of quality, teachers immediately identify the problems and require students to repeat the passages until correct technique and beautiful tone are demonstrated in context. The teachers are tenacious about sound quality, continuing to attack the same issues again when they reappear. They do not let sound problems persist in their presence. (Duke & Simmons, 2006a, p. 12)

This study’s results mirrored Duke and Simmons’ findings; all three expert voice teachers demanded “a consistent standard of sound quality from their students” (p. 12).

Erie Mills:

During a second session lesson with a soprano (opera chorus member) performing *Let the Bright Seraphim*, Mills stopped the student: “It’s very interesting when you do

[imitates the student's performance of the phrase's high A at pitch], that [e] is always so good on [sings the phrase an octave lower] *Their loud, uplifted angels trumpets blow angels*; but your mouth is really open. I think you could open your mouth more lower. Now I don't want the jaw on the floor, I understand that. But, even on *burning* [models singing the descending melody an octave lower with a more open mouth] *bu-u-urning*. Just, and what maybe what it is it's not more open, it's the jaw more relaxed; instead of [models juxtaposed tight and more open-relaxed jaw positions] kind of [models relaxed, dropped jaw while speaking the syllable] *bur*." Mills set a target goal—she wanted the student to drop and relax her jaw position on the first syllable of *burning* to produce beautiful tone on both the high and low notes of the phrase.

- Mills: "See when it's open the way it should be, whether it's flappy, flappy, [gestures hands flapping around jaw] or not we have less control."
- Student: "Um-hum."
- Mills: "And you want more control."
- Student: "I know, that's why the little fast notes are kind of a mess."
- Mills: ". . . But just allow yourself to let that jaw really flap a little bit and you will feel like you don't have control, nothing could be further from the truth you will actually have more control. Let's go from *Their loud* [plays octave leap, models, singing the phrase an octave lower] *Their loud uplifted angel's*, is that alright?"
- Student: Repeats the passage *Their loud uplifted angel's trumpets blow*, this time opening and relaxing her jaw position on the lower notes of the phrase and producing more beautiful tone quality on the word *burning*
- Mills: (Over performance) [watches, models relaxed open mouth position synchronized with the student's performance of lower

pitches on the word *burning*] “Better. And that’s all it has to be, that’s it!”

With that approval, teacher and student understand that the target goal has been achieved; the student produced beautiful tone throughout the phrase, dropping and relaxing her jaw position on the word *burning*.

Joseph Frank:

During a first session lesson with a countertenor (freshman undergraduate), Frank stopped the student’s chanting of a French song (identified as *Les Verso*) on a pitch in falsetto register: “When you’re chanting it I want you to keep the energy going so that it’s spinning.” Frank set a target goal—he wanted the student to chant the French text in falsetto with consistent vocal energy and vibrato throughout the phrase (Frank applied the metaphor of spin for vocal vibrato).

Frank: [Stands, models, chanting the passage in falsetto] “*Mie viens . . . mes adieu.* [returns to normal speech] So the idea is to practice it, if you practice it on one note and you let it go flat it’s not going to spin when you put the correct. . .”

Student: “So I have to keep it spinning.”

Frank: “Keep it spinning so that when you add the melody to it it’s going to feel natural. But if you sing [models the passage, chanting in a non-energized tone and falling under pitch], you’re singing a straight sound and then you have to think ‘okay, I have to lift it.’ [Models the passage again, staying on pitch with an energized, spinning tone. Gestures spinning right hand]. Practice your chant.” [Plays starting pitch]

Student: Chants the passage, this time on pitch with an energized, spinning tone – producing energized and even vibrato throughout

Frank: (Over performance) [models mouth positions] . . . [Nods] “You know how to work that now?”

Student: [Nods] “Yeah.”

Both teacher and student recognize that the target goal for chanting French text in falsetto with consistent energized vocal tone and vibrato (spin) throughout the phrase has been achieved.

Eric Howe:

During a first session lesson with a dramatic mezzo soprano (cantor), Howe halted the student’s performance of Giacomelli’s *Sposa son disprezzata*: “Let’s just do the pickups to the last page here . . . easy on the whole thing. Let’s do [plays ascending melody line]. If you don’t mind let’s just go ahead to the last page again. This time I’d like you to do it on one of the rolls, ‘r’ or ‘v’ your choice. And I’d like you to notice where the voice wants to vibrate and how it might be different on the top than the bottom.” [plays staring pitch]” Howe set the target—he wanted the student to produce a consistently relaxed tone quality and to notice the sensations of tension-free tonal placement in both head and chest register notes.

Student: Performs the phrase on rolled ‘r’ with relaxed tone on the held upper note

Howe: “Super, what do you sense different between those two octaves? Anything in terms of vibration?” [Gestures, touches forehead]

Student: “Yes, the high one is [gestures, touches upper forehead area] sitting up here more.”

Howe: “Sitting up there [gestures, patting upper forehead], yeah great. Let’s be sure that that happens when you sing the vowel . . . Let’s see what we get.”

Student: Performs the phrase singing the text, this time her tone quality is relaxed and correctly placed in both head and chest register notes

Howe: “Yeah, I thought that was in better shape that time.”

With that affirmation, both teacher and student recognize that the target goal has been achieved; the student produced a consistently relaxed, well placed, and more beautiful tone in both head and chest register notes.

In the current study, all three instructors required students to meet consistently high standards of vocal sound quality. When students applied improper technique and produced sub-standard sound quality, the voice teachers immediately halted performance trials to identify and rectify errors. All three expert voice teachers had students repeat performance trials until issues were resolved, showing tenacity about sound quality. In this, they also appeared to persist in technical flaw remediation and to hold students to high sound quality standards.

Goals and Expectations: Select Musically Important Targets in the Moment

Duke and Simmons (2006a) observed their three applied teachers “select lesson targets (i.e., proximal performance goals) that are technically or musically important” (p. 12). The complete element narrative follows:

Perhaps the most occluded aspect of the teachers’ decision making is their selection of lesson targets in the moment. Their choices of targets are based not only on the achievability of goals, but also on the goals’ contribution to the musical product. The teachers’ choices evince a reasoning that balances feasibility with importance. More trivial issues, like intermittent, momentary errors, tend to be ignored, whereas more fundamental issues of technical execution and issues of continuity and effective expression of musical ideas are attended to immediately and are pursued assiduously. (Duke & Simmons, 2006a, p. 12)

As shown in the following examples, this study’s voice teachers also selected musically or technically important lesson targets that were achievable in the moment (p. 12).

Erie Mills:

During a first session lesson with a soubrette soprano (professional), Mills gave feedback about the student's performance of Mozart's *In uomini, in soldati*: "The *per*, the [plays the notes for *vani*, models the octave leap and final note of the phrase at pitch] *ta* . . . you must think of the *per vani* [claps once as she sings *ta*, then slowly declaims each syllable] *per vanita*. Yes, you have to be there sooner, but lengthen the [slowly declaims the string of syllables then models the phrase at pitch] *vanita, vanita*." Mills set the target—she wanted the student to produce pure vowels on the octave leap between the second and third syllables of *vanita* while correctly timing the upper note.

Student: "String."

Mills: "Yes, think about making *per vani*, as the vowels go by you are crescendoing."

Student: "Ah! Okay, yes, okay that makes sense!"

Mills: "You are crescendoing vowels [models the phrase with crescendo down an octave] *Amiam per comodo, per vanita-!* [slows, emphasizing the crescendo, gestures graceful horizontal arm sweep] *per vanita-!* So that really again it's going like this [moves hand horizontally] instead of going up." [gestures arm shooting straight up]

Student: "So it's like." [bends knees, bounces, flings both arms extended to the sides]

Mills: "Don't bounce so much, glide, glide dear. Can we just do that?"

Student: Repeats the phrase

Mills: [Halts] "Now the only thing is, *Per vanita-*, yes the [a] is the stress but the [a] has to have, *per vanita*." [extends the [a]] "*Per vanita*, you tend to want to stress it and sit on it. You cap it and I don't want anything capped. Nothing should be capped. Everything should be rrrrr [makes tongue trill, gestures hand up,

wiggling, models the phrase with pronounced energy at pitch on [da, du, du, da]], it's the champagne bubble thing going on.”

Student: Repeats the phrase, this time with well-timed octave leaps and pure vowels. The tone quality was beautiful and energized

Mills: “That was better, it was better, you see! So keep it super-duper legato. It isn't like a skip. Usually I would say like the little bunny jump up there but in this case it's like [models down an octave] *Per vanita*. It's almost like you're thinking down as you go up.”

With that approval, both Mills and the student recognize that the target goal has been achieved; the student correctly timed the upper note between the syllables “ni” and “ta” of *vanita* and, at the same time produced pure vowels and more beautiful tone quality.

Joseph Frank:

During a first session lesson with a tenor (sophomore undergraduate), Frank stopped the student's performance of a single pitch vowel series exercise ([o, o, e, e, i, i, u, u, a, a]): “It's going sort of in your snoz . . . You hear how it's getting stuck in there? You have to get it out of there.” Frank set the target—he wanted the student to produce vocal tone that was less nasal in quality.

Frank: “So we're just going to sing [models a single pitch exercise at pitch] “[o, u, o]. [Gestures both hands extending upward from the sides of his neck] lift the space, and.”

Student: Performs, this time with more resonant and less nasal tone quality

Frank: [Points at student] “There we go.” [plays next starting pitch]

Student: Performs, again with more resonant and less nasal tone quality

Frank: “Okay now you're cooking with all four burners!” [Plays next starting pitch]

Student: Performs, again with beautiful resonant and less nasal tone quality

- Frank: “Okay that’s where it is. Number one you look relaxed [demonstrates a tension-free neck], number one I’m not seeing that [models a lengthened neck]. You’ve got a thin neck and you’ve got to think you’re not doing an imitation of Audrey Hepburn [lengthens neck again]. It’s like turtle-time [gestures with two hands moving horizontally away from the neck while modeling relaxed neck]. That throat should feel condensed [gestures two hands vertically shortened height]. It’s like, [glances around the studio] my picture of Luciano is not here, it’s down in my office. Remember his neck. . .”
- Student: (with recognition) “He didn’t have collars.”
- Frank: “He didn’t have collars. Okay, it [gestures to neck] just sits there.” [Cues performance]
- Student: Performs the exercise with beautiful balanced tone, keeping the neck relaxed
- Frank: “That’s right.”

The student has achieved the target goal, he produced less nasal and more balanced vocal tone quality.

Eric Howe:

During a second session lesson with a lyric soprano (graduate student), Howe gave feedback about the student’s performance of Britten’s *Johnny* from *Cabaret Songs*: “Do for me, just let’s take the first three notes and I’d like you to do super slow with lots of voice in the consonants. [Models, slowly declaiming the text, emphasizing the consonants] *Oh the va . . .* Let’s be sure the consonant’s on the next note.” Howe set the target—he wanted the student to articulate the initial voiced consonant of the syllable “va” on pitch.

- Student: Performs, singing the notes of the phrase slowly

- Howe: [Nods] “That’s it. Now let’s do it again and be consonant- vowel, no transition time between. No slow movement from one to the other [gestures, thumb and index finger together then quickly apart]. It’s either consonant or vowel.”
- Student: “Okay, am I still doing long consonants though?”
- Howe: “Yes still the long consonants, just spring [gestures closed fingers springing open] right to the vowel after the consonant.” [plays starting pitch]
- Student: Performs the phrase very slowly with extended consonant articulation
- Howe: (Over performance) [watches, nods] “Yeah, ‘cause the transition time is what starts letting that jaw get a little tight [gestures turning fist, then touches jaw] and then we don’t quite get to the free release. Good, let’s start one more time.” [Plays starting pitch]
- Student: “Am I delayed too much?”
- Howe: “Maybe . . . it’s [models the rhythm then the phrase an octave lower] yum, pa-pum, pum; *Oh the valley*. It just goes right in.”
- Student: Performs the section again, this time clearly voicing the consonants on pitch and quickly transitioning to pure vowels
- Howe: “Super.”

The student has achieved the target goal, producing correctly pitched voiced consonants.

In the present investigation, all three voice teachers set achievable yet important lesson targets in the moment. They immediately recognized and addressed errors in technique, musical expression, and continuity and demonstrated persistence in helping students achieve the goals that had been set (Duke & Simmons, 2006a, p. 12).

Goals and Expectations: Select Achievable Targets for the Short Term

Duke and Simmons (2006a) observed their expert teachers set targets at a difficulty level “close enough to the student’s current skill level that the targets are achievable in the short term and change is audible to the student in the moment, when errors in performance require attention, teachers guide error correction successfully” (p. 12). More particulars about this element follow:

They accomplish this by clearly identifying the underlying fundamental issues that are causing problems and asking students to make adjustments in their playing accordingly. The teachers skillfully limit what they ask students to do in a way that ensures students will be able to make that adjustment in the moment. Because students are able to successfully manage the changes they are asked to make, they hear improvement immediately. (Duke & Simmons, 2006a, p. 12)

As shown in the following examples, this study’s three voice instructors also set achievable targets that were close to their students’ present technical capacity, with goal achievement being immediately audible. All three expert voice teachers identified and successfully guided correction of “underlying fundamental issues” (p. 12).

Erie Mills:

During a second session lesson with a soprano (opera chorus member), Mills stopped the student’s performance of Donizetti’s *Il faut partir*: [moves from piano, stands beside student] “Open your mouth...you try to be like a ventriloquist, like [makes sounds though closed lips]. Just let it drop [gestures hands downward movement alongside the jaw], almost feel like you are so out of control that you can’t stand it.” Mills set the target—she wanted the student to perform with a dropped-tension free jaw to produce more beautiful vocal tone quality.

- Mills: [Models the phrase at pitch with an open mouth position, turns her head to show profile, gestures circular hand around mandible, the gesture conveyed fluidity-relaxation] “*Vos regrets.*”
- Student: Performs with a lower jaw position but draws insufficient breath
- Mills: “Now if you would have taken a better breath.”
- Student: Repeats the passage, this time taking a better prepared breath, allowing the jaw to drop to the position Mills modeled, and producing a more beautiful and balanced tone quality
- Mills: (Over performance) [gestures hands dropping around jaw, floppy out of control arm movements . . . nods] “Yeah! Yeah, and that, let me say, can be done at any volume.”
- Student: (Smiles) “Yeah.”

The student has achieved the target goal; performing with a relaxed-dropped jaw position, and producing a more beautiful vocal tone quality.

Joseph Frank:

During a first session lesson with a tenor (sophomore undergraduate), Frank halted the student’s performance of Bononcini’s *Un’ombra di pace*: “You cannot croon this. I’m hearing [models, singing the phrase at pitch with mumbled consonants juxtaposed with a clearly articulated version], *Un’ombra . . . Un’ombra di pace si mo*. All those initial consonants have to be up and over.” Frank set the target—he wanted the student to perform with clearly articulated initial consonants.

- Frank: “Ready, on [plays starting pitch]. And.”
- Student: Performs, imitating Frank’s articulation but producing a closed [o] mouth position on *mostra*
- Frank: [Halts] “Terrific. [Models, singing the phrase at pitch, emphasizing a pure [o] vowel] *Si mostra di*. So that the quarter note on the F natural, I’ve got to hear the vowel longer [gestures

parallel index fingers a foot apart]. And put the [st] at the very end [sweeps right hand over to the side]. [Here, Frank set a second target, he wanted the student to produce a pure [o] vowel while clearly articulating the [st] of *mostra*. Much better start. And.” [Plays starting pitch]

Student: Repeats the passage, this time with well-articulated and correctly timed consonants and pure [o] held on the quarter note

Frank: (Over performance) [models [o] mouth position] . . . [smiles and nods, continues accompaniment to the next phrase]

The student has accomplished the target goal; he performed the phrase with clearly articulated consonants and also attained a second goal for pure [o] vowel production with clear-correctly timed consonant articulation.

Eric Howe:

During a first session lesson with a dramatic mezzo soprano (cantor), Howe stopped the student’s performance of an octave interval-held upper pitch *messa di voce* (volume change) exercise on [me, le, me] (the student’s voice quality sounded tense-forced): [Moves from piano, stands next to mirror, models rolled shoulders then ankles] “Let’s just check in on the [models very relaxed body], can you just [rolls each ankle] make circles with your” [rolls ankles, hums starting pitch, models the exercise down an octave while moving his arms, shoulders, and ankles]. Howe set the target—he wanted the student perform with a more relaxed body to produce a more beautiful- less tense tone quality.

Student: Performs the exercise while rolling shoulders, this time the tone was freer

Howe: (Over performance) [stands rolling shoulders, models loose, tension-free body . . . nods] “Good. On a scale of one to five where was your effort level?” [returns to piano]

- Student: “Oh, (laughs) zero.”
- Howe: (Laughs) “I love it! All that sound for minimal effort! Yeah, that’s what we’re looking for. You put in some energy in, of course. But that was it!”
- Student: (Smiles) “You were distracting me with all the crazy dancing.”
- Howe: (Laughs) “And that’s helpful for you so you don’t lock down [tightens-contracts body] on stuff. Let’s do one more.”
- Student: Student repeats the exercise, again with a more relaxed body and producing a more relaxed and more beautiful tone quality
- Howe: (Smiles) “Wow!”

The student has accomplished the target; she relaxed her inappropriate physical tension and produced a more beautiful, relaxed tone quality.

In the current study, all three voice teachers set attainable lesson targets, positioned appropriate to students’ technical capacities. They instantly detected and addressed underlying technical issues, helping students make corrections; improvements were audible in the moment (Duke & Simmons, 2006a, p. 12).

Effecting Change: Course of Music Directs Lesson

Duke and Simmons (2006a) noted that across their three expert teachers “in general, the course of the music directs the lesson; errors in student performance elicit stops” (p. 13). More details about this common element follow:

Students come to lessons with a command of the repertoire. Notes and rhythms, except when these have been learned incorrectly, are not topics of discussion. Teachers allow students to play through pieces or sections of pieces in their lessons until errors occur. These are dealt with the instant they occur, with the teacher immediately interrupting performance. Because errors are not permitted to occur without correction, teachers reinforce the idea that performing beautifully and accurately is the goal of every performance trial (Duke & Simmons, 2006a, p. 13).

This study's findings aligned with Duke and Simmons' results as demonstrated by the examples that follow. Across the three voice teachers, students' musical performance directed each lesson, with errors eliciting correctional halts (p. 13).

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied voice instructor), Mills halted the student's performance of Donizetti's *Prendi per me sei libero*: "One of the things you are not doing . . . is breathing, even when Donizetti gives you rests." Mills set the target – she observed errors in breathing.

- Student: Repeats the passage
- Mills: [Halts] "Not more air, the way you take the air in." [Models breath, gestures hands elongating the in-seam]
- Student: Repeats the passage, this time breathing on the rests and imitating Mills' elongated breath]
- Mills: [Nods, gestures to continue, continues the accompaniment to the next phrase]

With Mills' approval and continuing accompaniment, both teacher and student recognize that the target goal for breathing has been achieved.

Joseph Frank:

During a second session lesson with a countertenor (freshman undergraduate), Frank halts the student's performance of Purcell's *Music for a while shall all your cares beguile*: "The 'm' is on the pitch of *music*." Frank set the target—he heard the student perform an under-pitch voiced 'm' consonant.

- Frank: [Models falsetto at pitch, placing 'm' on the pitch of the [u]] "*mu. mu, mu.*"

- Student: Repeats the passage, placing the ‘m’ on pitch but performing without tonal energy-spin
- Frank: [Nods] “Spin.”
- Student: Repeats the phrase, this time slightly under pitch
- Frank: (Over performance) “Keep your butt tucked! . . . [Halts] That’s flat.”
- Student: Repeats the phrase, this time with a narrow mouth opening
- Frank: “Why are you singing [models ‘m’ with tight lips and closed jaw)? Give me an [u] position.” [models [u] mouth position]
- Student: Repeats the passage
- Frank: [Halts] “Sloppy, because you’re breathing in a generic position. [Models, falsetto at pitch, breathing through the [u] position] *Music*. As opposed to” [models generic mouth position breath] *Music*.”
- Student: Repeats the passage, continues to the next phrase following Frank’s accompaniment
- Frank: (Over performance) [models mouth position for *mu* . . . gestures spinning hand . . . halts] “Watch where the tongue is [models, singing falsetto at pitch] *shall all*. See where my tongue is . . . remember, [models, breathing through the [u] position, singing falsetto at pitch] *mu*.”
- Student: Repeats the passage, this time breathing through the [u] position, articulating ‘m’ on pitch, and producing a beautiful vocal tone
- Frank: [Smiles] “Good!”

With that approval, both instructor and student recognize that the target has been achieved.

Eric Howe:

During a second session lesson with a lyric soprano (graduate student), Howe

gave feedback about the student's performance of Britten's *Johnny* from *Cabaret Songs*:

"The main trick is just to figure out where the phrases start. Howe set the target—he heard the student perform incorrect phrasing.

Howe: "So you just went [plays accompaniment, models an octave down] *he went away*. [continues accompaniment to the waltz section, models the breath and phrase beginning, an octave lower] *Oh, oh but he was*. [Repeats accompaniment introduction, nods and verbally cues student] One."

Student: Performs the first note of the phrase

Howe: [Halts] "Yes, you weren't sure of it even though you were looking at it. [Plays accompaniment, models the previous phrase ending and the next phrase an octave lower] *away. . . Oh*"

Student: Starts the phrase

Howe: [Halts] "Can you take your breath a little sooner? That will help; that will make it a little more inevitable."

Student: Repeats the passage, this time breathing earlier and phrasing correctly

Howe: "Ok that's better."

The student has achieved the target goal for correct phrasing.

In the current study, all three voice instructors had students perform through exercises and repertoire until errors occurred. When errors took place, the teachers immediately halted for corrections, suggesting that they, too, allowed "the course of the music [to] direct the lesson" (Duke & Simmons, 2006a, p. 13).

Effecting Change: Tenacity

Duke and Simmons (2006a) reported that their three expert teachers "were tenacious in working to accomplish lesson targets, having students repeat target passages until performance is accurate (i.e., consistent with the target goal)" (p. 13). Further

specifics about this element of expertise follow:

Once a target has been identified, teachers have students repeat passages until positive changes are made and the students perform accurately. They use a variety of feedback and modeling to elicit changes and do not give up or simply tell students to “go practice.” The targets they choose to work on are noticeably directed at characteristic sound production and appropriate musical interpretation, and are carefully chosen so that success is achieved. (Duke & Simmons, 2006a, p. 13)

This study’s results aligned with Duke and Simmons’ narrative; all three expert voice teachers showed tenacity in helping students achieve lesson targets. Each teacher had students repeat passages until they were successful and their performance was “consistent with the target goal” (p. 13).

Erie Mills:

During a second session lesson with a lyric coloratura soprano (opera chorus member), Mills gave feedback on student’s performance of Donizetti’s *Il faut partir*: “Now, let me just say, when you gear up, when you take a really good breath, and usually it’s gonna happen on a cadenza, the sound is really baawm. I think this thing about, sometimes you do a phrase and . . . I think it’s a breath thing more than it is a technical thing...because I noticed when it didn’t sound so good was when you forgot to breathe.” Mills set the target—she discerned problems with sound production caused by errors in breath timing and capacity and she wanted the student to produce more beautiful tone quality by breathing correctly within the phrase.

Mills: “Most of this is very, very good . . . then there are these places that kind of get out of whack. I think it’s because you don’t, you’re not approaching it like every phrase is a cadenza. I do not mean to sing louder, that is not what I mean, I just mean that it’s

got to have this kind of breathe [models full relaxed breath] and raar, roll out sound.”

Student: “Yeah cause I feel there are certain phrases where I feel like it’s easier to find for some reason.”

Mills: “Well, it’s a lot harder within the middle voice stuff because you have to keep singing. When you do a cadenza you stop and then you go ‘hey, I’m gearing up’ [breathes] and [performs a short cadenza] da, da, da, da. I mean you have your own timing. So let’s just go back. And don’t be afraid also in this kind of music to allow us to hear you breathe. For example, the second verse [models beautifully with dramatic audible breaths] *Il faut partir! Adieu! Vous que, dès mon enfance,* [speaks] breath, *Sans peine, j’appris à chérir.* And I think those accents; you could do more if you want to. They don’t have to be louder...but I think it helps with the breath [models rhythmic, chanty breaths] that kind of monkey thing going on.” [Beautifully models *adieu* at pitch, performing a relaxed, well-placed A natural]

Student: “I’m still trying to work that out; I know what you’re saying.”

Mills: “There again I think it’s a breath thing, because [models correct breath] You’ve got to get rid of the old [breaths out] and get some new in there! Let’s just try from the beginning.”

Student: Starts the piece again.

Mills: (Over performance) “Breathe...breathe . . . [models audible breath] . . . get rid of the air and go. [Halts] But don’t try to make it so heavy [models at pitch] *Vos regrets* Feel like uh huh, u-huh [imitates Mae West]. It’s gonna be louder because it’s higher, Think about the word [declaims dramatically] *Vos regrets pour mon Coeur,* u-huh, u-huh, u-huh [models rhythmic breathing with Mae West imagery]. Yeah it’s a Mae West note. But up to that point excellent, really excellent! Breathe.” [models audible breath]

Student: Repeats the phrase

Mills: (Over performance) “. . . breathe . . . [models audible exhale] . . . [Halts, moves to student, gestures stop with hand, shakes

head]...just go [models quick breath, sings] *Désormais, loin de vous m'enfuir!*”

- Student: Repeats the phrase
- Mills: “. . . Now if you would have taken a better breath . . . So you’re breathing and then you go.”
- Student: Draws a better initial breath, performs the section again, this time breathing correctly- to greater capacity at appropriate places within the phrase and producing more beautiful sound throughout
- Mills: (Over performance) [Nods, looks significantly at student] “The breath setup was better. . . (laughs) Now that that’s fixed.”

The student has accomplished the target goal of breathing with correct timing and capacity to produce beautiful vocal tone throughout the section.

Joseph Frank:

During a second session lesson with a countertenor (freshman undergraduate), Frank stopped the student’s performance of five-note scales on [wi, we, wo]: “The reason I put the ‘w,’ I want you to really feel the pressurization.” Frank set the target, he wanted the student to articulate ‘w’ with the correct sensation of pressurization.

- Frank: [Models the exercise down an octave, gestures twisting fist on each emphasized ‘w’] “[wi, we, wo].”
- Student: “When you say pressurization do you mean air pressure?”
- Frank: “No, I mean feel the tension, the pressurization of the lip [touches lips, models the exercise down an octave, emphasizing ‘w’s] [wi, we], wuh, wuh, wuh, wuh, wuh. But I’m not going [models exaggerated lip pucker], I’m not using the outward lips. I’m just keeping it really up front. [Models the exercise falsetto, then down an octave] See how quickly it is.”
- Student: “Yeah. Performs the exercise, “Hmm, I didn’t like that at all.”

- Frank: “No, okay sing [models repeated notes down an octave] [wi, wi, wi].”
- Student: Performs
- Frank: “Okay there! You feel how much tension, do it again, feel for the” [gestures with both index fingers touches corners of mouth].
- Student: Repeats the exercise
- Frank: “Don’t stick any air in your cheeks.” [Models repeated [wi] falsetto on pitch]
- Student: Imitates Frank “[wi, wi, wi]”
- Frank: That’s it, [Models falsetto at pitch] “[wo, wo, wo].”
- Student: Performs “[wo, wo, wo].”
- Frank: “They got better.”
- Student: Performs “[wo, wo, wo].”
- Frank: “More, energy.”
- Student: Performs “[wo, wo, wo].”
- Frank: (Over performance) [Models mouth position, models falsetto at pitch] “[wo, wo, wo, wo, wo].”
- Student: [Imitates Frank] “[wo, wo, wo, wo, wo].”
- Frank: [Points] “Okay, the last two were correct. I don’t want any, don’t push any air into your cheeks.” [Models falsetto at pitch] “[wo, wo, wo, wo, wo].”
- Student: “Okay, [Imitates Frank] [wo, wo, wo, wo, wo].”
- Frank: “There we go.” [Plays five-note scale, models falsetto at pitch] [wi, we].
”
- Student: Performs, sings incorrect vowel “aah.”

- Frank: [Speaks] “[wi, we, wo].”
- Student: Performs the exercise
- Frank: [Speaks] “[wi, we, wa].”
- Student: Performs the exercise
- Frank: “Okay good, you finally got there. You have to oval; the [a] has to be oval. [Models falsetto at pitch] “[wi, we, wa].”
- Student: Performs the exercise, this time with correctly pressurized and positioned lips and pure vowels
- Frank: (Emphatically) Good! So you’re actually committing to each of those vowel positions; from the “w” to the vowel is an instantaneous going to the phoneme.”

With that approval and positive feedback, both teacher and student recognize that the target has been achieved, the student articulated a series of ‘w’s with the correct sensation of pressurization.

Eric Howe:

During a first session lesson with a bass-baritone (amateur performer), Howe halted the student’s performance of vowels in Brahms’ *Denn es gehet dem menschen*: “Will you do it one more time and see if you remember any of the places that feel freer than other places. We want to find the freest, easiest sensation and eventually let that be the model.” Howe set a target, he wanted the student to identify the vowel he was able to produce with a sensation and sound of relaxed-tension free tone quality .

- Howe: “Take that same of set of vowels and string them together into a flow. You can already hear this leaning come into play.”
- Student: Performs the succession of vowels in the phrase, appears to concentrate on his own vocal sound and related sensations to discovering the most relaxed and beautiful vowel

- Howe: “What do you sense?”
- Student: Declaims a free, resonant [o]
- Howe: [Models, imitating the student’s free [o] vowel] “Um-hum, [o] really does it for you . . . it opened up. Will you take an [o] then for a moment and see if we can get the openness of it into some other vowels. So do for me [models open resonant vowels in the low register, gestures a slow arching arm movement] [o, e, i], just in a single note.” [plays starting pitch]
- Student: Performs the vowel series producing a freer more beautiful tone on [o] that he was able to maintain into [e] and [i] tone production
- Howe: “Yeah you got there.”

The student has achieved the goal, identifying a relaxed, beautiful tone quality on [o] and then applying this relaxed tone production to [e] and [i] vowels.

In the current study, all three vocal teachers set targets that focused on “sound production and appropriate musical interpretation” (Duke & Simmons, 2006a, p. 13). The instructors had students repeat performance trials until they achieved the target goal, modeling and offering various feedback and directives until students were successful. This suggests that they, too, showed tenacity in helping students achieve targeted lesson goals.

Effecting Change: Immediately Address Technical Errors

Duke and Simmons (2006a) noted across their applied teachers, “any flaws in fundamental technique are immediately addressed; no performance trials with incorrect technique are allowed to continue” (p. 13). More particulars about this element of expertise ensue:

Teachers pay careful attention to the way students execute physical movements in every performance and flaws in technique do not go unnoticed or unmentioned.

When students demonstrate a fundamental flaw, that problem becomes the utmost priority, superseding any other previously stated performance target. Repetition of the targeted physical movement continues until the technical flaw is corrected, and the lesson resumes its course. (Duke & Simmons, 2006a, p. 13)

Similar to Duke and Simmons' findings, across this study's three voice teachers "flaws in fundamental technique are immediately addressed; no performance trials with incorrect technique are allowed to continue" (p. 13).

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied voice instructor), Mills stopped the student's performance of descending five-note scales on [u]: "We're going to do all these again . . . but this time I want you really thinking about in-seam and that the torso, actually the torso gets longer as you hit the first note, the five, and as you go down the scale. And I mean torso not going up like this [models raised sternum] but, that, it's almost like, pardon the expression, like the in-seam is being sucked to the floor and that's what makes the torso longer, not here, nothing with the shoulders. And the approach to the first note is always from above. It's like dunking a basketball [gestures dunk], boom" Mills set the target, she wanted the student to produce a more beautiful tone quality by applying the sensation of lengthening her torso downward, rather than raising her sternum and shoulders—while performing vocal onset informed by the image of fluid fall from above rather than upward pull from below.

Student: Performs the exercise, this time responding to Mills' metaphor with more relaxed fluidity on onset and producing a more beautiful tone; her sternum and shoulders remained level

Mills: (Over performance) [gestures dunking basketball, nods, models [u] mouth-rounded lips, plays next descending chord]

- Student: Performs the next scale
- Mills: [Halts] “The only thing that would make these better would be if I got a better [u] vowel.” Mills identified a technical flaw related to the student’s vowel production and set an additional target for vowel purity on [u]. [Plays next chord]
- Student: Performs the next scale
- Mills: [As student performs models [u] cheek, lip, jaw positions, makes blowing sound] “Blow, blow let the bad air go.” [blows out air]
- Student: Performs the next scale imitating Mills’ facial positions and breathing; her [u] vowels were pure
- Mills: [Blows] “Good, start right there [models five note ascending-descending scale] [du, du, di, du, du].” [Plays starting chord]
- Student: Repeats the exercise, producing pure [u] vowels but with less abdominal drop, producing a less expansive tone
- Mills: [Halts] “The same thing happens here but it goes down and up; long and then back, long and then back. As the phrase goes up the torso gets longer and then it goes back to normal size as you go down [plays starting chord a half step higher]. [du, du, di, du, du].”
- Student: Performs the exercise, this time producing an expansive tone but less pure [u]
- Mills: (Over performance) . . . “Vowels.” [Plays next chord]
- Student: Performs the exercise again, this time applying Mills’ metaphor of torso-inseam lengthening, expanding the lower abdominal muscles downward and producing a more beautiful, expansive vocal tone and maintaining pure [u] vowels
- Mills: “Nice . . . good. Yeah that’s all you have to think about. Well, among other things, fifteen million other things . . . in the sixty minutes we’re here.” (Both laugh)

The student has attained the original proximal goal, producing more beautiful expansive tone quality by applying Mills’ imagery of torso-inseam lengthening breathing to find the

sensation of lower abdominal expansion while maintaining correct sternum and shoulder height. The student also responded to the metaphor of producing vocal onset from above, producing the initial tone with more fluidity and less audible tension. Here, Mills recognized and immediately addressed a technical error in impure vowel production, momentarily diverting work toward the first target goal for vocal onset and lower body expansion. Mills led the student through numerous performance trials until she achieved the additional-technical target for pure [u] vowel production and the initial goal for lower torso expansion and fluid vocal onset from above, related to tonal beauty.

Joseph Frank:

During the first session lesson with a tenor (junior undergraduate), Frank stopped the student's performance of Respighi's *O falce di luna calante*, working towards a goal of correct intonation and 'spin' (vibrato) on 'n.' (Student) Repeats the phrase. Frank halts performance [shakes head, models raised-upper lip, puckered mouth position] "When you go to an [i] vowel you sometimes want to chew (move) it." Frank set the target—he wanted the student perform without moving his upper lip position on [i] vowel production.

Frank: [Models the phrase at pitch juxtaposing moving and correct [i] vowel mouth positions] "*a me ti libre, a me ti libre* [gestures, pointing to lips]. That [i] vowel and that [e] position are behind the front teeth not in front of it [models raised-upper lip then lowered-puckered lip mouth positions]. Otherwise you're doing guppy technique. When you look at your videotape you're going to see that that looks not normal." (Both laugh)

Student: Repeats the passage, this time with correct, constant upper lip position on the [i] vowel

Frank: (Over performance) [models correct [i] mouth . . . nods, smiles, continues accompaniment to the next phrase, halts] (resumes focus on ‘n’ articulation) “Listen to the ‘n.’”

With Frank’s approving gestures and decision to set a new target related to earlier work on ‘n’ intonation, both teacher and student understand that the target for mouth position has been achieved; the student maintained correct upper lip position for pure [i] vowel production throughout the phrase.

Eric Howe:

During a second session lesson with a coloratura soprano (graduate student), Howe halted the student’s performance of *I’m just a Girl Who Can’t Say No*: “Okay, let’s stop and work this a little bit. I’m liking the lower half of the range when you do it, but you’re not enough in the twang when you get into the middle. [Models, speaking the text] *I’m jist, I’m jist a girl*. So the trick with this is it sits a little higher and you still need the character voice.” (Student) “Is it about accent or placement?” (Howe) “Go for it with an accent and see if it’ll do it, you want to be sure it’s forward. So let’s go ahead with the chorus again and can you sing it without me (playing the accompaniment), I just want to watch that.” Howe set the target—he wanted the student to produce a more forward placed tone quality by applying vowel modification in her character dialect.

Student: Begins the chorus

Howe: [Halts] “Quiet breath.” Howe observed incorrect breath intake and set an additional target for a quiet breath

Student: Repeats the section, this time drawing a quieter breath

Howe: (Over performance) “That’s right . . . but smaller vowels [models, speaking the text] *fix, fix*, [halts] *fix*.”

- Student: Speaks the words of the chorus in dialect, imitating Howe's model and pronouncing *fix* closer to an [i] vowel
- Howe: "Yup, that's the character. [Models, speaking with dialect] *turrible.*"
- Student: [Imitates Howe] "*Turrible.*" Repeats the chorus, this time with over-resonant tone, the vowel production for "fix" was too spread
- Howe: (Over performance) "And go right to the mouse [halts, gestures closed fingers in front of lips, speaks the word in dialect] *fix.*"
- Student: Repeats the word on pitch: "*fix*" again producing a smaller vowel. Begins the chorus again
- Howe: [Halts, shakes head] "It's too spacey...you don't want to sound like Minnie Mouse but you also don't want to have [models exaggerated over-resonant tone] *I'm just.* That just doesn't sound like."
- Student: Repeats the phrase, this time with smaller [i] vowel production on "fix," balanced tone quality, and quieter but efficient breathing
- Howe: (Over performance) "That'll work . . . I'll take it."

With that feedback, both student and teacher understand that the target goal has been accomplished. In this example, Howe immediately identified an error in breathing technique while working on vowel production related to tonal placement. He helped the student achieve both target goals; she was able to produce character voice with correctly modified vowels and more forward placed tone quality, and also accomplish quiet but efficient breathing.

In the present study, all three teachers prioritized technical flaw correction over previously set targets, shifting focus to address technical errors until rectified. Through this prioritization, the voice teachers also demonstrated primary concern for instilling correct, fundamental technique.

Effecting Change: Lessons Proceed at Rapid Pace

Duke and Simmons (2006a) observed their expert instructors conduct rapidly paced lessons noting that “because teachers identify targets quickly and concisely, teacher-student interactions occur frequently” (p. 13). More details about this element of expertise follow:

This rapid alternation between episodes of teacher activity and student activity increases the students’ opportunities to respond and receive feedback about their performances. Teacher activity episode are generally very brief. Teachers state their feedback and directives succinctly and straightforwardly. (Duke & Simmons, 2006a, p. 13)

As evidenced in the following transcribed rehearsal frames, all three expert vocal instructors conducted “intense, rapid paced lessons,” succinctly identifying target goals and allowing frequent feedback and teacher-student interaction (p. 13).

Erie Mills:

During a first session lesson with soubrette soprano (professional) contained a rapid interchange addressing vowel production; this type of interchange typified Mills pace in every observed lesson. Mills halted the student’s performance of Verdi’s *Sul fil d’un soffio etesio*: “Now, there’s one place to, one time give me [models the phrase an octave lower] *carmi e malie*, give me an [i].” Mills targeted pure [i] vowel production.

Student: Repeats the phrase

Mills: [Halts] “No, but that sounds like mala.” (the student did not clearly articulate both vowels [i] and [e] in the word “malie”

Student: Repeats the passage

Mills: [Halts] “Do [i]” [plays pitch] That’s not that high, we were doing [i]s. ... I know you can do an [i] vowel. I don’t want you to pull

hair to do it, just do it with air.” [Models the phrase down an octave]

Student: Repeats the phrase down an octave

Mills: [Halts] “Ah, that’s a big old Mae West note (Mills applied imagery to help the student understand the Italian text’s cadence and syllabic stress

Mills and Student: [Speak together, imitating Mae West’s hip movement, word cadence-emphasis] “uh-huh, uh-huh, *carmi e malie, uh!*”

Student: Repeats the phrase at pitch, this time producing pure [i] and [e] vowels with stunning tone quality

Mills: [Pounds the piano bench, makes an ‘I told you so’ expression]

Student: (Laughing) “Okay, you were right!”

The student has achieved the target goal for pure [i] and [e] vowel production on the word *malie*. Mills demonstrated tenacity, applying a variety of modeling, feedback, and imagery to support student goal achievement.

Joseph Frank:

During a first session lesson with a countertenor (freshman undergraduate), Frank halted the student’s performance of five-note scales on [æ]: [stands, moves near the student, gestures, pointing to mouth] “Get the position [models breath with [æ] mouth position, performs the vocalise falsetto at pitch, points to mouth, taps upper lip], it’s right there.” Frank set the target—he wanted the student to perform correctly timed and positioned [æ] vowels.

Student: Performs, attains correct [æ] vowel position midway through the exercise.

- Frank: “See where it ends up getting?”
- Student: (Laughs) “Yeah.”
- Frank: “You have to start there.” [Plays and models a vocalise (5, 5, 5, 4, 3, 4, 3, 2, 1, 5, 1) on [æ]]
- Student: Performs the vocalise with correct [æ] vowel positioning
- Frank: (Over performance): “Keep it. . . There ought to be space. . . Good, connect it . . . connect it.”
- Student: [Stops] “Should I put a portamento there?”
- Frank: “No portamento.” [Models, singing the fifth interval falsetto on pitch] “[æ]. And.”
- Student: Performs the vocalise, this time attaining correct [æ] vowel position on the breath and maintain position through the exercise
- Frank: “There we go! Okay, so that each one of those vowels when it gets to position it’s like, remember I said breathe, stretch, sing? So that position when I’m breathing, I’m breathing in the position I want for the vowel. If I’m gonna be an [i] it’s gonna be [models [i] intake], [i] breath, if [o] [models [o] intake], [a] [models [a] intake]. It’s on the intake. Don’t breathe generically and then go to position.”

With that approval, both teacher and student recognize that the target goal has been achieved; the student performed the exercise with correctly timed and positioned lips, jaw, and tongue for [æ] vowel production.

Eric Howe:

During a first session lesson with a lyric soprano (graduate student), Howe halted the student’s performance of Britten’s *Johnny*: “A little mixy-er, sometimes that doesn’t happen enough and so the note doesn’t quite settle into pitch.” Howe set the target—he wanted the student to execute a partial or “mixed” register change rather than a complete

shift from head to chest register on the descending melody.

- Student: Repeats the phrase
- Howe: [Halts] “That’s where I was hearing it.”
- Student: Repeats the phrase singing with little abdominal support and still making a complete shift from head to chest register
- Howe: “It sounds like it’s a little under sung.”
- Student: Repeats the phrase, again making a complete shift from head to chest register
- Howe: [Halts] “It’s only when you come from above, when you’re from below you’re already in that mix easily.”
- Student: Performs the passage again, this time executing a partial-mixed register change into the lower notes; the voice was well better intonation and sounded more beautiful
- Howe: [Nods, smiles, continues playing the accompaniment into the next section]

The student has achieved the target goal; she was able to execute a partial or “mixed” register change on a descending melodic passage.

In the present study, the voice teachers conducted rapidly paced lessons, characterized by frequent alternating teacher and student activities. Across all three instructors, feedback utterances, modeling, and directives were generally concise.

Voice Teaching Aligned with Duke and Simmons' (2006a) Elements with Minor Variations

Goals and Expectations: Assigned Repertoire Well Within Students' Capabilities

Duke and Simmons (2006a) observed their three applied teachers assign repertoire “well within students’ technical capabilities; no student is struggling with the notes of the piece” (p. 11). This element of expertise continued:

The fact that students are performing selections from the standard repertoire that are well within their technical and musical capabilities affords more time to focus on the consistent application of excellent fundamental technique in the context of expressive music making. The challenge for the students, then, is to execute the technical and musical demands of repertoire with the utmost skill every time they engage in performance. Students come to lessons having learned the notes of the piece and having had time to make independent interpretive decisions. It is from this point- notes learned and musical ideas formulated- that work in the lesson begins. (Duke & Simmons, 2006a, p. 11)

The current study’s findings aligned with Duke and Simmons’ results in that all three voice teachers assigned performance repertoire that was within students’ technical capacities. However, in variance to the original narrative, all three voice teachers also assigned exercises that explored the limits of students’ current vocal capabilities; in some cases students appeared to be “struggling with the notes” (p. 11). Also, there was little in the lesson data to suggest that the teachers expected students to form “independent interpretive decisions” (p. 11) before lessons commenced.

Erie Mills:

In the opening segment of a lesson with a soubrette soprano (professional performer), Mills vocalized the student on a five-note scale on [de, de, da, de, de] to the extreme upper notes of her range. Here, Mills set an implied target for range extension.

- Mills: (Over performance) “Good . . . C# . . . good... [Halts] watch [models, prepared breath, beautiful tone] [de, de, da, de, de]. Just be really ready for it u-huh, u-huh.” [Modeling, imitating Mae West’s relaxed confidence and accent pattern]
- Student: Repeats the exercise a half step higher
- Mills: (Over performance) [gestures relaxed arms, waves] “Catch the wave; join the wave, here it comes, here it comes!”
- Student: Continues, ascending by half steps
- Mills: [Halts] “Think [i] and say [a].”
- Student: Repeats the exercise, ascending by half steps.
- Mills: (Over performance) “The wave . . . the wave.” [Halts, nods] (smiles) “G natural (G6)! That’ll do!”

With that approval, both Mills and the student understand that the student has achieved the target; The student performed the exercise to the extreme high range, producing beautiful and relaxed vocal tone.

Joseph Frank:

During a first session lesson with a basso profundo (junior undergraduate), Frank halted the student’s performance of arpeggios to an eleventh on [æ]: [shakes head] “Space” [gestures raised, arched back of hand]. Frank set the target—he wanted the student to raise his soft palate to increase resonance in the upper range.

- Student: Performs
- Frank: (Over performance) [nods, models [æ] mouth position] “We’re doing it fast because I don’t want you to think about where you are (smiles). And.”
- Student: Performs the exercise

- Frank: “Very good. Now combination [plays then models an extended vocalise on pitch, gestures raised, arched back of hand]. Keep the space open. And...”
- Student: Performs, loses breath support, stops
- Frank: (Encouraging)“One breath. Let’s go. You got it. You know where you’re going now, right? It shouldn’t frighten you. Remember you’re lifting the space [gestures raised, arched back of hand] and everything is staying in that area [gestures, wiggles fingers of the other hand under the raised arched hand]. It’s not that you’re going any higher than that [gestures, raises the other hand above the raised arched hand]. It’s right [moves hand back under arched hand, touches vertical fingers to palm above], you’re already there.”
- Student: Performs the arpeggio, this time producing a resonant tone
- Frank: (Over performance) [gestures raised arched back of hand, smiles, nods] “Very good. That’s a very nice F. . . You couldn’t sing a Db when you first came here (both laugh). So we’re adding on to that. So now all of the arias that you brought to me because you do your homework, that you wanted to sing, we can start looking at these again because you now have these notes that you can play with. I mean just to be able to hit a high note isn’t, you have to be able to spend time on it.”

The student has achieved the target goal; he produced resonant notes in his upper range, presumably by raising his soft palate.

Eric Howe:

During a first session lesson with a coloratura soprano (graduate student), Howe stopped the student’s performance of repeated staccato-legato arpeggios to a twelfth on [a]: “Be sure that you’re really connecting with breath (Howe applied a metaphor for continuous energy) on that legato, especially near the end. No bumps, no throaty things.” Howe set the target—he wanted the student to perform legato arpeggios in the upper range without disconnecting from continuous breath flow-energy.

- Howe: [Gestures, slowly raising both arms out and upward]
- Student: Repeats the vocalise [holds both arms extended shoulder-high, lowers arms during the last four notes, losing breath energy and performing with glottal breaks in the legato line]
- Howe: “I’d like you to imagine that you’re continuing this way [gestures, slowly raising both arms out and upward] all the way to the end.” [Plays starting pitch, one half-step higher]
- Student: Performs, this time raising both arms out and upward to the end; her tone remained legato and energized throughout the exercise
- Howe: (Over performance) [slowly raises right arm] “There you go! It was just an energy thing.” [Plays next starting pitch, one half-step higher]
- Student: Performs the vocalise, raising both arms
- Howe: “And when you keep the energy in it, especially in the legato, you’re in better tune coming down.” [plays chord a half-step higher]
- Student: Performs the vocalise, raising both arms
- Howe: “Super, a couple more.” [plays chord a half-step higher]
- Student: Performs the vocalise, raising both arms
- Howe: “Keep the breath moving through that top. Sounds great.” [plays chord a half-step higher]
- Student: Performs the vocalise, raising both arms and producing energized legato tone
- Howe: “Thank you! Wanta do any more of that?” [Plays chord a half-step higher]
- Student: (Laughs) “Sure!” Performs the vocalise two more times, each time raising her arms to the end and performing the legato section with consistent energy-breath flow
- Howe: (Smiles) “Now we just have to find some music that uses it!”

Student: “What was that?”

Howe: “High G. One of these days I have to find that Schoenberg *Herzgewächse* for you.”

The student has achieved the target goal, performing legato arpeggios with continuous breath energy and beautiful tone quality to the extreme high range.

Each of this study’s voice teachers assigned performance repertoire within students’ technical and musical capabilities. They also assigned vocal exercises that stretched the limits of their students’ current vocal capacities. There was little evidence that the voice teachers expected students to “make independent interpretive decisions” (p. 11) during practice.

Effecting Change: Structure Lesson Like a Performance

The expert instrument teachers in Duke and Simmons' (2006a) study had students perform repertoire "from beginning to end; in this sense, the lessons are like performances, with instantaneous transitions into performance character; nearly all playing is judged by a high standard, 'as if we are performing'" (p. 12). More details about this element of expertise follow:

The teachers create opportunities for students to practice performing by structuring lessons in ways that make the lesson performances resemble public performances. In the case of only one teacher (True) do lessons generally begin with uninterrupted performances of prepared repertoire. In subsequent performances with Professor True and in all performance with Professors Killmer and McInnes, students are interrupted only when errors are made. When giving feedback, the teachers describe how an audience in a concert hall would perceive the students' performances, which serves to emphasize the point that every performance trial should be executed as though people were "paying to hear it," whether the performance takes place in a practice room, lesson studio, or concert hall. (2006a, pp. 12-13)

In the present study, all three vocal instructors had students perform repertoire from start to finish, interrupting only for error correction (p. 12). However, in offering feedback, the teachers rarely referenced audience perceptions. The three transcribed lesson frames that follow were the only instances of feedback referencing listener expectations in the data set.

Erie Mills:

During a lesson with a coloratura soprano (community college applied voice instructor), Mills stopped her performance of Donizetti's *Prendi per me sei libero*: "Take your time; what, do you think the people are going to walk out of the theater?" Mills set the target—she wanted the student to slow the tempo.

- Student: Repeats the phrase, still rushing her tempo
- Mills: [Halts, expressively models the phrase at pitch in slow tempo] “*Saggio*, [expressive breath] *onesto*.”
- Student: Repeats the phrase, a little slower
- Mills: [Halts] “Whoa, whoa, I gotta to hear all the notes.” [Models the trill at pitch in a slow tempo]
- Student: “Am I going through the trill too fast?”
- Mills: “Yes. Yes, you’re going through them too fast. Again its tempo, but it’s in this nice two [expressively models the phrase down an octave on ya, da, da, da, da] . . . Take a bigger breath before those . . . [Plays, models at pitch with a *rallentando*] *Ah no. Ah no*. That’s what you’re saying. [Models the phrase with a dramatic *rallentando*] *Ah no. Ah no* . . . I have to have the groups of four. . . Now I want all of the notes.”
- Student: Repeats the passage in a slow tempo with expressive pauses and phrasing
- Mills: “Yeah, good!”

With that approval, both instructor and student understand that the student has achieved the target, performing the in a slow tempo.

Joseph Frank:

During a first session lesson with a tenor (junior undergraduate), Frank stopped the student’s performance of Respighi’s *O falce di luna calante*: “Good, now can I have more energy?” Frank set a target for more vocal energy.

- Frank: [Models the opening phrase with expressive energy at pitch] “*O falce di luna*.”
- Student: Repeats the passage

- Frank: [Halts] “Sing forward; you are never backing away from it.”
- Student: Repeats the passage, this time with more forward energy
- Frank: (Over performance) “Good. [Continues accompaniment to the next phrase, gestures raised arched back of hand . . . nods . . . halts, models imitation of student’s under-energized tone]. Pitch it like your singing it an octave higher.” (Models the phrase with energy at pitch)
- Student: Repeats the passage, this time producing somewhat swallowed and tense low notes
- Frank: [Halts] “Placement of [e] front!” (Models juxtaposed front and back placed [e] vowels at pitch) “You should never sound like you have no notes below that.”
- Student: Repeats the passage, this time with forward-placed [e] and energized tone
- Frank: [Nods, smiles] “Good!”

With that approval, both teacher and student recognize that the target goal has been achieved, the student performed with consistent vocal energy and correctly placed low notes.

Eric Howe:

During a second session lesson with a tenor (graduate student) Howe gave feedback after the student’s performance of Widor’s *Rude Maestro*: “I think you tend to use only part of your voice.” Howe set the target—he wanted the student to sing with full energy, support, and balanced tone quality.

- Howe: “And it’s Widor! . . . High Romantic! And this is the *forte* in the piece. Then you get these lovely delicate things that follow in the pianissimo.”
- Student: [Looks at his score] “So let’s see, what is the text there?”

- Howe: “Yes, please tell me.”
- Student: [Reads] “*And it knows oh girl who has experienced suffering. Your whole heart?*”
- Howe: “*Il nobile, with your noble heart. With the nobleness of your heart . . . I’d like to go back to the first phrase and pulsate eighth within the quarters. And let that be a little sense of a body springiness. Especially in the breath system.*”
- Student: (Asks question to clarify the task) “We’re doing this at a slow tempo? So it’s a little more difficult than it might otherwise be.”
- Howe: “That’s right. Well it’s *adagio*, yes, but *adagio* to the four so you get that inner pulse going. [Models the phase opening down an octave, bobbing on the inner pulses] *Ru-de mae-stro di gentil.*” [Plays starting note]
- Student: Performs the section, with a subtle pulsation throughout
- Howe: [Halts at the section ending] “Yeah I like that a lot better. Still got a little bit of de-grounding [taps right foot on the floor] in the body. Would you sing *in nobile tuo cor* and use your hands to just arch through the phrase.” [arcs one then the other arm upward]
- Student: Repeats the phrase with support and pulsating energy while sweeping one arm back and forth
- Howe: “That’s much prettier just getting that movement” [moves arm in imitation of student]. Let’s create a complete arch, left to right.” [Gestures, one arm slowly arching across the body]
- Student: “For the whole phrase?”
- Howe: “We’ll do two phrases. So your left.” [gestures, arm movement arching up and across the body then back the other direction]
- Student: Repeats the two phrases with support, pulsating energy, and expression while slowly arching his arm across the body
- Howe: (Over performance) [stands, gestures slow arching arm sweep, changing direction at the second phrase . . . smiles, applauds one hand on chest] “All the girls will go aflutter! Yeah, that was very beautiful.”

The student has accomplished the target goal, performing the phrase with full energy and beautiful supported tone quality.

All three of the current study's voice teachers had students perform repertoire beginning to end, stopping when errors occurred. At variance with the original element narrative, voice teacher feedback referencing audience perceptions was infrequent, appearing in only three lessons.

Effecting Change: Lesson Breaks

Duke and Simmons (2006a) observed their three expert teachers interrupt the pace of lessons "from time to time with what seem to be 'intuitively timed' breaks, during which the teachers give an extended demonstration or tell a story" (p. 13). More particulars about this element follow:

The teachers seem to sense when breaks from the intense pace of the lessons are needed. In order to allow for mental and physical relaxation, teachers depart from rapid teacher-student interactions by telling an interesting or entertaining story or by elaborating on something previously discussed. These breaks are clearly departures from the task at hand and seem to serve as brief, pleasant diversions for both the student and the teacher. Once students and teachers have had time to relax, the more intense interactions resume. When the pace changes from rapid alternation of teacher and student activity episodes to longer breaks and back again, there is little or no transition time in getting back to the intense pace. In fact, the pacing of the lessons seems almost dichotomous. The teacher is clearly in control of the pace of the lesson. (2006a, pp. 13-14)

As demonstrated in the following three rehearsal frames, the current study's findings aligned with Duke and Simmons' results in that all three voice teachers halted lesson pace for breaks comprised of stories or elaboration. However, instead of diversions or departures from lesson tasks (p. 13), the voice teachers raised topics that connected to performance goals. None of the voice instructors performed extended demonstrations.

Erie Mills:

In a first session lesson with a soubrette soprano (professional) performing Verdi's *Sul fil d'un soffio etesio*, Mills halted lesson pace while working toward a goal for clear characterization of Nanette for a recollection:

Mills: "I only did this part twice, both times in English. I never sang it in Italian, get that. Houston and Opera Theater of St. Louis."

Student: "That's crazy."

Mills: But the production in St. Louis, was so, I finally got it, because it was so charming. I remember for a wand, it was a Rhoda Levine production, the wand was a broom beater . . . one of those things that goes out like this, a rug beater. She was all dressed up in this linen stuff, looked kind of goofy, and she had stuff coming out of the veil. But the wand was a rug beater."

Student: "Rug beater. That's so cute!"

Mills: "It was so wonderful! And there were children all over the place, but it was just so, and she wanted it real, [mimes walking about in character as Nanetta] just walk around. And it was just so much fun. But I finally got into it, because vulnerability is not one of my things either. But it has to be that way because otherwise it loses the air underneath it. Yeah, so one more time." [Plays accompaniment introduction]

Student: Repeats the opening, expressing more vulnerability

Mills: [Smiles, nods]

The student has achieved the target, more clearly understanding and characterizing Nanette.

Joseph Frank:

During a first session lesson with a junior-level tenor, Frank stopped the student's performance of Respighi's *O falce di luna calante*: "[e-i], you sometimes want to chew it,

otherwise you're doing guppy technique, and it looks [models, raising his upper lip to show upper teeth] not normal." Frank set the target—wanted the student perform [e-i] diphthong with correct upper lip positioning.

Frank: "I mean it's like when Renata Scotto first was, the first 1974 TV broadcast of Boheme, she was chunky. And after it was over she said [imitates Renata Scotto] 'Joey I look terrible and I'm also singing out of the side of my mouth.' [Returns to normal voice] Cause we were doing Butterfly in San Francisco. So, she said, 'I can't have,' she actually went to a coach. Number one, she lost the weight and then she was looking at herself in the mirror so that she looked normal. Because once it's on that video thing, its posterity." [Plays starting pitch] "Okay, right there. Aneliti."

Student: Repeats the section, this time with correct lip position on the [e, i] diphthong.

Frank: (Over performance) [gestures, touching upper lip] "Okay, good."

With that approval, both instructor and student recognize that the target has been achieved; the student maintained correct upper lip position on the Italian diphthong.

Eric Howe:

During a first session lesson with a bass-baritone (amateur performer), Howe gave feedback about the student's performance of vowels-only in a section of Brahms' *Denn es gehet dem Menschen*: "Ah, my favorite [a]. So there's more openness, right?" [Models open [a] mouth position]. After acknowledging goal achievement for more open vowel production, Howe halts lesson pace to relate a story.

Howe: "Have I told you about Ralph Appelman, who wrote this book *The Science of vocal pedagogy*? And the [a] vowel? So he's got all these charts and spectra grams of blah, blah, blah, blah, blah and it's one of the first books, the important books on vocal pedagogy. The chair of the department at Indiana says to him one time, 'So Ralph, you've got all these diagrams, all this science, how is it that you have identified the ideal [a] vowel?' And he

says, [speaks in an exaggerated low voice] ‘Well Roger,’ [returns to normal speaking voice] He’s a basso, [returns to exaggerated low voice] ‘I’ve been teaching voice for thirty-five years, I figure I know a good [a] when I hear one!’ [Returns to normal speaking voice] And therein is the basis of the science of vocal pedagogy! (Laughs) Now I don’t want to denigrate all of the fine things he did for the field, but we have a lot of possibility with this. That open [a] you just had, fabulous!”

Student: “Yeah, but I feel like it’s not matching the other vowels.”

Howe: “Well maybe the other vowels need to match it.” (Laughs)

Student: Repeats the section, performing the with brighter, more tonally unified vowels

Howe: [Nods, models spoken vowels] “[a], There you go, yeah it’s all coming more forward and more bright, and more natural.”

The student has achieved the target, producing brighter, more uniform vowels.

This study’s voice teachers initiated breaks in every observed lesson, suggesting that they, too, sensed their students’ need for respite from lesson activities. However, rather than departing from lesson tasks, their break topics generally related to performance goals (p. 14). There were no examples of the voice teachers performing extended demonstrations in the transcribed rehearsal frames.

Conveying Information: Fine Discriminations

Duke and Simmons (2006a) observed their three artist-teachers made “very fine discriminations about student performances; these are consistently articulated to the student, so that the student learns to make the same discriminations independently” (p. 14). More specifics about this element of expertise follow:

It is clear that the teachers know precisely what they expect to see and hear from the students, which suggests that their vivid auditory images of the repertoire lead to their detecting even the smallest deviations from the images they have in mind.

Teachers articulate clearly and directly what they hear, and their attention is focused primarily on tone production and musical expression (including all of the rhythmic and dynamic variables that contribute to expressive music making). This systematic feedback guides students to listen to themselves as their teacher listens, and shapes students' ability to make independent discriminations about their own playing. Teachers further ensure that students are making appropriate, independent discriminations by asking them to verbalize those discriminations in lessons. (2006a, p. 14)

The present study's results aligned with Duke and Simmons' findings in that all three voice teachers expressed "very fine discriminations about student performances" (p. 14), clearly articulating what they heard and expected to hear in terms of tone quality and expression. At variance with the original narrative, there were few instances where voice teachers asked students to verbalize "independent discriminations" (p. 14) about their own performance.

Erie Mills:

During a second session lesson with a lyric coloratura soprano (opera chorus member), Mills gave feedback about the student's performance of Handel's *Let the Bright Seraphim*: "[Models the phrase at pitch] *in burning, burning row*. But be ready with the mouth position for this [plays pitches, models the leap at pitch] *burning row*." Mills set the target—she wanted the student attain correct mouth position and sound quality for [i] vowel production faster, and in correct timing.

Mills: [Shakes head, plays upper note twice] "Just do *ing*."

Student: Performs: "*ing row, ing row*."

Mills: (Over performance) [models [i] mouth position] "Okay now do [Models the lower note] *bur* [plays upper note three times, speaks on the melody notes an octave lower], in the same place."

- Student: Performs *burning row*
- Mills: “Now do [slowly models the phrase at pitch, emphasizing mouth positions] *in burning row*.”
- Student: Performs the phrase, this time preparing the [i] mouth position for the leap to *ing* and producing a pure vowel and more balanced tone
- Mills: [Nods, smiles] “Good.”

The student has achieved the target goal, she produced correctly positioned and timed [i] vowels with balanced and beautiful vocal tone.

Joseph Frank:

During a first session lesson with a countertenor (freshman undergraduate) Frank stopped the student’s performance of a portamento and non-portamento exercise (1, 6, 1, 6, 4) on [æ]: “No ‘h’ between them, all you’re doing is singing into the next pitch without the portamento.” Frank set a target for continuous tone production without aspirant ‘h.’

- Frank: [Models the exercise down an octave, gestures vertical flat left hand, horizontal flat right hand moving up and down with pitch height. Plays pitch] “And.”
- Student: Repeats the exercise without aspirant ‘h’ sounds
- Frank: “Reverse it.” [plays inverted exercise, gestures horizontal flat right hand moving up and down with pitch height]
- Student: Repeats the exercise performing, again without aspirant ‘h’ sounds
- Frank: (Over performance) [models mouth position, gestures, pointing index finger moving up and down with pitch height . . . nods] “Closer. Now look at yourself in the mirror and we’re going to sing yah and we’re going to sing [a]. [Models [a] mouth position, models the exercise down an octave] One position [points to mirror], and.”

Student: Performs the exercise, shifting his view between Frank and the mirror

Frank: (Over performance) [models mouth position . . . nods emphatically] “Pretty good! Understand? So that what you’re doing is, even though the notes have no portamento, the throat is staying open so that you can sing into the next pitch without doing [models interval of a fourth with exaggerated ‘h’] ha ha with the ‘h’s’. That’s not *bel canto*. Okay good.”

With that approval, both Frank and the student understand that the target has been achieved, the student performed exercises without introducing aspirant ‘h’ into the tone.

Eric Howe:

During a second session lesson with a tenor (graduate student), Howe gave feedback about the student’s performance of Widor’s *Rude Maestro*: “Let’s do from *il sa* one more time, *fanciulla*, and see if we can stay really grounded [stamps both feet]. You tend to come off your feet sometimes; you really need to keep that energy coming from really deep in the body.” Howe set a target for continuously supported tonal energy.

Howe: “And send *il nobile mio* core. Even though it’s the lighter sound, really let it spin out into the room.” [plays starting pitch]

Student: Performs the passage

Howe: (Over performance) “Use your hand.” [gestures, one arm sweeping in an upward arc]

Student: Continues performing, begins arcing arm movement

Howe: (Over performance) “Bravo!” [continues accompaniment to the next section]

Student: Continues performing

Howe: [Halts] “Will you do this again and I’d like you to imagine you’ve got a little bit of a crescendo at the end of every note.”

- Student: ‘Yeah, I’m dropping off.’ Repeats the phrase, this time with continuous energy and support
- Howe: “That’s way better . . . that’s very good . . . so we get [models, declaiming the text in rhythm with exaggerated crescendo on each word, gestures] *Dai fuochi che sgu*a . . . Keep on feeding the tone.”
- Student: Performs the passage again, this time maintaining an energized, spinning, supported tone
- Howe: (Over performance) [gestures continuing support with upward tensed hand] “Good . . . [halts] Much better singing. That tone is so much more continuous, it’s that legato that just never drops in energy, and it takes a conscious choice to keep feeding it like that. That’s where you move out of your comfort zone energetically. Wow, so pretty.”

With that approval, both teacher and student recognize that the target goal for continuously supported tonal energy has been achieved.

In this study, all three expert voice teachers communicated clear auditory and visual discriminations, detecting even slight deviations from their performance objectives. This suggests that they, too, make “very fine discriminations about student performances” (p. 14). However, the voice teachers rarely asked students to state independent discriminations about their own vocal performance.

Conveying Information: Negative Feedback is Succinct and Specific

Duke and Simmons (2006a) reported that their three expert teachers’ “negative feedback [was] clear, pointed, frequent, and directed at very specific aspects of students’ performances, especially the musical effects created” (p. 15). More details describing this element of expertise ensue:

Negative feedback is given succinctly and is pointedly directed at improving performance quality. The frequency of negative feedback is markedly higher than

the frequency of positive feedback. The content of negative feedback is consistently quite specific and explicit, making the students privy to the teachers' highly refined auditory discriminations. This contributes to students' learning to make finer discriminations about their own playing. The clarity and directness of the negative feedback facilitates the efficient correction of errors. (2006a, p. 15)

The current study's findings aligned with Duke and Simmons' results in that all three expert voice instructors frequently provided "clear, pointed, and directed" (p. 15) negative feedback. However, the voice teachers' negative feedback use did not appear to be "markedly higher than the frequency of positive feedback" (p. 15).

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied voice instructor), Mills halted the student's performance of five-note scales on [de, de, da, de, de]: "Take that mirror and look right here [positions the mirror] and as you come down don't close the mouth [gestures opening and closing hand]. Just leave the opening [gestures fingers closing, fingers held open]." Mills set the target—she wanted the student to maintain an open mouth position through the vowel.

Student: Repeats the exercise

Mills: [Halts] "Look in the mirror, look at yourself."

Student: Repeats the exercise, this time watching in the mirror. "Oh man!"

Mills: "See? You want to [models negative over-loud [de], closing her mouth]. It's not even that you make the diphthong; it's that you close the mouth which of course will make the diphthong. But I don't even care about the diphthong; I care about the closing of the mouth."

Student: Repeats the exercise, still closing the mouth slightly on release

Mills: "And just stop singing then, just let the tone stop."

- Student: Repeats the exercise, shortening the notes
- Mills: “Well, make the tone itself longer and then stop. You understand what you were doing.”
- Student: “Yeah”
- Mills: [Models exaggerated student error juxtaposed with held mouth position on the exercise] “And as you let the air out [leans toward student, gestures open hand, then arched arm movement] finish the phrase; you close your, you collapse on it [models collapsed posture then models open mouth]. Don’t collapse.”
- Student: Repeats the exercise, this time maintaining open mouth and upright posture
- Mills: [Nods, smiles] “Yes Ma’me!”

The student has achieved the target goal, she maintained open mouth position for correct vowel production.

Joseph Frank:

During a first session lesson with a tenor (sophomore undergraduate), Frank stopped the student’s performance of Massenet’s *Élégie*: [models relaxed jaw position, shakes head] “Keep it back. See that? [Juts jaw forward] Okay, you see? Looks like you’re ready for a glass jaw [gestures punching].” Frank set the target—he wanted the student to perform with correct jaw positioning.

- Frank: [Points to mirror] “Look at yourself. You see where you are right now? You see how that is? And the minute I see that elongation [shakes head] first of all, it doesn’t look like you’re enjoying yourself cause you’re not.”
- Student: (Laughs)

- Frank: “Okay, now be careful. It’s *Comme en mon coeur tout est sombre et glacé!* Do just the last one and we’ll go back.” [Models at pitch] *pour toujours!* And.”
- Student: Performs the phrase.
- Frank: [Halts] “You started correctly then all of a sudden it starts to push out. One more time.”
- Student: Performs but juts the jaw forward, loses control of the tone
- Frank: [Models the phrase ending at pitch] *toujours*. “Ah! What it is, you’re in too much of a hurry to get to *jours*. Place it on [Models at pitch] *toujours*. Just do *toujours*.”
- Student: Performs, appears tense
- Frank: “You’re already monkeying with it. Trust it. [Models the phrase on [u]]. . . Wide neck . . . No, don’t pull up. . . [shakes head] No, I want the larynx to stay relaxed. Take a breath . . . [gestures, pulling hand wide apart] you see what happened? Now watch [Models relaxed breath] And you’re going [models, imitates student’s breath, jaw and laryngeal movement] You’re lifting it back up after you take the breath. Go [u, u, u].”
- Student: Performs with more relaxed jaw position
- Frank: “Okay that’s where it has to be. Now [models the phrase at pitch] *pour toujours!*”
- Student: Performs the phrase, this time keeping the jaw and larynx still
- Frank: [Points] “Okay, that was right.”

With that approval, both teacher and student recognize that the target goal has been achieved, the student performed with a correctly positioned and more relaxed jaw.

Eric Howe:

During a second session lesson with a tenor (graduate student), Howe stopped the student’s performance of a vocalise on mim (1, 1, 1, 1, 1, 2, 3, 2, 1): “Do a little of the

mims again. I'm hearing a-mim mim. A-mim, it's a little Lawrence Welk. Let's see if we can just go to [mim]". Howe set a target for clear consonant articulation.

- Student: Begins, stops after the first a-mim at Howe's negative facial expression
- Howe: [Frowns, then raises eyebrows]
- Student: Repeats the exercise, this time going directly to the 'm'
- Howe: (Over performance) [nods . . . halts] "You caught yourself didn't you? Good, let's do a couple more." [plays next starting chord]
- Student: Repeats the exercise, going directly to the 'm' but using an over-resonant tone
- Howe: [Frowns, halts] "Still, let the voice come to that real bright ringing place [frowns, gestures hand curving from forehead], it's a little [speaks in an exaggerated over-resonant voice] back in here [returns to normal voice] right now." [plays next chord]
- Student: Performs the exercise twice, going directly to the 'm' and brightening the tone
- Howe: (Over performance) "There you go . . . [nods] . . . good."

The student has achieved the target goal, he produced pure, well-timed vowels with balanced tone quality.

In the present study, when voice teachers gave negative feedback, it was concise, specific and "pointedly directed at improving performance quality" (Duke & Simmons, 2006a, p. 15). In this, the voice instruction aligned with Duke and Simmons' findings. However, the frequency of the voice teachers' negative feedback did not appear significantly higher than the frequency of their positive feedback as described in the original narrative.

Conveying Information: Exquisite Modeling

Duke and Simmons (2006a) observed their three instrumental instructors “play examples from the students’ repertoire to demonstrate important points. The teachers’ modeling is exquisite in every respect” (p. 15). Further specifics about this element of expertise follow:

In all instances in which the teachers demonstrate, whether singing, gesturing, or playing, they embody the expressive elements of the music while executing the example nearly flawlessly. The teachers often juxtapose a remarkably faithful imitation of the student’s performance with their model of the performance goal, evincing a level of technical command and fluency that is brought to bear in the process of developing artistry. (2006a, p. 15)

All three voice teachers provided excellent models of important points and accurate imitations of student performance. I found variance from Duke and Simmons’ narrative in the voice teachers’ additional modeling behaviors: providing excellent models at transposed octaves, dramatic expression, declaimed text, physical positions, and exaggerated negative models, not characteristic of the student’s actual performance.

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied voice instructor), Mills halted the student’s performance of a held first note-descending five-note scale exercise: “The only thing that would make these better is if you had a better [u] vowel.” Mills set the target—she wanted the student to produce pure [u] vowels.

Mills: [Models, imitating the student’s impure [u]]

Student: Repeats the exercise

- Mills: [Models [u] lip position, blowing air through pursed lips]
“Vowels!”
- Student: Repeats the exercise
- Mills: “Now the vowels need to be further forward.”
- Student: Repeats the exercise
- Mills: “Get that minor and . . . [models [u] mouth position, imitates student’s vowel and mouth-tongue position] “tip of the tongue behind the teeth at all times.”
- Student: Repeats the exercise, this time producing a pure [u] vowel
- Mills: “Yes Ma’me!”

With that approval, both student and teacher recognize that the target goal for pure [u] vowel production has been achieved.

Joseph Frank:

During the second session lesson with a basso profundo (junior undergraduate), Frank gave feedback about the student’s performance of Menotti’s *Amahl and the Night Visitors*: “Okay, so just one thing . . . we have to work a bit more on the diction for the, you know, just what I was doing for the inflection of Kaspar. It’s one thing just to do all the notes and do all the words, there has to be, I said this last week, you’ve got to have a palette of colors. I mean we start off with, remember the old Crayola crayons? We had like 24, 48, and a hundred and whatever they were. Right now we’re doing like a palette of like seven colors. You’ve got to do more than that.” Frank set the target—he wanted the student to perform notes and words with more dramatic color.

- Student: “I just need to be more confident with the words too.”
- Frank: “Well that’s what . . . with the idea of explaining what your character is about. That’s when you sort of find, what you’re

going to create from inside, that's going to make that sound like you're King Balthazar. We'll get into it."

Student: Performs the first solo section for King Balthazar

Frank: [Halts, models the section at pitch with clear articulation, dramatic pacing, vocal inflections, and facial expressions] "*I live in a black marble palace full of black panthers and white doves.* I mean, you're a show-off too as well. Remember you're a king, okay, so you know. Remember, this is the first time he's hearing you say this. I know we've been rehearsing it, but the thing is, and the audience is only hearing it for the first time too. I'm the one who says 'aye' [gestures hand to ear, characterizing Kaspar's deafness], not the audience. [Models phrase at pitch, clearly articulating the text] *I live in a.*"

Student: Repeats the passage, this time clearly articulating the text

Frank: (Over performance) "Good . . . Good." [Halts, models pacing and dramatic expression for the next line] "*And you little boy, what do you do? You're not angry, it says *libertamente* there, so it's in your power to change that, you know. That was excellent that time. Now change the color when you get to *and you.*"*

Student: Performs the passage again, this time pausing and changing dramatic color on *and you little boy, what do you do?*"

Frank: "Okay, now I believe it."

With that endorsement, both instructor and student understand that the target has been achieved, the student performed the passage with a range of different dramatic and voice quality colors.

Eric Howe:

During a first session lesson with a coloratura soprano (graduate student), Howe gave feedback about the student's performance of Menotti's *The Telephone*: "What's interesting to my ear is that we need more intention on the low. You're having such fun being in the high that we sometimes lose a little of that color as you get to the bottom of

the staff.” Howe set a target for more tonal color in the lower register.

- Student: Repeats the opening section
- Howe: [Halts] “There was a glottal. How about we start from *who? I?*”
[plays accompaniment]
- Student: Begins the phrase, this time with coordinated vocal onset
- Howe: [Continues accompaniment, halts after student performs the lower pitches] “So maybe a little, I hear [models imitating student, performing the phrase an octave lower], *My dear* [spoken] break [sings] *I’m not feel*. [Models the phrase again, this time, with more vocal color and no break] *My dear I’m not feel* is what I’d rather. Just so it gets to the room. In this room, no problem, in another room it wouldn’t come through.” [Plays starting pitch, accompaniment]
- Student: Performs the passage again, imitating Howe’s phrasing and tone color on the lower notes
- Howe: (Over performance) [nods and smiles] “Yeah!”

With that approval, both teacher and student recognize that the target goal has been achieved, the student performed with clear expression, varying her tone color and phrasing to express the character and drama.

The three voice instructors modeled musical and expressive elements with excellent skill and control, demonstrating in different registers and octaves when needed. In variance to Duke and Simmons’ (2006a) findings, the voice teachers evidenced some additional modeling behaviors not described in the original study. These included modeled physical positions, spoken-declaired text, dramatic interpretation, and exaggerated negative examples.

Chapter Summary

In this chapter I presented findings of my first phase of data analysis, where I assigned etic codes derived from Duke and Simmons' (2006a) elements to voice teachers' behaviors and attributes in transcriptions of rehearsal frames. Voice teaching that mirrored Duke and Simmons' elements of expertise: (a) aligned with all key points of Duke and Simmons' (2006a) original narratives of elements of expertise, or (b) aligned with original narratives but with minor variations. Some voice teaching observed in this study, however, did not align with Duke and Simmons' original narratives.

Expert voice teaching that aligned with all key points of Duke and Simmons' (2006a) 19 elements generally fell into their broader categories of Goals and Expectations and Effecting Change. In terms of Goals and Expectations, the three voice teachers appeared to: (a) have a clear auditory image of the piece that guides their judgments about the music; (b) demand a consistent standard of sound quality from their students; (c) select lesson targets that are technically or musically important; and (d) position lesson targets at a level of difficulty close enough to the student's current skill level that targets are achievable and change audible in the moment. In terms of Effecting Change, the three voice teachers appeared to: (a) generally allow the course of the music to direct the lesson with performance errors eliciting stops; (b) be tenacious in working to accomplish lesson targets, having students repeat performance until accurate; (c) immediately address flaws in fundamental technique; and (d) conduct lessons at a rapid pace (pp. 11-15).

Voice teaching that aligned with minor variations to Duke and Simmons' (2006a)

19 element narratives included six elements. In terms of Goals and Expectations, the three voice teachers appeared to assign repertoire within students' technical and musical capacities, but they also assigned exercises to stretch student capabilities. In terms of Effecting Change, the three voice teachers appeared to: (a) have students perform repertoire beginning to end with stops for error correction, yet they rarely described audience perceptions; and (b) interrupt their teaching pace for intuitively timed breaks, but the teacher talk during the breaks was always relevant to lesson work. In terms of Conveying Information, the voice teachers appeared to: (a) communicate fine auditory and visual discriminations about student performances, but they rarely asked students to state independent discriminations about their own vocal performance; (b) give frequent and concise negative feedback but at a rate not notably higher than positive feedback; and (c) provide excellent sung models, but also provided exaggerated negative examples, physical positions, dramatic expression, and spoken text (pp. 11- 15).

Five elements characterized by Duke and Simmons (2006a) did not appear in the voice teaching observed in this study: (a) lengthy comparisons to past lesson work; (b) offers of student interpretive choice; (c) pointing out how physical motion correlates sound quality; (d) describing technique in terms of interpretive effects; and (e) providing infrequent but lengthy positive feedback.

At this point of my investigation, I considered alignment of the voice teaching observed in this study with Duke and Simmons' (2006a) 19 elements. I found the greatest lack of alignment with Duke and Simmons' category of "Conveying Information" (p. 14). Reflecting on the conversation with my instrumentalist husband and son that initiated this

study, I wondered whether, when voice teachers study pedagogy, they are taught to convey information in specific ways. Alternatively, might the nature of the vocal instrument itself require different means of conveying information? Also, might fundamental differences between instrument teaching and voice teaching, namely the musical expression of text, influence the way expert teachers convey information to their students? These questions paved the way for a second analysis of the transcribed rehearsal frames.

CHAPTER FIVE: FINDINGS FROM SECOND ANALYSIS

The purpose of this study was to characterize expertise in voice teaching, using Duke and Simmons' (2006a) descriptions of 19 elements of expertise as a point of departure for that characterization. This was a collective case study, observing common elements in the pedagogy of three expert voice teachers: Erie Mills, Joseph Frank, and Eric Howe. I observed and digitally recorded close to 20 hours of voice lessons, interviewed all participants, and logged field notes. The lesson recordings served as my primary data. Applying Duke's (1999/2000; 2008) idea of rehearsal frames, I reviewed each video, identifying teachers' goal setting and indicators of students' goal achievement, and transcribing all verbal statements and describing all non-verbal actions within each frame. I coded this data in two phases.

In my first phase of analysis, using an etic coding system derived from Duke and Simmons' narratives, I discovered that Duke and Simmons' element characterizations were inadequate to describe everything I observed in voice teaching. Specifically, I observed that vocal performance differed from instrumental because the physical motion of singing was mainly internal (and invisible) rather than directed toward manipulation of an external instrument. I also noted that, unlike instrumental music, interpretation of vocal music is the expression of a text. Not only is the shaping of vowels and consonants key to vocal sound quality, but singing artistry also is communicating understanding of a text. I believed that these two fundamental aspects of singing must influence voice teaching, and therefore must figure into a characterization of voice teaching expertise.

Consequently, I undertook a more organic emic approach to my second analysis

of all transcribed rehearsal frames (Duke 1999/2000; 2008), first allowing new behavior-attribute codes to emerge through open and axial coding processes (Merriam, 2009, p. 177). By applying spoke outlining (Mack & Skjei, 1979), I evaluated my results for maximum data assignment, plausibility, and clarity of classification (Merriam, 2009). I applied these emic codes to verbal statements and descriptions of non-verbal behavior from each rehearsal frame. As in the first phase of analysis, I tracked the appearance of each emic code in every lesson taught by all three teachers, addressing Duke and Simmons' (2006a) standard of commonality. Overall, I found that expertise in voice teaching can be classified as follows: (a) working with a largely invisible and full embodied instrument, (b) frequently focusing exclusively on technique, and (c) drawing on extensive familiarity with texts used for singing.

Using these three classifications, I gathered behavior-attributes not recognized by Duke and Simmons (2006a) into new elements. I have organized the chapter with descriptions of new elements, paralleling descriptions used in Duke and Simmons (2006a), and I have illustrated each element with a rehearsal frame from each of the three voice teachers. Again, although one illustration might suffice for each element, the standard that Duke and Simmons (2006a) introduced was commonality—the elements of expertise needed to appear in “nearly every lesson taught by all three teachers” (p. 11). Each transcribed rehearsal frame begins with the teacher’s proximal goal setting and ends with an acknowledgement that the student has accomplished the goal. Because voice teachers use some discipline-specific terminology, to aid the reader, I have included a glossary of terms in Appendix K.

Expert Voice Teachers Work with a Largely Invisible and Fully Embodied Instrument

Singers produce sound by means of human vocal anatomy, but unlike instrumental musicians, most physical function is not visible externally to teachers or students. Because voice teachers and students work with largely invisible and fully embodied instruments, expertise in voice teaching can be characterized by: (a) communicating comprehensive knowledge of human anatomy and physiology of voice production; (b) establishing safe and collaborative studio environments where students' questions and observations about the mechanics and process of singing were encouraged; and (c) supporting students' learning to sing, and learning about singing, by means of devices such as lesson recordings and mirrors.

Communicate Comprehensive Knowledge of Human Anatomy and Physiology of Voice Production

All three voice instructors demonstrated expertise with human anatomy and physiology of singing, including knowledge about body alignment, breathing, phonation, articulation, resonance, range, and registration. They showed capacity to represent anatomical and physiological information in mechanistic-functional terms and through metaphor and to apply this information to further develop students' vocal capabilities. Each voice teacher immediately attended to embodied flaws in vocal production.

Erie Mills:

In a first session lesson with a soubrette soprano (professional performer), Mills stopped the student's performance of five-note scales on [de-, de-, da-, de-, de-]. "I don't

want it to be thin, I want it to be forward . . . It's going to feel to you, because you, because you shouldn't be listening, it's going to feel to you like [models the exercise at pitch, gestures hand circling a few inches in front of her lips] but, inside you, [gestures raised arched palm-down hand at the side of her head at the back mouth-soft palate area] . . . soft palate area, buzzing." Mills set the target—she wanted the student to create more balanced vocal tone, having the sound and associated physiological sensations of full resonance and forward placement in the forward lip and soft palate areas.

Student: Repeats the exercise, this time with balanced forward placement and resonant tone

Mills: "That's the right place! . . . Let me remind you that these sound really great and you're not over opening. Muscle memory is a funny thing, that's why you hope everybody learns things right the first time."

In this rehearsal frame, Mills immediately attended to embodied flaws in voice production. She demonstrated knowledge about vocal resonance related to soft palate position, and she offered this information to the student in functional, but mainly metaphorical terms. She helped the student recognize sensations associated with raised soft palate and forward placement to create a more balanced tone quality, and make positive progress toward the target goal.

Joseph Frank:

During a second session lesson with a countertenor (freshman undergraduate), Frank halted the student's performance of arpeggios: "Ok, you were slouching into your body, that's what I call your shlump." Frank set the target—he wanted the student to

perform with raised sternum-ribcage and shoulder positions.

Student: Repeats the arpeggio, this time with a more upright posture

Frank: [Halts] “Posture is part of the whole aspect, if this is up [models raised sternum and shoulders, expanded ribcage] you can breathe below it. [Gestures pointing toward abdominal muscles, models abdominal support] It’s like a tuning fork, you hit it and it doesn’t, you can’t hear it until you [mimes placing a tuning fork on his up-turned palm], so that [hums] and it’s grounded.”

Student: Repeats the arpeggio, with improved but still somewhat collapsed sternum, ribcage, and shoulders.

Frank: [Halts, points toward mirror] “Do you see where your body is?”

Student: [Looks at his posture in the mirror, smiles wryly] “Yes.”

Frank: “Be careful of letting this get slouchy” [models collapsed sternum, ribcage, and shoulder posture juxtaposed with upright expanded sternum, ribcage, and shoulder posture]

Student: Repeats the arpeggio, alternatively watching Frank’s modeled upright posture and his own posture reflected in the mirror

Frank: [Halts, nods] “You have to start walking around like you’re a singer; [models upright posture] posture has to be in the right place.”

Student: Repeats the arpeggio, this time watching his own reflected posture in the mirror and maintaining a higher sternum, expanded ribcage, and upright shoulder height. His tone quality sounded more supported and more beautiful

Frank: (Smiles, nods) “Ok.”

Here, Frank immediately attended to embodied flaws in the student’s sternum, ribcage, and shoulder positions, and he demonstrated and explained the relationship between expanded chest position and upright posture and breath capacity in functional terms and through metaphor. The student was able to attain the target goal for correct raised

sternum-ribcage and shoulder position.

Eric Howe:

During a first session lesson with a bass-baritone (amateur performer), Howe halted the student's performance of octave slides on [u] (1-8-1): "Let's do the same slide on the bubbles." [Howe and student take up partially-filled water bottles with straws.] Student performs, singing through the straw. Howe gives feedback: "Just so you get an idea of what I'd like to see and hear." [Models the exercise, singing the octave slide through the straw and creating a steady flow of smallish bubbles in the water]. (Student) "Less?" (Howe) "Not less, more constant." Howe set the target—he wanted the student to perform with correct breath pressure and constant airflow.

Student: Performs the exercise

Howe: "That's better, um there's a little air 'escapage' somewhere else [gestures a circle around his mouth] . . . maybe [models pucker] with your lips it might seal it a bit."

Student: Repeats the exercise, producing a steady stream of small bubbles and quiet vocal sound

Howe: "Good [plays next pitch], fairly light sound but constant, that's good."

Student: Repeats the exercise, this time louder and with even steadier stream of bubbles

Howe: "Excellent, You're getting a much steadier airflow than you did last time."

Student: "It's the same thing?" [Pats hand on abdominal muscles] (the student needed clarification about applying abdominal support during the exercise)

Howe: "It is; you have to engage with the breathing apparatus." [Models upright posture, hand on engaged abdominal muscles]

- Student: “But keep it steady, you know, not like you’re trying to pulse it or increase it on the high note?”
- Howe: [Nods] “Right, you don’t need to increase it. If anything the vocal cords resist the air a little bit and you have a little bit less coming through, but the energy increases, just not the amount of air.”
- Student: Performs the exercise again, this time louder with constant bubbles
- Howe: “Very good . . . [plays pitch] same volume and everything on an [u], not on the straw . . .” [models starting pitch, producing a steady balanced *forte* tone on [u]]
- Student: Performs the octave slide on [u], singing *forte* with steady breath pressure and beautiful resonant tone
- Howe: “Good, the air and the tone are pretty steady with that, I like it.”

With that approval, both teacher and student recognize that the target for steady supported airflow has been achieved. In this rehearsal frame, Howe demonstrated his knowledge of embodied singing-specific breathing functions. He provided information about airflow related to abdominal support in functional terms and applied a technical exercise, vocalizing through a straw into water, to help the student see and feel correct air pressure and steady breath flow.

Establish Safe and Collaborative Studio Environments.

Because the vocal instrument is largely invisible and fully embodied, students naturally have questions and make observations about the mechanics and process of singing. All three voice instructors created safe lesson environments where students’ questions and comments were welcomed and addressed seriously. Furthermore, the teachers conscientiously built rapport with the student, so that mutual respect, honesty, and a sense of playfulness and good humor encouraged risk taking with embodied sound

production.

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied voice instructor), following the student's performance of Donizetti's *Prendi per me sei libero*, Mills responded to the student's negative non-verbal reaction.

Student: [Frowns, compresses lips, places hands on hips and shrugs shoulders]

Mills: "Now what do you think is the problem?"

Student: "By the end I'm so tired and the high note is just, gets strident."

Mills: "Well, now let me just say, for someone who just had a baby, what, six weeks ago...see I thought it was going to be like totally blah and it isn't...The tired part I can fix...because, one of the things"

Student: (Interrupts) "Seems like I'm pushing through so much of the second part"

Mills: "Well, yeah the fast part...This is where those shorter inhalations, and crisper, and the in-seam on the floor kind of thing needs to come in." (Mills' used the "in-seam on the floor" metaphor to represent lower abdominal breath support, the sensation of lengthening the torso downward on inhalation)

Mills set the target-- she wanted the student to draw quick breaths with controlled abdominal drop on inhalation.

Mills: "You must think of this fast part as much more technical much more like . . . like no music, (humorously) not artsy-fartsy; it's a Bach song. It's pure [models uniform melisma] duh, duh, duh, duh duh, breathe, duh, duh, duh, duh, duh kind of thing"

Student: "Is that with clarity in the, within the runs?"

Mills: "Well there are some runs that were not as they should be...for example [models, imitating student's performance of a melisma] didn't quite make it down [plays correct notes on the piano] and

some and sometimes your triplets get a little [models, imitating student's performance of triplets] instead of even-even [models even triplets] they're not true triplets; that would help you also, if you even them out a little bit." (Encouraging facial expression)
 "From the way you talked I thought it was going to be, you know, like really awful and it isn't.

Student: "It's just weird for me to struggle with the second half of this piece; usually it's flipped"

Mills: "And you are tired, you are physically tired. And this is not probably the best piece to sing when one is physically tired."

Student: "It's not a tiredness that is going to go away though."

Mills: "Alright...so now you have to learn how to do it being tired. But part of it is really that you are not tanking up the way you should be. And I mean tanking up, not more air, but just the way you take the air in. Do you want to just do the fast part and then we'll go back to the slow part? And yes, I would agree that today's performance the second half was not as good as the first half. But even in the first half there are times when you're not taking the time to breathe."

Student: Performs the fast section again, this time taking correctly timed breaths and applying appropriate abdominal support.

Mills: (During the student's performance) [models quick breaths, gestures dropped abdominal muscles-'inseam breathing'] "Yes Ma'am" (smiles)

In this rehearsal frame, Mills took the time to address the student's concerns and frustration and answer questions about the execution of melismatic passages. Rapport was also generated when Mills provided honest feedback with understanding about the student's life situation and its effect on her technique and energy level. Here, Mills' rapport encouraged the student to take risks with sound production, in spite of her fatigue, and the student made progress toward the target goal for quick breaths with correct

abdominal support.

Joseph Frank:

In a lesson with a countertenor (freshman undergraduate), the student performed a repeated-note exercise on [o, e, i, u, a]. Frank responded, “Good, now where is your tongue going to be for all these vowels?” (Student gestures to mouth) “Under.” (Frank) “Uh-huh. Now remember, I know you’ve got your dentures (teacher and student laugh), I mean your braces, your braces and the tendency is to shy away from, you want to get away from those. But you must try to think that that lip stays against those teeth even though it’s uncomfortable.” Frank set the target—he wanted the student to produce vowels with his lips correctly positioned against his upper front teeth.

- Frank “So when I’m singing [models in falsetto correct lip position, touches upper lip while singing [o, e, i, u, a]] it’s right in there. And” [touches upper lip]
- Student: Performs, but on the first note his lips do not hold position, stops) “Sorry,” (teacher and student laugh)
- Frank: (With smiles and a laugh) “I know. Anyone who’s worn braces, I usually can tell who has worn braces depending on what they’re doing with their lips. The case is, now you still have yours in there, so this is the perfect time to for you to get used to feeling that they’re supposed to not be there” [plays starting pitch, over performance touches his upper lip].
- Student: Performs, this time with correct lip placement
- Frank: (Very pleased) “Oh God! Do you see how front that sounds?”
- Student: (Makes pleased sounds, smiles)
- Frank: “Okay? So, it’s like you’re doing interference, you’ve got those things that are there, so instead of shying away from them embrace them and feel like they’re like a part of [gestures horizontal finger

over upper lip] what you're doing so by the time you, how long are you going to wear braces?"

Student: "I think I'm scheduled to get them off like this summer."

Frank: "So you have at least nine more months with them, so in that case, so when they finally come off your going to feel like 'oh wow this is exactly how I'm supposed to feel' as opposed to shying away from it. That was excellent (smiles). One more time, right behind there" [plays starting pitch, gestures upper lip, models mouth position]

Student: Performs, again with correct lip placement

Frank: (Teacher and student smile) "See where it is?"

Student: (Smiles again) "Yeah."

In this rehearsal frame, Frank's positive attitude, humor, and honest explanations about the difficulties of proper lip positioning with orthodontic braces helped create a safe environment for the student to experiment with appropriate technique, although the physical feeling was uncomfortable. The student was able to recognize the sensation of correct lip-to-braces placement and of placing the singing tone slightly in front of the lips, thus, achieving the lesson target.

Eric Howe:

During a second session lesson with a coloratura soprano (graduate student) Howe gave feedback about the student's performance of staccato then legato arpeggios to the 12th of the scale on [u]: "I'd like you to do a decrescendo into the *passaggio* and a crescendo above it, so you're going to make an hourglass [gestures hands wide apart-narrowed- wide apart]. [Student performs, breaking on the *passaggio*] [Howe halts the student] That's the one, do you feel what happens in that narrowed place? [Gestures wide

to narrow hands] Somewhere in that general vicinity [plays two notes in the upper-mid range] is where you're going through the neck of the hourglass." Howe set the target—he wanted the student to execute and feel sensations of vocal register change, using softer dynamics to maintain control of the physical processes and produce balanced tone quality through the *passaggio*.

Howe: [Plays vocalise] “Stay with the [u] for a minute and remember how it releases this way” [gestures hand lifting upward].

Student: Repeats vocalise

Howe: (Over performance) [gestures hourglass, rising hands wide apart-narrowed- wide apart] . . . [Halts, plays arpeggio] “Did you catch my little hourglass?”

Student: (Laughs) “One Grecian urn and a fountain.”

Howe: (Laughs) [plays next starting pitch and chord]

Student: Repeats the vocalise, watching Howe

Howe: (Over performance) [gestures hourglass]

Student: “Do you actually want [gestures hourglass] in the volume?”

Howe: “Yes, let's stay with that approach in the volume. So the octave [plays octave pitch] is going to be the neck.”

Student: Performs the staccato section only, halts. “Do, mi, sol, do.” [Performs, breaks on her *passaggio*] (laughs) “I need signage!” [gestures two-handed hourglass] (teacher and student laugh)

Howe: “Okay, I'll keep signing you, I'll stand up.” [stands]

Student: Performs, this time narrowing and moving smoothly through her *passaggio* “Thank you, that's very helpful.”

Howe: (Over performance) [gestures hourglass, coordinating narrow hands with *passaggio* shift] “Good.” [Plays next pitch, humorously]

gestures a random pattern of hand movements before the student performs]

Student: (Laughs) “Now you’re playing around.” Performs the vocalise again, narrowing and singing smoothly through her passaggio

Howe: (During student performance) [gestures hourglass]“Yeah, great. What we’re really doing is just getting a better balance in the passaggio, because it’s tended to be a little too thick you know and the tuning goes a little funny and it gets a little bit of a breathiness and not at all now, which is great . . . eventually we’ll be able to swell that passaggio area back into a fuller tone but I’d like you to narrow it down first.”

Student: (Smiles) “I like it!”

Here, Howe welcomed the student’s clarifying questions about the exercise and responded to her request for the hourglass gesture. He gave an honest assessment of the student’s performance, praising her for achieving the goal, producing balanced, non-breathy vocal tone with good intonation while executing a controlled change of register. Both teacher and student showed humor and playfulness that suggested well-established rapport and a safe, collaborative atmosphere.

Support Student Learning by Means of Devices Such as Recordings and Mirror

Because the instrument of voice is fully embodied, the three instructors wanted to call attention to visible external positions and cues of hidden vocal processes and help students recognize the sound of healthy and fluent vocal production. They used devices such as mirrors to help students see correct voice production during lessons and audio and digital recordings to allow recall and replication of good vocal technique and sound quality during practice.

Erie Mills:

During a first session lesson with a coloratura soprano (community college applied instructor), Mills halted the student's performance of five note scales on [de-, de-, da-, de-, de]: "Watch yourself in a mirror because the minute on an open vowel you let the jaw go, you get a diphthong, whether you want to or not, and that's gonna be bad for Italian or French or whatever." Mills set the target –she wanted the student to maintain correct jaw position for pure open [a] vowel production.

Student: Repeats the exercise, this time watching in the mirror and maintaining dropped jaw position on the [a] vowel

Mills: [Nods] "That's alright, but it's really important, because the minute you see yourself scrunch, it changes the vowel, if you want to change the vowel that's the way to do it. If you don't, then (shrugs). Back down. [Gestures to repeat the exercise a half step lower] And look in the mirror, one vowel one mouth."

Student: Repeats the exercise a half step lower, watching her face in the mirror and maintaining dropped jaw position on the [a] vowel

Mills: [Nods] "That's how it should be."

In this rehearsal frame, Mills immediately attended to a flaw in the vowel sound, and she instructed the student to look in the mirror while performing the vocal exercise. By focusing on jaw position while she was performing, the student was able to maintain the dropped jaw and produce a pure vowel, thus she achieved the target goal.

Joseph Frank:

During a second session lesson with a basso profundo (junior, undergraduate), Frank gave feedback about the student's performance of Saint-Saëns' *Danse macabre*. "Diction . . . keep it right in front" [gestures, pointing towards tongue]. Frank set the

target—he wanted the student to correctly position the tongue to clearly articulate the song’s text.

- Student: Repeats the passage focused on his reflection in a full-length mirror.
- Frank: (As student performs) “Watch your lower lip [models open mouth with slightly tucked lower lip]. . . Good . . . Don’t rush . . . Tongue! [gestures halt] You see where that was? [Points to mirror then to his own tongue]
- Student: [Looks into mirror] “Yes.”
- Frank: [Models the note with retracted- moving tongue then with correctly positioned tongue] “*Oh*. Onset the tongue is already there. You take the breath in the [o] position [models the [o] position] that’s it, and that’s [gestures tongue position] stretched below you. [Models, singing the word at pitch] *oh!*”
- Student: Student repeats the passage, again watching his performance in the mirror
- Frank: (As student performs) “*On se pousse, on fuit* . . . Breath and stretch and [models [o]] . . . same thing here. . . Take your time [models mouth position] . . . [models moving tongue] . . . [halts] Okay on the second verse, when you get off of *Un voile est tombé!* That’s when you start rushing . . . Let’s go from *Ziggy ziggy*, the previous page.”
- Student: “Okay.” Performs, watching his mirrored reflection and breathing through the onset [o] position and correctly positioning his tongue; he clearly articulated the text.
- Frank: [Nods] “Okay, better.”

Frank used the mirror to help the student recognize how the tongue and lips were positioned, particularly when singing an [o] vowel. By watching his performance in the mirror, the student was able to achieve the target, breathing through the [o] lip and tongue positions, correctly positioning the tongue, and clearly articulating the song text.

Eric Howe:

During a first session lesson with a dramatic mezzo soprano (cantor), Howe helped the student use the studio recording equipment: “Is this the disc?” (Student) “Yes, whenever I brought this home I’ve been able to listen.” [Howe starts recording function, moves to piano] “Let’s start off with [plays five note descending scale], just do mingee, mingee, mingee.” Student performs. “A little crackly at the end; probably just lightening slightly will help you there.” Howe set the target—he wanted the student to maintain focused tone quality by applying appropriate physical effort.

Student: Repeats the scale, relaxing her physical effort but losing the pure [i] vowel.

Howe: “Now that time I heard a little different version of the vowel; take a moment, what [i] really and sounds and feels right to you? [Models] The [i].”

Student: Repeats the scale, this time with relaxed physical effort and a pure [i] vowel

Howe: “That was much different and much better in my ear.”

In this rehearsal frame, Howe employed a recording device so the student could review the correct tone quality and vowel production she had achieved at her lesson, and she could subsequently practice replicating the sounds in her home practice routine.

Voice Teachers Often Concentrate Exclusively on Technique

Unlike Duke and Simmons’ (2006a) analysis, where expert teachers were observed focusing on physical technique to serve expressive ends (pp. 14-15), the three voice teachers observed for this study often focused exclusively on technique. In terms of technique, voice teaching expertise can be characterized by: (a) maintaining near

constant visual scanning of students, (b) using imagery to represent and help explain vocal function and technique; (c) conveying technical information by means of physical gestures, and (d) using keyboard with a high degree of technical facility to support technique.

Maintain Near constant Visual Scanning

Although many aspects of vocal production are invisible, expert voice teachers have learned to recognize cues in the body, such as posture and facial, jaw, tongue, and lip positions, that impede beautiful sound production or vowel purity, or are indicators of inappropriate tension. During the lesson, they focus attention on the student, looking for visible physiological flaws and cues. The teachers immediately address observable errors, cues, and physical tension while they help students recognize that correct body positions and elimination of inappropriate and overt tension are connected to more beautiful sound production.

Erie Mills:

During a soubrette soprano's (professional performer) lesson, Mills halted the student's performance of five-note scales on [du-, du-, di-, du-, du]: "And even here [touches each of her own cheeks], remember last time we talked about the initiation of the cheeks. Even though you're saying [u], [gestures a circle around the lips] these are up [gestures fingers lifting the cheeks, models lifted cheeks], yeah?" Mills set the target—she wanted the student to perform [u] vowels with rounded lips and raised cheeks.

Student: Performs the scale again, this time with [u] vowel lip position and raised cheek muscles

Mills: [Watches student's face, nods, smiles]

Student: (In a low voice) “Yes!”

Mills: “But you hear how . . . with somebody like you, it’s not that different. Nikolaidi (Mills’ voice teacher Elena Nikolaidi) used to say [imitates Nikolaidi] ‘It’s not that different [gestures both hands close together], but it’s so different [gestures arms wide apart].’ (Both laugh, Mills returns to normal speaking voice) it really is; the sound kind of takes a” [gestures a diving arm movement].

Student: “It’s crisper.”

Mills: “It’s just cleaner, everything is like [whispers, gestures crisp hand movement] ‘ta dah’ . . . [returns to normal speaking voice] the other one’s okay, the other way is okay. . . it’s good in fact . . . but it’s not good enough for you! Let’s put it that way, it might be good enough for someone else but it’s not good enough for you!”

In this rehearsal frame, Mills focused mainly on the student’s face while she performed. She observed and immediately addressed the student’s lowered cheek position, helping the student reposition her facial muscles to achieve a more beautiful and balanced tone quality.

Joseph Frank:

During a first session lesson with a tenor (junior undergraduate), Frank halted the student’s performance of Respighi’s *O falce di luna calante*: [raises upper lip showing upper teeth] “If I see [again models raised upper lip] when you go to an [i] vowel [models incorrect [i] vowel, sung with raised upper lip] you sometimes, you want to chew (move) it.” Frank set the goal –he observed the student overly raise and move his upper lip while singing an [i] vowel, and he wanted the student to correctly position his upper lip to produce a pure vowel.

Frank: [Models the phrase with correct upper lip position] “*Aneliti bre, Aneliti bre*. Okay that [i] vowel and that [e] position is behind the front teeth, not in front of it. Otherwise you’re doing guppy

technique. And I'm just seeing [models overly raised and moving upper lip]. I mean when you look at your video tape when you sing that, you're going to see that that looks (pauses, smiles) not normal." (teacher and student laugh)

Student: "Right. Yep."

Frank: "It's like Bryn Terfel; Bryn used to sing out the side of his mouth . . . I mean if it works, fine, but I don't want you to do it. . . Right there."

Student: Performs the section, this time maintaining correct upper lip position on the [i] vowel.

Frank: (As student performs) [watches, focusing on the student's face-mouth, gestures pointing to his own relaxed upper lip position] (student finishes performing the passage)[nods] "Okay, good."

In this rehearsal frame, Frank focused his attention on the student's lips, observing a raised upper lip that showed too much teeth as well as movement of the upper lip during [i] vowel production. Frank helped the student relax and stabilize his upper lip position, consequently achieving the goal of balanced tone quality and pure [i] vowel production.

Eric Howe:

During a second session lesson with a lyric soprano (graduate student), Howe watched the student's performance of an arpeggiated tenth vocalise on [ya]: [Halts] "I look over, I want to be sure you understand, we don't want to hold the jaw in one place [models tense jaw position], we just want to keep it calm and uninvolved in the production. Howe set the target—he observed the student perform with rigid, tense jaw and he wanted her to relax the jaw to produce more beautiful tone.

Howe: "And sometimes when we do this, it will tend to just create a different tension; that's not the point at all. You may find you want a little different jaw position for low to high [gestures hand to jaw, models low and high jaw positions], especially since

we've gotten this high. Near the top of the staff . . ." [plays exercise]

Student: Student performs, this time with a relaxed jaw and, consequently, better tone quality

Howe: [Watches performance] "There you go, sure."

In the rehearsal frame, Howe noticed and immediately addressed overt jaw tension when the student was singing arpeggios on [ya]. He visually monitored the student's performance, helping her achieve the target goal of performing with a tension-free jaw, so the student produced a more beautiful sound quality.

Use Imagery to Represent and Explain Vocal Technique and Interpretation

Because much of the vocal mechanism is hidden from the student's view, all three voice teachers used metaphorical information, often known as imagery, to teach technical as well as expressive aspects of singing. They connected familiar people, properties, situations, and things to various vocal processes (e. g., evenness, breathing, tonal balance, registration, and resonance), using the effects of mimicry and imagination to accomplish student learning. When an image helped an individual student achieve positive progress toward a lesson target, a voice teacher was likely to reinforce progress by reiterating the image.

Erie Mills:

In a second session lesson with a lyric coloratura soprano (opera chorus member), Mills halted the student's performance of Handel's *Let the bright seraphim*: [Models the phrase with prepared breath, slightly exaggerated upward ribcage and stance, and beautiful, balanced tonal ease. Models the initial syllable of *Let*] "[le], like you drop

donuts into oil and they go p-chew (gestures quick, upward expansion with both hands). You have to be already ready here” [plays the point of readiness in the melody]. Mills set the target—she wanted the student to draw a quick, prepared breath while maintaining a raised and expanded ribcage.

- Student: Performs, this time with better prepared breath and upward ribcage posture, but with visible and audible physical tension on the high A of the phrase
- Mills: [Halts] “You need to toss off the [plays the two pitches of the interval], you’re making too big of a deal of the A natural and the A natural’s not nearly your highest note. So just let it [models, singing the interval three times], like idiot work, like it’s just a nothing.”
- Student: Performs the phrase again, this time under-supporting with the abdominal muscles and lower body and closing her mouth slightly. The high A was slightly under pitch.
- Mills: “Stay on top of it, like that little cat poster (Mills did not further clarify the poster referenced). [Moves to student, models open mouth position, speaks emphatically] Open your mouth!”
- Student: Repeats the passage, this time preparing the breath, breathing quickly, maintaining upward ribcage posture, applying appropriate abdominal and lower body support, and opening her mouth more. The A natural sounded effortless, with good tonal balance and intonation
- Mills: “And you did nothin’ at all on that A natural, you did nothin’ at all! [Claps twice for emphasis] . . . Good.”

Mills used the image of dropping donuts into a fryer to represent quick breathing with an upright ribcage position. She also suggested that the student should imagine high notes as toss-away and like-a-nothing “idiot work” to produce the high A with less physical tension. Finally, Mills interjected the humorous image of a cat poster to encourage good intonation on the high note. Mills’ use of these images helped the student make positive

progress toward the goal of achieving upward singing posture for prepared and properly supported, yet relaxed, high notes.

Joseph Frank:

During a second session lesson with a countertenor, Frank halts the student's performance of Purcell's *Music for a while*: [models, singing falsetto] "*Shall all*. See I'm using the blade of my tongue. I don't want to hear [models non-resonant quality, singing falsetto with high tongue and dropped soft palate] *Shall all*." Frank set the target- he wanted the student to perform with a lower tongue position to produce more resonant tone quality.

Frank "Otherwise, if the tip goes up it blocks it. The idea is to keep the space that's inside there as big as possible so that you've got that [drops jaw to model visible lowered tongue position, turns to the white board draws two arcs with up and down pointed arrows between, holds two markers end to end and quickly separates them] "The space between that tongue [taps lower arch on white board] and the soft palate [taps upper arch] should be gigantic. It's like magnets; Okay, it's like if these [taps marker lids together] are attracted, [flips markers to ends] the back of your tongue should repel your soft palate . . . so that every time you take a breath, you're doing this, ka-chung! [Quickly separates markers] And it's going apart" [Repels markers again]

Student: Performs the phrase again, this time with more resonance, presumably due to more space between the tongue and soft palate. He continues to the next phrase.

Frank: (During the student's performance reiterates the imagery) "Magnets . . . Good."

In this rehearsal frame, Frank used the image of magnetic pole repulsion to represent tongue and soft palate positions. He helped the student imagine separation of tongue and

soft palate; thus, the student was able to achieve the target goal, producing resonant vocal tone.

Eric Howe:

In a first session lesson with a dramatic mezzo-soprano (cantor), Howe halted the student's performance of a vocalise (octave leaps with sustained and pulsated upper pitch) on [me, le--, me]. "I'd like you to imagine Frankenstein bolts [gestures, pulling out the neck, then mimes bolts on the sides of the neck] in your throat for the low notes" Howe set the target—he wanted the student to maintain expansion in the throat to produce more resonant lower pitches.

Student: "Oh, okay." Performs the exercise again, this time with more resonance in the lower register.

Howe: "How about that!"

Student: "Yeah!"

Howe: "That took some of the pinch out." [gestures wide space around neck]

Student: (Looks pleased) performs the vocalise again

Howe: [Hums next starting pitch] "I love it! All that sound for minimal effort. That's what we're looking for. And that's helpful for you, so you don't lock down on stuff. Let's do one more." [Plays pitch]

Student: Performs, this time with less resonance on the low note. "Not enough bolt!"

Howe: "Not enough bolt!"

Student: Performs again, This time with more resonance on the low note

Howe: "Wow! (smiles) Okay, there's an image . . . there's an image that helps you!"

In this rehearsal frame, Howe used the image of external bolts on the large neck of Frankenstein’s monster to help the student attain the target for lower note resonance. He also gave feedback using metaphors of pinched and locked down tone to represent non-resonant tone quality, and he commended the student when she performed with greater resonance and achieved the target goal.

Convey Technical Information by Means of Physical Gestures and Facial Cues

All three instructors used non-verbal gestures, such as hand and finger positions, arm movements, facial expressions, and postural change, to communicate and clarify information, directives, and feedback. Nonverbal gestures were used both alone and in combination with facial cues, modeling, or short verbal directions or sounds. Teachers often used non-verbal gestures while students were performing.

Erie Mills:

During a first session lesson with a soubrette soprano (professional performer), Mills halted the student’s performance of five-note scales on [de-, de-, da-, de-, de]: “Now I just want to remind you to know exactly where you’re going and start the bottom note in the top place.” Mills set the target—she wanted the student to match the sound production of the bottom note to that of the upper pitch.

Mills: “. . . Just think about it ahead of time, that’s all.”

Student: Repeats the scale, ascending chromatically

Mills: (While student continues singing) [gestures hand circling] . . . [models mouth and cheek position...[gestures hand in high position moving horizontally forward] “go straight across it [points toward student, indicating approval] ...Love it ... [Makes high narrow descending sound] . . . [nods encouragement] ...when you stop

when you think it's comfortable, go at least to the next one" [plays next higher chord]

Student: Repeats the exercise three times, ascending chromatically. Each time, producing the lowest pitch in a similar manner to the top note, and emitting beautiful relaxed sounding vocal tone.

Mills: (Smiles) "Good, good, good, good, good!"

During the student's performance, Mills used circling and horizontal hand and arm movements to clarify her directive about starting "the bottom note in the top place." She combined these gestures with short directives, encouragements, and a narrow squeal that epitomized the ease of high sound production. Mills also nonverbally modeled cheek, jaw, and lip positions needed to articulate the consonant-vowel combination in the extreme high range. Here, Mills' use of nonverbal gestures helped the student achieve positive progress toward the technical lesson target without stopping her performance.

Joseph Frank:

During a first session lesson with a tenor (sophomore undergraduate), Frank gave feedback about the student's performance of a vocalise on [o] (5, 5, 3, 4, 2, 1, 5, 1): "Can I have the portamento (connecting slide) between so they're all spinning (having breath energy, resonance, and tonal vibrancy)? [Models the vocalise with vocal spin]. Going back up as well." Frank wanted the student to maintain consistent breath energy and tonal vibrancy (spin) while performing connected, *portamento*.

Student: Repeats the vocalise, loses resonance on the final upper fifth (1, 5, 1)

Frank: (As student performs) "Okay, that's where it is. [Halts] So we're going to sing a fifth [plays interval of a fifth, models the exercise at pitch with resonant forward placement and energy, while gesturing

closed thumb and index finger directly in front of lips] [o-o-o]
[models the exercise again, at the same time gestures both hands
close together on 1, hands stretched wide apart on 5, hands close
together again on 1] The throat staying open.”

- Student: Repeats the exercise, adopting Frank’s modeled [o] jaw and lip positions producing more resonant tone, but still lacking portamento
- Frank: (As student breathes) [models [o] vowel jaw and lip positions] (during student’s performance) [gestures both hands close together, hands wide apart, hands close together again, halts] “That’s right. Now do the portamento. [Models the portamento fifth at pitch with resonant, forward placement and energy] [o-o-o]”
- Student: Performs the [o] with greater breath energy, contributing to resonance, forward placement, and portamento.
- Frank: “So we’re going to do one portamento and one [at pitch models a fifth without portamento on [a]] [a-a-a]. So we’re going to do one portamento on the fifth and then without the portamento” [gestures right hand palm down, chest-high moving smoothly up and down about ten inches, then repeats the movement in a quick detached manner]
- Student: Performs the exercise, this time with consistent breath energy, resonance, and forward-placed tone. Recognizes sensations of portamento vs. disconnection.
- Frank: (As student performs) [again gestures palm down right hand moving smoothly up and down then repeats the movement in a quick detached manner] “Okay, good.”

In this rehearsal frame, Frank gestured to indicate a point of forward tonal placement, touching thumb and finger in front of his lips. He used narrow and wide spaced hand gestures to suggest open throat position on the upper note of the exercise. Before and during the student’s performance, Frank juxtaposed smooth and detached hand lifts to clarify directives for portamento and non-portamento singing. Frank’s nonverbal gestures helped the student achieve positive progress toward the lesson target of consistent breath

energy, which resulted in greater tonal resonance and vibrancy, as well as portamento between pitches.

Eric Howe:

During a first session lesson with a dramatic mezzo (cantor), Howe halted the student's performance of Giacomelli's *Sposa son disprezzata* after a sustained high F: "What you're getting is a relatively straight tone [gestures closed fist moving horizontally] that gives way to vibrato late" [opens hand, lifts]. Howe set the target—he wanted the student perform with even vibrato.

Howe: ". . . Whether it's a choice we want; is it easy musically and physically [gestures, placing hand over his larynx]. That's a different question."

Student: "Okay"

Howe: "Let's see if we can ask for [gestures right hand spinning] more spin (vibrato) right away, just for vocal reasons." [plays starting pitch]

Student: Performs the phrase a cappella, this time with even vibrato throughout the long note

Howe: (As student performs) [watches, leans forward, gestures tapping right hand on knee conducting the vibrato, nods head toward his tapping hand] (student finishes the phrase, stops) "I love that! [Nods] Voice teachers tend to like vibrant sounds more than non-vibrant sounds; we're just biased that way. And I thought you had better pitch and you had an easier time with the trill that followed too, 'cause things stayed freer [gestures, pointing hand towards larynx]. So, cool."

In this rehearsal frame, Howe juxtaposed fist-horizontally and raised open-hand movements to represent straight and consistently vibrating tone qualities. He placed a hand on his throat, nonverbally indicating the larynx as the source of vibrato. Howe's

circling hand gesture clarified feedback requesting more vibrato from the onset of the pitch, rather than at the terminus. During the student's performance, Howe tapped his hand on his knee to communicate vibrato rate, further emphasizing the gesture with a directed head nod. Here, Howe's nonverbal gestures helped the student achieve the target goal of consistent vibrato.

Have a High Degree of Technical Facility with Keyboard to Support Technique

All three instructors spent at least some of each lesson at the piano. They used the keyboard to provide support for various vocalises, model pitch and rhythm concepts, correct pitch and rhythmic errors, and accompany song repertoire.

Erie Mills:

During a lesson with a lyric coloratura soprano (opera chorus member), Mills accompanied the student's performance of Handel's *Let the Bright Seraphim*. [Halts]. "Better. Good, and the same thing [models vocally then plays an octave leap in the melody], just get there." Mills set the target—she heard the student sing an under-pitch upper note of an octave leap.

Student: Performs the phrase again. "Did I get there?"

Mills: "It was better the first time, not as good this time." [plays the melody on the piano, plays the octave interval, then models, singing the octave at pitch]

Student: Performs the phrase again, this time with better prepared breathing and abdominal support and good intonation throughout

Mills: (As student performs) [plays accompaniment, watches the student] "Good."

In this rehearsal frame, Mills demonstrated keyboard facility, providing repertoire

accompaniment on the piano. Mills also used the piano to model pitch and correct the student's error in intonation. Thus, Mills used keyboard support to help the student achieve the target goal.

Joseph Frank:

During the second session lesson with a basso profundo Frank accompanied the student's performance of Menotti's *Amahl and the Night Visitors*. [Plays introduction and sings Amahl's solo] "*Are you a real king?*" As the student performs, Frank alternately plays the accompaniment and notes of the recitative. [Halts, models, singing at pitch] "*It is just like yours*" [plays the recitative notes twice] "That's a quarter note with an eighth and a triplet." Frank set the target—he wanted the student to perform correct rhythm.

Frank: [Plays the recitative then sings the phrase at pitch] "*It is just like yours.*" [Plays starting pitch]

Student: Performs, but the 'l' of the word "like" is under pitch

Frank: "Now put the 'l' on top of that pitch [plays the pitch then sings emphasizing the correctly pitched 'l'] "*It is just like yours . . . like yours.*" (Frank set a second target—he wanted the student to articulate the 'l' of "like" on the pitch of the ensuing vowel

Student: Repeats the phrase, this time with correct rhythm and articulating the 'l' on pitch

Frank: "Yes." [cues student to continue by playing the next section of accompaniment and singing Amahl's solo] "*Tell me about your home.*"

Student: [Performs the next section, sings an incorrect melody pitch] "*I live in a black marble palace full of black panthers and white doves.*"

Frank: [Halts, models, singing the phrase at pitch] "*I live in a black marble palace full of black panthers and white doves. I live in a* [plays accompaniment, plays F#] and F#."

Student: Repeats the passage, this time with correct melody notes and ‘I’ consonant intonation

Frank: “Good . . . Good!”

In this rehearsal frame, Frank demonstrated facility with piano, providing accurate repertoire accompaniment. He also used the piano to correct errors in rhythm and pitches, so keyboard support was used to help the student make progress towards achieving lesson goals.

Eric Howe:

During a first session lesson with a coloratura soprano (graduate student), Howe halted the student’s performance of Menotti’s *The Telephone*: “Now let’s do that slowly for a moment just to check.” [Student begins performing]. [Howe plays the melody on piano with the student, halts and plays a pitch that the student has sung incorrectly, then plays the correct pitch]. Using the piano, Howe set the target—he wanted the student to perform correct melody notes.

Howe: “What chord are you sort of aligning with a couple of passing tones?”

Student: [Slowly sings the phrase] “D minor?”

Howe: [Plays melody after student] “You got it. Are you thinking, ‘oh there’s my harmony?’ [plays arpeggiated chords then plays melody]

Student: “No, I’m talking back to your right hand.”

Howe: “You are indeed, but my right hand is not in D minor, that’s the problem.” [plays accompaniment, melody, accompaniment, melody]

Student: [Joins in, performs melody] “I know that’s the conversation. [sings the phrase again, Howe plays accompaniment] That’s what I’m

doing, that's how I think of it, is you're this [high character voice] and I'm 'no.'" [different, lower character voice]

Howe: "So we've got this cross relation again, from the F# and the F natural. If you could just point that out a little bit the audience is more likely to get it."

Student: "Well that's because you're her friend, I mean you're her friend and she's not totally getting along entirely with her friend and that's why her tuning is different than your tuning."

Howe: "Exactly, yeah so you've got good reason for pointing it out. That's right. Can we start right on that measure . . . here we go." [Plays accompaniment]

Student: Performs the phrase again, this time emphasizing the F natural, and creating a contrast with the F-sharp in the accompaniment.

Howe: "Yeah, I'm hearing it more; I'm hearing you hear it more. This is a good thing."

In this rehearsal frame, Howe demonstrated facility with keyboard instruments, providing accurate and expressive accompaniment, and illustrating correct pitches juxtaposed with alternate harmonization. Thus, Howe used the keyboard to help the student achieve correct intonation, and consequently emphasize a contrast or conversation between the singer's melody and the accompaniment.

Expert Voice Teachers Rely on Extensive Familiarity with Texts Used for Singing

Unlike instrumental performance, singing relies on the expression of text. At a basic level, vowels (and their various combinations) allow pitches to be sustained, and vowel formation differs among the different languages of song. Consonants must be articulated in a timely way if an audience is to comprehend the text. At another level, interpretation in singing relies on a deep understanding of the poetry, characters, and plot line of art song, oratorio, opera, and musical theater, in addition to its historical and

cultural context. Thus, expertise in voice teaching can be characterized by familiarity with technical and interpretive issues of text, including: (a) comprehensive knowledge of vowel and consonant production in the primary languages of song and (b) knowledge of the vast array of art song poetry and oratorio, opera, musical theater libretti.

Demonstrate Comprehensive Knowledge of Vowel and Consonant Production in the Primary Languages of Song

All three instructors demonstrated familiarity with Italian, German, French, and English lyric diction and capacity to help students produce beautiful tone while clearly conveying song texts. They immediately addressed errors in pronunciation, such as idiom-specific vowels, consonants, diphthongs, and syllabic stress, and flaws in diction related to the singing voice, such as vowel modification and consonant articulation timing and positioning.

Erie Mills:

During a second session lesson with a lyric coloratura soprano (opera chorus member), Mills halted the student's performance of Handel's *Let the Bright Seraphim*: "It's not an open [ɛ] it's a big [I] *up lifted* . . . and that'll keep, that'll help, because (models, chanting text in rhythm) *up lifted angel*. I never sang it that way, never. Up lif ted, it's not good (shakes head) you don't say up lif ted, you say up lif tid. And it really keeps it in a better place." Mills set the target—she wanted the student to produce an [I] vowel on the third syllable of *uplifted* to maintain correct vocal placement in the upper register.

Mills: [Models, singing the passage at pitch, gestures one hand with a small space between thumb and index finger]

Student: Performs the section again, this time imitating Mills' demonstration and modifying the vowel to [I], the resulting tone was better balanced

Mills: (As student performs) [nods and smiles]

The student has achieved the target goal, producing the appropriate vowel in her upper register. In this rehearsal frame, Mills modeled a specific vowel production and applied a gesture to denote a more closed vowel formulation. Emulating Mills' demonstration, the student successfully formulated the [I] vowel, maintained correct vocal placement, and produced more beautiful tone quality.

Joseph Frank:

During a first session lesson with a countertenor (freshman undergraduate), Frank halted the student's performance of Purcell's *Music for a While*: [Models falsetto, at pitch] "*from the [stands] from, from can you lift that space and sing from, from.*" Frank set and modeled the target—he wanted the student to produce a more resonant [a] vowel by lifting his soft palate.

Frank: "If I think of that 'f', I know it's a fricative, [models clear consonants and pure, resonant [a] vowel in falsetto] *from, from.* Okay, just give me the vowel [models in falsetto] [*am*]"

Student: Performs "[*am*]."

Frank: "Again."

Student: Performs [*am*], this time presumably raising his soft palate and producing a more resonant tone

Frank: "There we go. Okay, now sing *from.*"

Student: Performs with resonant tone but lengthy initial consonants

- Frank: “Make it faster.”
- Student: Performs a faster consonant to vowel articulation
- Frank: [Models, quickly articulating the consonants and producing a pure resonant [a] vowel in falsetto] “*From*”
- Student: Performs, imitating Frank’s model and producing clear, well-timed consonants and pure, resonant [a] vowel
- Frank: “There we go. Okay.”

With that approval, both teacher and student recognize that the target has been achieved.

In this rehearsal frame, Frank modeled and gave information about initial consonant articulation with pure resonant vowel production in the male falsetto. Following his feedback and models, the student successfully articulated clear initial consonants and resonant vocal tone on a pure [a] vowel.

Eric Howe:

During a first session lesson with a bass-baritone (amateur performer), Howe halted the student’s performance of Brahms’ *Denn es gehet dem Menschen*: [Shakes head] “Say the words here.” Howe set the target—he wanted the student to correctly pronounce the German text.

- Student: (Speaks, mispronouncing *wie dem Vieh*) “Die menschen wih den veg, din veeg?”
- Howe: [Halts student] “I think I’ll read to you, so that we get a little more of the cadence of the words.” [Models text, emphasizing correct pronunciation and syllabic stress] “*Denn es gehet dem Menschen wie dem Vieh. Vieh.* There’s a pencil over next to the recorder there. *Denn es gehet dem Menschen wie dem Vieh.*”
- Student: Marks score

- Howe: “Say that again.”
- Student: Repeats the text, imitating Howe. “*Denn es gehet dem Menschen wie dem Vieh.*”
- Howe: “Good . . . *Denn es ist alles eitel.*”
- Student: “*Denn es ist alles eitl.*” [mispronounces *eitl*]
- Howe: [Models, speaking] “*Eitel.*”
- Student: [Imitates Howe] “*Eitel.*”
- Howe: “There you go. Careful not to say *tl.*” [Models incorrect pronunciation, connecting *t* to *l* without articulating the vowel].
- Student: “*Eitel*, It’s still kind of a schwa?”
- Howe: “It’s a schwa, right, it’s the ‘*l*’ that we want to keep in the tip of the tongue. Now go back, if you would, to the top.”
- Student: Performs, this time with accurate German pronunciation
- Howe: “Good. Bravo.”

In this rehearsal frame, Howe immediately addressed incorrect German vowel and consonant production and syllabic stress. Howe modeled the German text, and by following the model, the student achieved the lesson target of accurate pronunciation.

Demonstrate Familiarity with Art song Poetry and Oratorio, Opera, and Musical Theater Libretti.

All three instructors demonstrated familiarity with songs and arias for many voice types, as well as knowledge about where a recitative, aria, ensemble, or song falls in the dramatic arc of a larger work. They helped students understand and express textual meaning with sound quality, gestures, and facial expressions, while still maintaining beautiful and healthy voice production.

Erie Mills:

During a first session lesson with a soubrette soprano (professional singer), Mills gave feedback about the student's performance of Verdi's *Sul fil d'un soffio etesio* (from Act III, Scene 2 of *Falstaff*). In this aria, Nanetta, who is in love with Fenton and disguised as the Fairy Queen, orders her helpers—other disguised characters—to torment Falstaff: “It already is very good. It's just that...look you're very smart, you're very prepared, you're talented. Now you need to start thinking about [student speaks with Mills, finishing the sentence] ‘who the character is.’” Mills set the target—she wanted the student to understand and clearly express a dramatically accurate characterization of Nanetta.

Mills: “The character is not you.”

Student: “No, she's such a sweet...”

Mills: (Interrupts) “Well you're sweet too. But she's very innocent; she's very quick ...”

Student: “Smart.”

Mills: “Yes, smart. She's very smart. Sing this song as if you're teaching uh, five year olds a Bible story.”

Student: “Okay.”

Mills: “Noah and the ark. [Speaks in a quiet dramatic voice]. So, you're telling the story [returns to normal voice] doesn't even have to be a Sunday school ...the Big Bad Wolf. [Models, singing the opening phrase of the aria with facial expressions and dramatic gestures like a storyteller. Returns to normal speaking voice] ...It's a story, and it's about whatever it's about. And plus you need to smell the story.”

Student: “Oh totally! She's doing it to scare the crap out of Falstaff and at some point she loses him and thinks about Fenton.”

Mills: “Oh I think so too! She can’t not think about Fenton; she’s thinking about Fenton every moment of the day, it’s the hormone thing. It’s also that she’s having the time of her life. It’s also just a lot of fun...She’s all dressed up, queen of the fairies. [Speaks with a storyteller voice] ‘Look at me children.’ [Returns to normal speaking voice] And the more vulnerable and fun she is, the more scared he gets. If she gets all creepy, where if you kind of [gestures creepy talons] ‘raar’, it loses its charm...Singing as who you are, the tone will take care of itself. You are not you, you are Nanetta. Think ‘who am I, what am I doing here, who am I singing to, where am I?’ That’s the acting part. Stop thinking about phonating; so what if you make one ugly tone. [Models, singing the passage with dramatic expression] Think about what you’re saying.”

Student: Performs, this time using various facial expressions and arm movements

Mills: [Halts] “Verdi knew what he was doing; he put a closed unstressed vowel on a high F. It’s like the heart, *core*, goes on!” [Models with beautiful and expressive tone color and phrasing]

Student: Repeats the passage, this time clearly expressing the character and scene with vocal color, physical movement, and facial expressions

Mills: [Applauds] “Lovely!”

In this rehearsal frame, Mills demonstrated familiarity with the specific aria, scene setting, and opera plot, offering detailed information about the aria in the dramatic flow of Verdi’s *Falstaff*. She provided excellent models to guide the student, who achieved the target goal of dramatic communication and characterization of Nanetta.

Joseph Frank:

During a first session lesson with a tenor (junior undergraduate), Frank gave feedback about the student’s performance of Britten’s *Sweet Polly Oliver* (a folk song about a young woman who joins the army, disguised as a man, to avoid separation from her soldier lover. The song is set as discourse from Polly and her lover’s sergeant, with

narration inserted): “*I’ll list*. It’s from ‘I’ll enlist’, that’s what that comes from . . . *I’ll list, I’ll list as a soldier and follow my*. I have to have more knowledge of what you’re saying because these are all strophic folk songs and they tell a story.” Frank set the target—he wanted the student to clearly differentiate each character in the song.

- Student: Repeats the section, still with little vocal sound differentiation
- Frank: [Halts] “No, no. I’ve got to hear the change. You got three things going on. You have the Captain [sic], then she says ‘*I’m ready*’, and then the narrator says ‘*said Polly, ‘to nurse.*’ That’s why when you listen to Fischer-Dieskau or Quasthoff when they’re doing the German things you hear the coloration, colorization. If you hear Quasthoff sing *Erlkönig* you hear the Erlkönig, you hear the son, and you hear the father. And you get goosebumps, okay. This isn’t eerie but I gotta hear the difference. “Now here’s the Sargent talking [models Sargent] *Now who’s good for nursing?*”
- Student: Performs to the end of the piece, this time varying his facial expressions and producing some different sound qualities
- Frank: (As student performs) [mimes each character with facial expressions and physical demeanor, halts] “Okay, so what’s the punchline here?”
- Student: “It’s that he was into the nurse.” (misunderstands the punchline)
- Frank: [Shakes head, speaks emphatically] “. . . the punchline is the last. . . *The Captain took joyfully his pretty soldier nurse*. That has to be said [models, singing and dramatically communicating the meaning of the final phrase] *The Captain took joyfully his pretty soldier nurse*. Between you and the audience, that has to be a facial thing as well. Inflection in the voice, but your face has to come alive there.” [Models again with drama, vocal color, and expressive facial mien] *The Captain took joyfully his pretty soldier nurse*. It has to come alive. And that’s when you have to [taps mirror] practice looking in the mirror. Because you’re an actor, you know you love that stuff. So you have to take that audience and have them in the palm of your hand so they know what you’re talking about. ‘Cause if they don’t understand this. . . ‘Gee it was boring ‘cause it was the same melody.’ That’s why strophic songs are so

difficult. You have to have the ability to do something with the words. Do the last verse again.”

Student: [During Frank’s demonstrations and discussion watches intently, nods]. Performs the last verse [watches his performance in the mirror], this time imitating Frank’s modeling and clearly communicating each character and the song’s final line with different sound qualities and facial expressions.

Frank: [Smiles, nods] “Okay.”

In this rehearsal frame, Frank demonstrated familiarity with a folk ballad and with Britten’s setting of the text. He provided information about conveying the characters and plot of the song text and compared the performance of this song to well-known baritones’ performances of German lieder. He also modeled dramatic facial expressions, vocal inflections, and sound color differentiation. Doing so, Frank helped the student achieve the goal of better understanding and more clearly expressing the song’s characters and storyline.

Eric Howe:

During a first session lesson with a coloratura soprano (graduate student), Howe halted the student’s performance of Menotti’s *The Telephone* (a one act, two-person opera where the lead male’s attempts to propose marriage to the female lead are constantly foiled by telephone calls): “In your acting here, how irritated, impatient, fed up are you in this whole section?” Howe set the target—he wanted the student to perform with clearer dramatic intent.

Student: “That’s sort of one of the things that changes every time I perform it.”

Howe: “Yes, this time I had the sense that you were being somewhat resigned.”

- Student: “Right. That’s one of the things that kind of just changes.”
- Howe: “We want to be sure that it’s not apathetic; apathy is one of the hardest emotions to project as an actor. So, were you glad she called, were you really just thinking of her problems?”
- Student: “I think I was honestly just a little distracted.”
- Howe: “Let’s do it again and see if you can bring your character back in. *Oh dear.*”
- Student: Repeats the passage, this time singing into a mimed telephone receiver and clearly projecting impatient facial expressions and related vocal sound.
- Howe: (As student performs) . . . “Yes!” [At the phrase ending] “Wow, that was a whole different singer, love it! . . . Okay, now she’s going to tell you something interesting, here we go.” [Plays introduction to the next section]

In this rehearsal frame, Howe demonstrated familiarity with the aria itself, and where it falls in the dramatic flow of the opera. He also demonstrated familiarity with acting issues, helping the student recognize the challenges of portraying characters who are distracted or apathetic. Howe guided the student to consider different dramatic interpretations of the character’s emotional reaction to the caller, namely to consider whether the character might be portrayed as impatient or irritated. When the student attempted this characterization, she achieved the target goal of clearer dramatic intention, both with facial expressions and sound color.

Chapter Summary

The purpose of this study was to characterize expert voice teaching while evaluating the generalizability of Duke and Simmons’ (2006a) 19 elements of expertise to voice instruction. One overarching question guided the study: How can expert voice

teaching be characterized? More specifically, using Duke and Simmons' (2006a) study of expert instrumental music teachers as a point of departure, I wanted to understand: To what extent does voice teaching observed in the present study align with Duke and Simmons' (2006a) 19 Common Elements of Expertise ? As I completed the first phase of analysis, coding for etic codes derived from Duke and Simmons' elements, not all of the codes initially generated had been employed. In addition, some statements or descriptions had no code attached. These discrepancies led me to consider that, while Duke and Simmons' version of teaching expertise was applicable in many ways to voice teaching, not all of the characteristics of voice teaching could be accounted for in their scheme. Consequently, I carried out a second analysis of all transcribed rehearsal frames, using an emic coding process: that is, allowing new codes to emerge from the data.

Results of my second analysis suggested that expert voice teachers: (a) work with a largely invisible and fully embodied instrument, (b) frequently focus exclusively on technique, and (c) rely on extensive familiarity with texts used for singing. Using these classifications, I gathered evidence of nine new elements that appeared in most lessons across three vocal instructors. Three new elements related to expert voice teachers working with largely invisible and fully embodied instruments. These included: (a) communicating comprehensive knowledge of human anatomy and physiology of voice production, (b) establishing safe and collaborative studio environments where students' questions and observations about the mechanics and process of singing were encouraged, and (c) supporting students' learning to sing and learning about singing by means of devices such as lesson recordings and mirrors. Four new elements related to expert voice

teachers' frequent focus exclusively on technique: (a) maintaining near constant visual scanning of students, (b) using imagery to represent and help explain vocal function and technique, (c) conveying technical information by means of non-verbal gestures, and (d) high technical facility with keyboard instruments, which they used to support technique. Two new elements related to expert voice teachers' extensive familiarity with texts used for singing. These included: (a) knowledge about vowel and consonant production in the primary languages of song and (b) knowledge of the vast array of art song poetry and oratorio, opera, and musical theater libretti.

In the previous chapter, I reported findings from my first analysis, where I assigned codes derived from Duke and Simmons' (2006a) narratives to transcribed rehearsal frames. Expert voice instruction completely aligned with eight of Duke and Simmons' element narratives, and some variance was demonstrated with six other narratives. A majority of these elements fell under Duke and Simmons' categories of Goals and Expectations and Eliciting Change. Some initially derived codes were not applied during the first analysis; thus, voice teaching expertise did not align with five of Duke and Simmons' element narratives, a majority of which fell under Duke and Simmons' category, Conveying Information.

Overall, it appears that applied music teaching expertise may be characterized similarly, irrespective of whether it is conducted in an instrumental studio or a voice studio, in terms of the ways in which teachers set goals and expectations and attempt to elicit change in students' performance (Duke & Simmons, 2006a, p. 11). Overlap between instrumental expertise and voice teaching expertise occurs in assigning capacity-

appropriate repertoire, judging students' performance to consistently high standards of a clear auditory image, setting important yet achievable proximal goals. having students perform pieces beginning to end with halts for error correction, being tenacious about technical flaw correction and lesson goal achievement, and conducting rapidly paced lessons with intuitively timed breaks. However, voice teaching expertise should be characterized differently than instrumental teaching expertise in assigning technical capacity stretching exercises and using breaks only to expand on lesson work. Moreover, voice teaching expertise should be characterized differently than instrumental teaching expertise in their lack of lengthy comparisons between past and present lesson performance or offers of student interpretive choice. Voice teaching expertise also appears to differ in significant ways from instrument teaching expertise in terms of both what information is conveyed and how that information is communicated. More specifically, voice teaching expertise should be characterized differently than instrument teaching expertise in conveying fine discriminations about performance but not asking students to verbalize their own discriminations nor describing technique in terms of physical motion or interpretive effect. Further, voice teaching expertise should be characterized differently than instrument teaching expertise in providing succinct positive and negative feedback in similar frequencies and in the use of additional forms of modeling, such as exaggerated negative, spoken and chanted text, and dramatic expression. Finally, in responding to conditions of voice teaching (viz., working with largely invisible-fully embodied instruments, frequently focusing exclusively on technique, and having extensive familiarity with texts used for singing), voice teaching

expertise should be characterized differently than instrumental teaching expertise in collegiality-rapport development, constant visual monitoring, use of studio devices, keyboards, imagery, and gestures to communicate and support technique, and in the need for comprehensive knowledge of human vocal anatomy and physiology, vowel and consonant production in sung languages, and libretti and art song poetry. These findings suggest, in turn, that knowledge underlying voice teaching expertise may be organized somewhat differently from knowledge underlying instrument teaching expertise. In Chapter Six, I will explore this possibility as I summarize my research findings and, drawing on Berliner (1986, 1988), turn toward a theoretical model of expertise.

CHAPTER SIX: CONCLUSIONS AND IMPLICATIONS

The goal of this study was to better understand and characterize voice teaching expertise. I began my study with Duke and Simmons' (2006a) descriptions of 19 elements common to the teaching of three exemplary instrumental instructors. In centering their study only on instrumental teaching, Duke and Simmons invited subsequent investigation, such as the present study, to determine the extent to which their findings would generalize to other contexts. Thus, using Duke and Simmons as a point of departure, I conducted a collective case study of expertise, informed by three exemplary voice teachers: Erie Mills, Joseph Frank, and Eric Howe. I digitally recorded almost 20 hours of lessons, interviewed all participants, and logged field notes. The lesson videos served as my primary data. Using Duke's concept of a rehearsal frame (1999/2000, 2008), I reviewed each video to identify when a teacher set a target goal and indicators that the student had accomplished the goal. I transcribed all verbal instruction and described all non-verbal behaviors within each frame.

I analyzed the transcribed-described statements and nonverbal behavior in two phases. First, I derived etic codes from Duke and Simmons' (2006a) narratives and attempted to assign at least one code to each segment of data. At the end of the first phase of analysis, not all initially generated codes had been used, and some statements or behaviors remained uncoded. This led me to take a more organic approach in the second analysis, allowing emic codes to emerge from the data in an open coding process. I assigned these codes to categories by means of axial coding (Merriam, 2009, p. 177). I then employed spoke outlining (Mack & Skjei, 1979) to confirm and classify new

behavior-attribute categories. Throughout data analysis, I tracked behavior-attribute commonality, using Duke and Simmons' (2006a) standard of appearance "in nearly every lesson taught by all three teachers" (p. 11). Finally, I determined new elements based on commonality, maximum data assignment, clarity of classification, and plausibility (Merriam, 2009). I created new element descriptions based on review of my findings, discussions with my dissertation advisor, and reflection on related research (Blades Zeller, 1993, 2003; Clemmons, 2007; Dufault, 2008; Duke & Simmons, 2006s; Levasseur, 1994; L'Hommedieu, 1992; Parkes & Wexler, 2012).

In this chapter, I provide a brief summary of the findings detailed in Chapters Four and Five. Then I use Berliner's (1986) lens on expertise to discuss the findings in a theoretical context so that I can advance a theoretical model of voice teaching expertise. Finally, I present implications of that model for the preparation of novice voice teachers and for further research on voice teaching expertise.

Summary of Findings

The first phase of analysis revealed 14 elements similar to those characterized by Duke and Simmons (2006a). Duke and Simmons divided their 19 elements into three broad categories: Goals and Expectations, Effecting Change, and Conveying Information. I found expert voice teaching in the present study to be mainly aligned with all key points of Duke and Simmons' original narratives, or aligned with some minor variation, under the categories of Goals and Expectations and Effecting Change. In contrast, I found expert voice teaching less aligned with elements related to Conveying Information.

Goals and Expectations

This study's expert voice teaching was mostly similar to Duke and Simmons' (2006a) descriptions of expert instrument teaching under the category Goals and Expectations (see Table 2 Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Goals and Expectations). All three vocal instructors: (a) assigned standard repertoire of a level commensurate with student capacities, (b) taught with a clear auditory image in mind, (c) demanded consistent sound production from students, (d) selected musically important target goals, and (e) positioned lesson targets so students could achieve them successfully. Although each voice lesson used repertoire within students' capabilities, similar to Duke and Simmons' (2006a) claim, lessons were initiated with exercises that took students only to the limits of their current capacities. I did not find examples of lengthy comparative feedback about student progress over time as I observed the voice teachers in this study; the rare occurrences of this type of feedback were pointed and concise.

Effecting Change

In terms of Duke and Simmons' (2006a) elements under the category Effecting Change (see Table 3 Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Effecting Change), all three teachers: (a) structured lessons to address errors as they occurred, (b) were tenacious in helping students achieve target goals, (c) immediately addressed technical errors, and (d) conducted lessons at a rapid pace (pp. 12-13). In minor variance to Duke and Simmons, although teachers held

Table 2

Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Goals and Expectations

Complete Alignment	Alignment with Variation	Non-Alignment
<p>Have a clear auditory image of the piece that guides their judgments about the music.</p> <p>Demand a consistent standard of sound quality from their students.</p> <p>Select lesson targets that are technically or musically important.</p> <p>Position lesson targets at a level of difficulty close enough to the student's current skill level that targets are achievable and change audible in the moment.</p>	<p>Assign repertoire within students' technical and musical capacities.</p>	<p>Clearly remember students' work in past lessons and frequently draw comparisons between present and past, pointing out both positive and negative differences. The amount of time spent describing improvements in performance over weeks or months is notable for its contrast with negative feedback, which is generally pointed and brief.</p>

students to high standards of through-performed repertoire, they rarely offered feedback that referenced audience perceptions. Similarly, although teachers intuited students' need for breaks, they used breaks exclusively to elaborate or clarify topics addressed in the lesson. Expert voice teaching did not align with Duke and Simmons' element describing limited student choice about interpretation and no choices about technique (p. 14). Instead, all three voice teachers offered students some technical options, (e.g. frequency of breath), but offered almost no interpretive choices.

Table 3

Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Effecting Change

Complete Alignment	Alignment with Variation	Non-Alignment
Generally allow the course of the music to direct the lesson with performance errors eliciting stops.	Repertoire is performed from beginning to end, as if in performance, with stops merely for error correction. Feedback is about how the audience would perceive the performance.	Allow students to make interpretive choices, among a limited range of circumscribed options; students are permitted no options related to technique.
Are tenacious in working to accomplish lesson targets, having students repeat performance until accurate.	Fast-paced teaching is interrupted for breaks in which the teacher tells an entertaining story, elaborates on the lesson work, or performs an extended demonstration.	
Immediately address flaws in fundamental technique.		
Conduct lessons at a rapid interactive pace.		

Conveying Information

Voice teaching observed during this study was least aligned with Duke and Simmons' (2006a) narratives under the category of Conveying Information (see Table 4 Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Conveying Information). All three voice teachers: (a) communicated fine discriminations about students' singing, yet they rarely asked students to verbalize independent discriminations about their own performance, (b) offered clear, concise negative feedback directed toward improving performance but not more frequently than they offered positive feedback, and (c) modeled excellent singing and exaggerated

negative aspects of the performance to make a point, spoken and sung text, dramatic expression, and physical positions (pp. 14-15). In contrast to the expert instrumental instructors in Duke and Simmons' study, expert voice teachers in the present study (a) addressed physical movement as a technical device, rather than pairing physical motion with musical or expressive effect, (b) similarly offered technical feedback separately from interpretive feedback rather than linking the two, and (c) offered no lengthy episodes of positive feedback (pp. 14-15).

Table 4

Alignment of Expert Voice Teaching with Duke and Simmons' (2006a) Element Category: Conveying Information

Complete Alignment	Alignment with Variation	Non-Alignment
	Communicate fine auditory and visual discriminations about student performances; ask students to state discriminations about their performance independently.	Physical motion is described in terms of its effects on sound.
	Give pointed negative feedback, with markedly higher frequency than positive feedback.	Once students have learned about physical motion, feedback is about how changes in physical motion can achieve interpretive effect.
	Provide excellent models, technically and expressively; they also are able to provide a faithful imitation of the student's performance.	Infrequent but high magnitude positive feedback of extended duration.

New Common Elements of Voice Teaching Expertise

Discoveries about alignment, variation, and non-alignment of voice teaching expertise with Duke and Simmons' (2006a) 19 elements of instrumental teaching expertise set the stage for a second phase of analysis. Specifically, I began to wonder whether the nature of the vocal instrument, being fully embodied and invisible (by comparison to an oboe, violin, or piano) influenced how technical and interpretive information was conveyed during a lesson. The behaviors I observed and attributes I inferred were coded and gathered into nine new elements. The new elements related to three conditions of vocal pedagogy, where expert teachers (a) work with a largely invisible and fully embodied instrument, (b) frequently focus exclusively on technique, and (c) rely on extensive familiarity with texts used for singing (see Table 5 New Common Elements of Expert Voice Teaching).

Related to Working with a Largely Invisible and Fully Embodied Instrument, all three teachers demonstrated extensive knowledge about the physiological functions of voice. Further, they all responded to the invisible and embodied nature of the instrument with two practical elements: (a) collaboration, rapport, humor, and encouragement as a condition of the studio to support student questioning and risk-taking, and (b) use of devices to help students connect correct physical positions with sound quality (e.g., lesson recordings and mirrors). Under the second category, Frequently Focus Exclusively on Technique, I described four new practical elements. The expert voice teachers all (a) constantly watched students, monitoring visible anatomy and cues about invisible singing functions, (b) used imagery to replace or clarify mechanistic explanations about

Table 5

New Common Elements of Expert Voice Teaching

Work with a Largely Invisible and Fully Embodied Instrument	Frequently Focus Exclusively on Technique	Rely on Extensive Familiarity with Texts Used for Singing
Convey comprehensive knowledge of human anatomy and physiology of voice production.	Maintain near constant visual scanning of students during performance for cues about technique.	Convey comprehensive understanding of the primary languages of song (viz., Italian, German, French, and English).
Establish safe and collaborative studio environments where students' questions and observations about the mechanics and process of singing are encouraged.	Use imagery to represent and help convey information about vocal function and technique.	Convey their familiarity with the vast array of art song poetry and oratorio, opera, musical theater libretti and its interpretation.
Support students' learning to sing and learning about singing by means of devices such as lesson recordings and mirrors.	Convey technical and interpretive information by means of non-verbal gestures.	
	Demonstrate high technical facility with keyboard instruments for the purpose of supporting technique and artistry.	

vocal function, (c) used non-verbal routines (e.g., gestures, facial expressions, and movement) to convey vocal functions without interrupting student performance or slowing the lesson pace, and (d) provided technically facile piano accompaniment for student performance, also using the piano to help correct melodic, rhythmic, and intonation errors. Related to the third category, Extensive Familiarity with Texts Used for Singing, I uncovered two new elements. First, all three voice teachers guided students to correct pronunciation of the main languages of song (i.e. Italian, German, French, and

English) and addressed errors in vowel and consonant production that impinged on beautiful sound quality. Second, all teachers demonstrated knowledge about meaning and context of individual song poetry and of larger works, guiding students to express the meanings while maintaining healthy vocal technique.

Discussion: Berliner's Theory and Voice Teaching Expertise

Integration of Complex Knowledge

At the heart of this study was an effort to characterize voice teaching expertise through observation of three exemplary applied voice instructors and description of elements of instruction common in their teaching. Berliner (1986) proposed that pedagogical expertise integrates two complex knowledge domains: subject matter knowledge and knowledge about organization and management of classrooms (p. 9). The 23 common elements identified in this study might be classified under these two knowledge domains advanced by Berliner as presented in Table 6.

Table 6

Classification of Common Elements Under Subject Matter and Organization and Management of Classrooms Knowledge

Subject Matter Knowledge	Organization and Management of Classrooms Knowledge
<i>1. Comprehensive knowledge of human anatomy and physiology of voice production.</i>	<i>1. Establish safe and collaborative studio environments where students' questions and observations about the mechanics and process of singing are encouraged.</i>
<i>2. Comprehensive understanding of vowel and consonant production in the primary languages of song (viz., Italian, German, French, and English).</i>	<i>2. Support students' learning to sing and learning about singing by means of devices such as lesson recordings and mirrors.</i>
	<i>3. Maintain near constant visual scanning of students.</i>

Subject Matter Knowledge	Organization and Management of Classrooms Knowledge
<p>3. <i>Familiarity with the vast array of art song poetry and oratorio, opera, musical theater libretti.</i></p>	<p>4. <i>Convey technical and interpretive information by means of physical gestures.</i></p>
<p>4. “Historical and theoretical knowledge and direct performance experience” (Duke & Simmons, 2006, p. 11) that shapes a clear auditory image of the piece.</p>	<p>5. <i>High technical facility with keyboard instruments to support technique.</i></p>
	<p>6. <i>Use imagery to represent and help explain vocal function and technique.</i></p>
	<p>7. Assign repertoire appropriate to students’ technical and musical capacities and exercises to stretch student capabilities.</p>
	<p>8. Demand a consistent standard of sound quality from their students.</p>
	<p>9. Select lesson targets that are technically or musically important.</p>
	<p>10. Position lesson targets at a level of difficulty close enough to the student’s current skill level that targets are achievable and change audible in the moment.</p>
	<p>11. Allow the course of the music to direct the lesson with performance errors eliciting stops.</p>
	<p>12. Be tenacious in working to accomplish lesson targets, having students repeat performance until accurate.</p>
	<p>13. Immediately address flaws in fundamental technique.</p>
	<p>14. Conduct lessons at a rapid interactive pace.</p>
	<p>15. Have students perform pieces from beginning to end; like a performance; judging performance by a high standard with stops only for error correction.</p>

Subject Matter Knowledge	Organization and Management of Classrooms Knowledge
	16. Interrupt teaching pace for lesson work related story breaks.
	17. Communicate fine auditory and visual discriminations about student performances, so that the student learns to make the same discriminations independently.
	18. Provide frequent pointed negative feedback in similar ratio to positive feedback.
	19. Provide excellent models of technical, musical, expressive, dramatic elements, text, and juxtaposed performance targets and exaggerated negative or accurate student imitations.

Note. New common elements in italics.

Nineteen of the 23 common elements of voice teaching expertise related to knowledge of organization and management of classrooms. Thus, expert voice teachers' knowledge of organization and management of classrooms appears to be extensive and vital to problem solving in the studio context. Findings of this study suggest that expert vocal and instrumental teachers' knowledge of organization and management of classrooms are in many ways similar, sharing a common core of 13 elements. However, the study's findings also suggest only one common element in the subject matter domain: Both voice teaching expertise and instrumental teaching expertise can be characterized by "historical and theoretical knowledge and direct performance experience" (Duke & Simmons, 2006a, p. 11) that shapes a clear auditory image of music. Voice teaching expertise appears to rely on additional subject matter knowledge, and notably, subject matter knowledge comes from domains outside of music, including human anatomy and

physiology, languages, and literature, including poetry.

Berliner (1986) went on to claim that expert teachers' knowledge of organization and management of classrooms is "of a very different order than is subject matter knowledge" and serves as the "basis for transforming subject matter" (p. 10). The ways in which subject matter knowledge becomes transformed through organization of the learning environment, then, are essential to the characterization of expertise. Figure 1 shows connections between expert voice teachers' subject matter and studio organization knowledge domains, where practical knowledge influences decisions about what and how subject matter is taught (e.g., feedback, modeling, pace, use of imagery, technical information) and "transformed" (Berliner, 1986, p. 10) into students' learned subject matter knowledge and goal achievement. Each element of classroom organization and management knowledge has potential to influence the application of subject matter knowledge in relation to individual student's needs in the moment. Figure 2 illustrates the influence of studio organization and management knowledge specific to appropriate repertoire assignment. Here, studio organization and management knowledge that repertoire should be well within student capabilities (Duke & Simmons, 2006a, p. 11) integrates with expert voice teachers' subject matter knowledge of vocal anatomy and physiology, language production, understanding and expression of text, and auditory image, to evaluate student capacities in each area, and inform repertoire assignment.

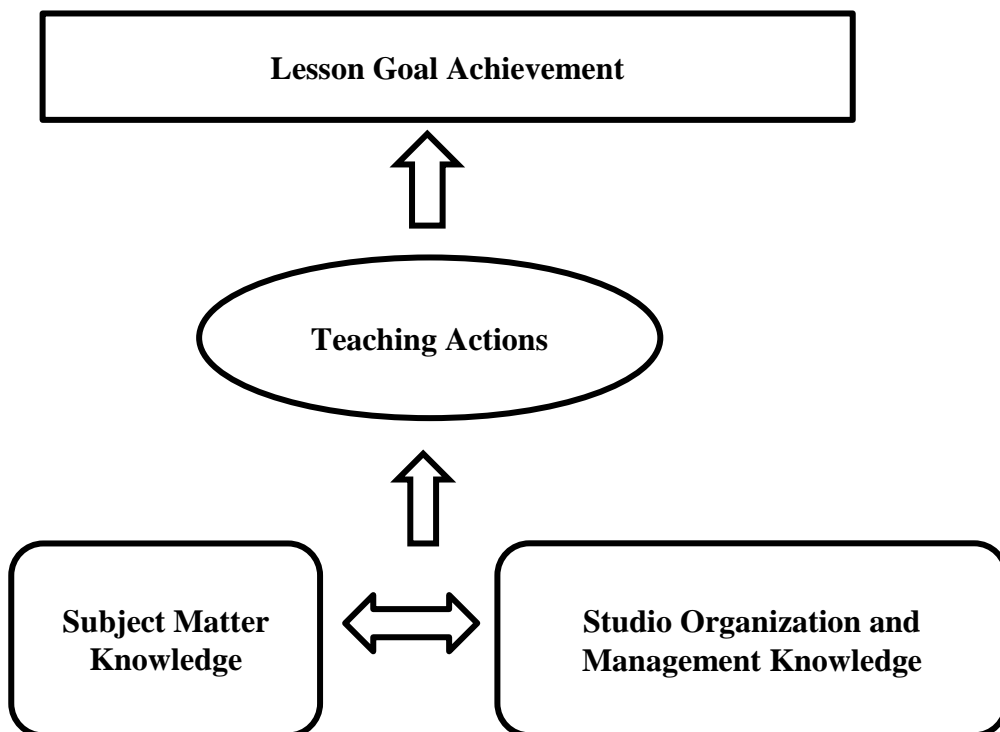


Figure 1. Connection of Subject Matter Knowledge and Studio Organization and Management Knowledge

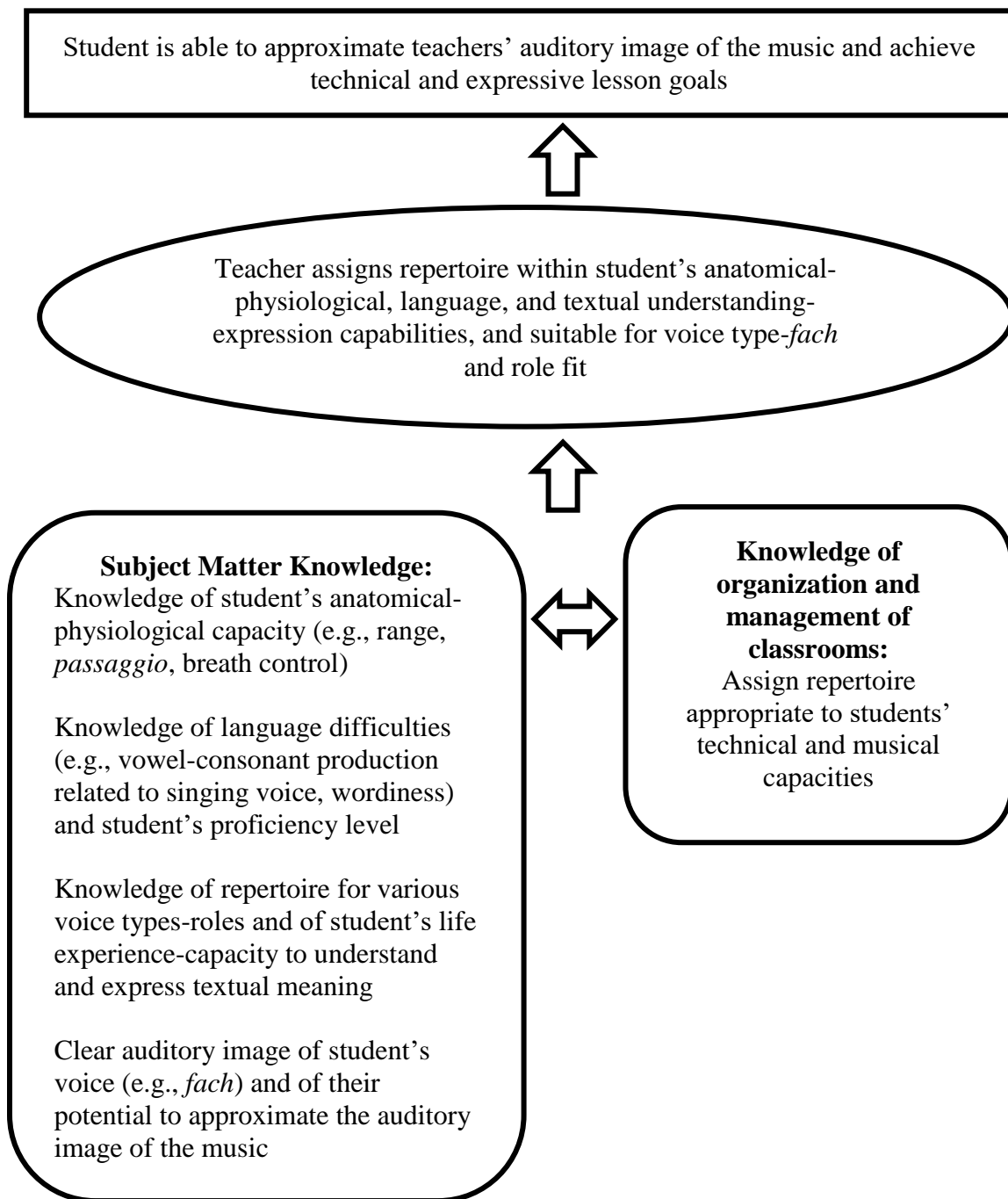


Figure 2. Connection of Subject Matter Knowledge and Studio Organization and Management Knowledge: Appropriate Repertoire Assignment

Comparing novice and expert teachers, Berliner (1986) claimed that novices “classify problems to be solved based on surface characteristics,” whereas experts classify problems to be solved with “higher order systems” (pp. 10-11). The complex integration of subject matter and learning environment organization appears to form the basis for such a higher order system that helps teachers classify problems of vocalists. Expert instructors do not apply any one knowledge domain discretely; instead, they draw various knowledges together.

Furthermore, Berliner (1986) noted that experts in other fields are said to be sensitive to situational characteristics, taking into consideration the task demands and facilities of their work context (p. 11). In the present study, voice teachers showed sensitivity toward each student who entered the studio, knowing not only general characteristics, such as voice type, but also specific information about the student’s background and experience. Such sensitivity adds another layer to integrated expert knowledge, and it was especially important in this study in terms of teachers’ use of imagery that was sensitive to the student’s every day experience. In addition, teachers’ understanding of when and how to use the keyboard for support, when to support instruction with non-verbal gestures, and their use of mirrors and lesson recordings was not formulaic, but responsive to each student’s unique background and circumstances. Finally, sensitive knowledge about each student was key to creating rapport, so that each student felt safe in the studio and encouraged to take expressive risks.

When expert teachers are observed, they may appear to act intuitively, perhaps because their decisions are made so rapidly; however, quick recognition of potential areas

of difficulty, or patterns of problems, “act like schema instantiations” (Berliner, 1986, p. 11) of their highly integrated knowledge. Just as quickly, experts decide how to address the problems. In this study, expert teachers drew on pattern recognition to decide, for example, when and how to use the piano to correct intonation or provide harmonic support, when to use creative imagery or more complicated physiological explanations to improve a student’s technique, and when to employ non-verbal gestures to supplement or replace technical information.

Experience and Expertise

Berliner (1988) pointed out that years of experience appear to make a difference to teaching expertise. Novices show less familiarity with typical classroom events, and they do not always know how to pay attention to what is important—all the information they glean from classroom events appears to carry equal emphasis. So, novices tend to interpret events according to surface features, reporting step-by-step what they observe. In contrast, experts are familiar with classroom events and they have experience focusing their attention on significant events; thus, they can judge between what is typical and what is atypical and immediately make inferences from their observations. Inference-making was featured prominently in the present study, principally because voice teachers work with an instrument that is largely invisible, both to teacher and student. The invisibility of the vocal mechanism led exemplary teachers to observe cues from singers’ body positions (e.g., posture and tension held in various parts of the body), and they connected those visual cues to vocal sound quality. It is reasonable to infer that, with experience, a voice teacher internalizes the connections between visual cues and vocal

sound quality as schema that help predict potential problems before they occur.

Experience also pays off to expertise, according to Berliner (1988), in terms of mastering routines for the classroom. Berliner described such routines as taking attendance and checking homework, which may not be applicable to studio voice teaching; however, he also described “clear signals to start and end the lesson segments” (p. 13), which were featured prominently in the present study. Efficient routines allow lessons to move at a rapid pace without sacrificing quality of student learning. The exemplary voice teachers observed in this study all moved at a very rapid pace between activities, setting clear, proximal goals and offering short and specific feedback, both positive and negative. They also demonstrated mastery of routines in the form of non-verbal gestures designed to shape sound and correct errors without interrupting a student’s performance or slowing the pace of the lesson.

Opportunistic and Flexible Planning

According to Berliner (1986), experts in some fields are thought to be opportunistic planners (p. 11), “thinking on their feet” to respond to changing situations. Although they began each lesson with a highly developed auditory image of the musical work and the student’s potential, the actions exemplary voice teachers took to support a student’s progress did not appear planned in advance. Voice teachers demonstrated opportunistic planning in their flexible use of imagery, non-verbal gestures, and keyboard support, inserting this kind of instruction into the lesson as needed. The instructors also did not plan breaks in lessons, but they intuitively knew when a student needed a break from singing.

Self-regulation

Finally, Berliner (1986) pointed out that, compared to novices, experts in other disciplines demonstrated metacognitive or self-regulatory skills in planning and sensible time use (p. 11). Expert voice teachers in this study always demonstrated awareness that they were using time judiciously, generally using rapid pacing, but also using sensitively placed breaks to expand on and clarify performance goals.

A Theoretical Model

In any scholarly endeavor, it is important to consider how findings might become more broadly useful. Although a case study, like the present one, is not designed for the purposes of generalizing findings to a broader population, findings can contribute to a theoretical model that can be honed and tested through further research. The foregoing discussion of findings in relationship to Berliner's (1986, 1988) work on expert teaching, offers a basis on which to advance a theoretical model of voice teaching expertise (see Figure 3).

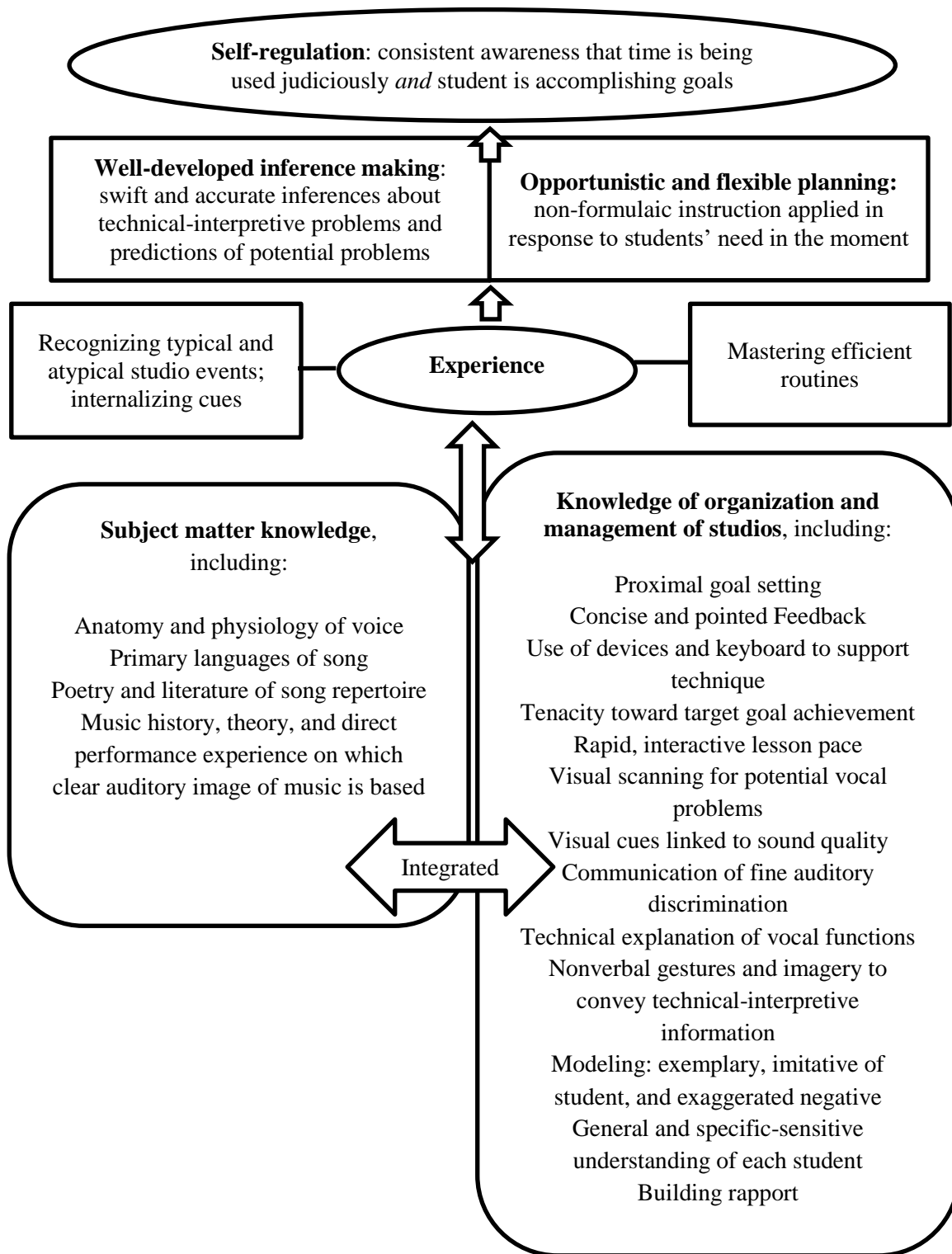


Figure 3. Theoretical Model of Voice Teaching Expertise

In this model, expert voice teaching is founded on two complex and highly integrated knowledge domains: subject matter knowledge and knowledge of organization and management of studios. Knowledge of studio organization and management comprises practical elements, such as pacing, goal setting, modeling, building rapport, and use of non-verbal gestures and imagery, and is the basis for transforming subject matter knowledge (Berliner, 1986, p. 10). These integrated knowledge domains are not sufficient in and of themselves to characterize voice teaching expertise. Experience plays a central role in amassing practical knowledge of studio organization (p. 10) and in developing the higher level skills characteristic of expert teachers. As voice teachers accumulate experience recognizing and responding to typical and atypical studio events, they develop skill for fast and accurate inference making and potential problem prediction based on internalized connections between visual cues and sound quality. Experience also factors into mastery of efficient routines in the form of rapidly paced lesson activities, goals setting, feedback, and non-verbal gestures. Further, with accumulated experience, experts apply effective routines and teaching elements opportunistically and in flexible response to studio events and student need in the moment. Finally, experts develop self-regulatory skills, where voice teachers consistently demonstrate awareness that time is being used judiciously in the lesson *and* that students are actually accomplishing proximal goals and also showing improvement and growth over time.

Implications of the Model for Research and Practice

Research

The theoretical model of voice teaching expertise implies several areas for future research. First, expert voice teachers demonstrate well developed inferential thinking in working with largely invisible and fully embodied instruments. They monitor students for visual cues, linking those cues to sound quality. Novice teachers appear to hold literal views, making classroom decisions based on surface characteristics (Berliner, 1986, p. 10). Studies comparing the inference making of expert and novice voice teachers may identify patterns for accurate and misguided inferential thinking. Such a study might extend Berliner's slide description study (p. 10), comparing expert and novice descriptions of students' vocal performance based on short video-audio examples. Research of this type might provide more understanding about expert and novice voice teachers' ability to infer correct conclusions based on visual cues and sound quality.

In drawing on Duke and Simmons' (2006a), the current study focused only on proximal goal setting and achievement in rehearsal frames (Duke, 1999/2000). Duke (2008) suggests that what is most important is what happens at the conclusion of a rehearsal frame, where expert teachers demonstrate tenacity to goal achievement and novices set new goals regardless of goal accomplishment. Future comparison studies of proximal goal setting and students' goal achievement may provide more information about tenacity and about what signals goal attainment for expert and novice voice teachers. Another area for future research relates to expert voice teachers' long-term goal setting and achievement. While I observed four students on two occasions, I did not apply

longitudinal data to evaluate change over time. Study of expert and novice voice teachers' distal goal setting and students' achievement of distal goals might clarify the type of long-term goals experts determine based on their general and specific sensitive knowledge, collegiality, and rapport.

Self-regulatory capabilities feature prominently in the theoretical model of voice teaching expertise. This implies that expert voice instructors have become consistently and critically reflective of their own teaching practices, evaluating, adapting, and improving their teaching over time and in response to new circumstances or student needs. While there is a body of research describing reflective practices of classroom teachers, a study of expert voice teachers' reflective practices is suggested to clarify the role of self-reflection in the development of flexible, opportunistic, and self-regulatory behaviors.

During this investigation, I observed three expert voice teachers located in the San Francisco Bay area. A replication of this study with expert voice teachers from a different or broader geographical area is needed to confirm the findings from this study and raise additional questions. I recommend replication and extension of this study, observing expert voice teachers from Southern California, the Midwest, and the East Coast, among other geographies.

This study's findings described six new elements related to practical studio activities (viz., use of imagery, establishing collaborative studio environments-rapport, use of devices such as mirrors and recorded lessons, near constant visual scanning, physical gestures, and facility with keyboard instruments). These elements were not

characterized by Duke and Simmons (2006a), so it is possible that they may not be used in instrumental studios. However, in their replication of Duke and Simmons' (2006a) study observing instrumental teachers of less elite students, Parkes and Wexler (2012) observed some similar elements. For instance, the teachers used gestures to shape interpretation and allowed frequent comments and questions from students (pp. 56-57). How the new elements of expert voice teaching found in this study are transferable to instrumental pedagogy marks another area for further research.

The use of imagery to teach technique is an area of controversy among vocal pedagogues (Blades-Zeller, 2003, p. 86). With this in mind, I asked the three voice teachers if they used imagery in their lessons. Only Mills called herself an “image” teacher. Frank and Howe did not think they used imagery to teach technique, preferring the terms “technical” (Frank), and “pedagogical-physiological” (Howe) to describe their pedagogy. However, the results of the current study provided evidence that all three teachers used imagery to explain vocal functions and technique. I recommend further observation studies to determine the extent a larger population expert voice teachers use imagery to teach technique. Results of such a study could clarify our understanding about the images and metaphors used to teach vocal functions and techniques, identify the extent to which teachers personalize imagery for each student, and suggest how novice teachers might learn to use imagery effectively.

Practice

The theoretical model of voice teaching expertise has implications for the preparation of novice voice teachers. First, in terms of vocal pedagogy course

curriculum, standard textbooks (Miller, 1986; Ware, 1997) provide detailed information about vocal anatomy and physiology but little about elements comprising knowledge of organization and management of studios, such as physical gestures and imagery. The model implies the importance of providing vocal pedagogy students with explicit information about elements associated with knowledge of studio organization and management and their application in lecture, discussion, and other course activities. This information also needs to be addressed in future vocal pedagogy textbooks and journal articles. Further, the model suggests the important role of experience in vocal pedagogy students' skills development. Thus, vocal pedagogy curriculum should also include significant hours of student teaching to maximize acquisition and integration of foundational knowledge and development of higher-level skills (e.g., efficient routines, inference making, flexible-opportunistic planning, and self-regulation).

While vocal pedagogy courses are valuable, the theoretical model of voice teaching expertise implies far more than a course to prepare novices; a vocal pedagogy course is insufficient to train future voice teachers. The model infers that voice teachers develop pattern-similarity recognition skills, become familiar with typical and atypical studio events, and master efficient routines only after accumulating hundreds of hours of experience (Berliner, 1986; 1988). Novices need opportunities to gain experience applying and integrating subject matter and studio organization and management knowledges to attain higher levels of expertise. Student voice teaching courses should be added to vocal pedagogy program curriculum. The model suggests specific elements of subject matter and studio organization knowledge and higher level teaching skills (e.g.,

appropriate repertoire assignment, balancing rapid pace and tenacity, developing better inference-making, and acquiring awareness of judicious time use in lessons) to monitor and evaluate in student teaching, expert mentoring-internships, and self-reflection.

According to Berliner (1988), novice classroom teachers conform their behavior to whatsoever elements, procedures, and rules their instructors directed them to follow (p. 2). These elements and procedures need to be “labeled and learned . . . in order to begin to teach” (p. 2). Classroom teachers then advance to higher-level skills of competency, proficiency, or expertise as they accumulate experience applying these elements in context (p. 2). In the field of vocal pedagogy, elements, rules, and procedures have been ill defined for novice preparation. Foundational knowledge of studio organization and management develops over time with accumulated experience, rather than being identified, “labeled, and learned” (p. 2) in pedagogy courses. The theoretical model of voice teaching expertise more clearly defines the elements, knowledge, skills, and characteristics necessary for novices’ advancement, potentially accelerating development of competence, proficiency, and expertise. Further, consistent with what both Duke and Simmons (2006a) and Berliner (1986) suggest to be the practical purpose of research on teacher expertise, the theoretical model implies more defined goals and design for novice voice teacher training, and furnishes a model for novices (and non-experts) to study and emulate.

Finally, the theoretical model of voice teaching expertise has implications for career vocal performers who engage in teaching with little or no pedagogical knowledge or experience. Berliner (1988) cautions that postulants who enter teaching with only

subject matter knowledge, performance experience, and limited classroom knowledge and experience “should be considered severely handicapped” (p. 20). The model of voice teaching expertise supports Berliner’s notion, suggesting the importance of both studio organization and management knowledge and of accumulated experience in the teaching context—generally lacking in postulant voice teachers. Institutions hiring postulant applied voice teachers should provide these individuals with expert mentors or apprenticeship and training programs to address deficits in studio organization knowledge and experience (p. 21).

In this study’s findings, we have evidence that expert voice teachers cultivate a safe studio environment that welcomes student questions and comments and addresses vocal issues with honesty, respect, and humor. Earlier research (Blades-Zeller, 2003; Dufault, 2008; and Clemmons, 2007) noted the positive effect of collegiality and rapport in voice lessons. This study’s results support these earlier findings, suggesting the positive effect of rapport (Clemmons, 2007), emotional support (Parkes & Wexler, 2012), and collegial teamwork with students (Blades-Zeller, 2003) on student risk-taking and effort. In light of current social concern about inappropriate physical, emotional, and sexual conduct, it is essential to teach future voice instructors how to develop rapport and teamwork with students that remains within appropriate boundaries.

Closing

It was a privilege to watch Erie Mills, Joseph Frank, and Eric Howe immersed in their craft. By observing their expertise I gained much to improve my own voice teaching and singing. It is important that voice teachers learn from one another, sharing

their expert subject matter knowledge and knowledge of studio organization and management, and detailing the results of their self-reflection. Berliner (1986) contends that practical knowledge, such as that involved in organizing classrooms and voice studios, is not always viewed as valuable. That is a major reason to continue research detailing how problem solving in classrooms, voice studios, and instrument studios is complex and integrated knowledge. Still, it is not a reason to neglect the practical aspects of voice teaching for those involved in preparing future voice teachers. As Joseph Frank noted, “You learn by teaching. Some of my students who have gone out, they say, ‘Professor Frank, teaching is the best! It’s making me a better singer because I have to be able to demonstrate, I have to be able to express what’s going on in my voice to somebody else.’” I have advanced the model with a vision that it will serve as an impetus to generate new research and practice. In that spirit, I put forward the theoretical model of voice teaching expertise in hopes of providing our profession with clearer understanding about the nature of expertise in vocal pedagogy.

Appendix A: The Nature of Expertise Narrative Descriptions

Observed by Duke and Simmons¹

Goals and Expectations

The repertoire assigned students is well within their technical capabilities; no student is struggling with the notes of the piece. The fact that students are performing selections from the standard repertoire that are well within their technical and musical capabilities affords more time to focus on the consistent application of excellent fundamental technique in the context of expressive music making. The challenge for the students, then, is to execute the technical and musical demands of repertoire with the utmost skill every time they engage in performance. Students come to lessons having learned the notes of the piece and having had time to make independent interpretive decisions. It is from this point—notes learned and musical ideas formulated—that work in the lesson begins.

Teachers have a clear auditory image of the piece that guides their judgments about the music. These teachers convey clear ideas about how technical demands should be executed to produce appropriate stylistic character and musical interpretation. There is little hesitation in their speech, which suggests that they have in their minds vivid auditory images of the pieces they teach. They seem to know exactly what they expect to hear when students perform. Their technical and musical judgments are made based on historical and theoretical knowledge and on direct performance experience. When lessons deal with repertoire teachers have not previously encountered, they are able to guide students by generalizing knowledge from familiar pieces in a way that makes instruction as valuable as instruction with familiar repertoire.

The teachers demand a consistent standard of sound quality from their students. In every lesson, the teachers are resolute in their insistence that their students produce only high quality sounds (tone quality), the product of consistently correct fundamental technique. Irrespective of the lesson target addressed at a given moment, the teachers' attention remains focused on the quality of students' sounds. When students use faulty technique and produce sounds that are below the expected level of quality, teachers immediately identify the problems and require students to repeat the passages until correct technique and beautiful tone are demonstrated in context. The teachers are tenacious about sound quality, continuing to attack the same issues again when they reappear. They do not let sound problems persist in their presence.

¹Narrative by Robert A. Duke and Amy L. Simmons, quoted from Duke, R. A., & Simmons, A. L. (2006c). The nature of expertise: Results. Retrieved October 6, 2010, from University of Texas at Austin, Center for Music Learning Web site: http://cml.music.utexas.edu/DistinguishedStream/MTM_Principles_List.htm

The teachers select lesson targets (i.e., proximal performance goals) that are technically or musically important. Perhaps the most occluded aspect of the teachers' decision making is their selection of lesson targets in the moment. Their choices of targets are based not only on the achievability of goals, but also on the goals' contribution to the musical product. The teachers' choices evince a reasoning that balances feasibility with importance. More trivial issues, like intermittent, momentary errors, tend to be ignored, whereas more fundamental issues of technical execution and issues of continuity and effective expression of musical ideas are attended to immediately and are pursued assiduously.

Lesson targets are positioned at a level of difficulty that is close enough to the student's current skill level that the targets are achievable in the short term and change is audible to the student in the moment. When errors in performance require attention, teachers guide error correction successfully. They accomplish this by clearly identifying the underlying fundamental issues that are causing problems and asking students to make adjustments in their playing accordingly. The teachers skillfully limit what they ask students to do in a way that ensures students will be able to make that adjustment in the moment. Because students are able to successfully manage the changes they are asked to make, they hear improvement immediately.

The teachers clearly remember students' work in past lessons and frequently draw comparisons between present and past, pointing out both positive and negative differences. As students make progress over time, the teachers are clear in pointing out the positive changes they hear in student performance. The amount of time spent describing improvements in performance over weeks or months is notable for its contrast with negative feedback, which is generally pointed and brief.

Effecting Change

Pieces are performed from beginning to end; in this sense, the lessons are like performances, with instantaneous transitions into performance character; nearly all playing is judged by a high standard, "as if we are performing." The teachers create opportunities for students to practice performing by structuring lessons in ways that make the lesson performances resemble public performances. In the case of only one teacher (True) do lessons generally begin with uninterrupted performances of prepared repertoire. In subsequent performances with Professor True and in all performance with Professors Killmer and McInnes, students are interrupted only when errors are made. When giving feedback, the teachers describe how an audience in a concert hall would perceive the students' performances, which serves to emphasize the point that every performance trial should be executed as though people were "paying to hear it," whether the performance takes place in a practice room, lesson studio, or concert hall.

In general, the course of the music directs the lesson; errors in student performance elicit stops. Students come to lessons with a command of the repertoire. Notes and rhythms,

except when these have been learned incorrectly, are not topics of discussion. Teachers allow students to play through pieces or sections of pieces in their lessons until errors occur. These are dealt with the instant they occur, with the teacher immediately interrupting performance. Because errors are not permitted to occur without correction, teachers reinforce the idea that performing beautifully and accurately is the goal of every performance trial.

The teachers are tenacious in working to accomplish lesson targets, having students repeat target passages until performance is accurate (i.e., consistent with the target goal). Once a target has been identified, teachers have students repeat passages until positive changes are made and the students perform accurately. They use a variety of feedback and modeling to elicit changes and do not give up or simply tell students to “go practice.” The targets they choose to work on are noticeably directed at characteristic sound production and appropriate musical interpretation, and are carefully chosen so that success is achieved.

Any flaws in fundamental technique are immediately addressed; no performance trials with incorrect technique are allowed to continue. Teachers pay careful attention to the way students execute physical movements in every performance and flaws in technique do not go unnoticed or unmentioned. When students demonstrate a fundamental flaw, that problem becomes the utmost priority, superseding any other previously stated performance target. Repetition of the targeted physical movement continues until the technical flaw is corrected, and the lesson resumes its course.

Lessons proceed at an intense, rapid pace. Because teachers identify targets quickly and concisely, teacher-student interactions occur frequently. This rapid alternation between episodes of teacher activity and student activity increases the students’ opportunities to respond and receive feedback about their performances. Teacher activity episodes are generally very brief. Teachers state their feedback and directives succinctly and straightforwardly.

The pace of the lessons is interrupted from time to time with what seem to be “intuitively timed” breaks, during which the teachers give an extended demonstration or tell a story. The teachers seem to sense when breaks from the intense pace of the lessons are needed. In order to allow for mental and physical relaxation, teachers depart from rapid teacher-student interactions by telling an interesting or entertaining story or by elaborating on something previously discussed. These breaks are clearly departures from the task at hand and seem to serve as brief, pleasant diversions for both the student and the teacher. Once students and teachers have had time to relax, the more intense interactions resume. When the pace changes from rapid alternation of teacher and student activity episodes to longer breaks and back again, there is little or no transition time in getting back to the intense pace. In fact, the pacing of the lessons seems almost dichotomous. The teacher is clearly in control of the pace of the lesson.

The teachers permit students to make interpretive choices in the performance of repertoire, but only among a limited range of options that are circumscribed by the teacher. Students are permitted no choices regarding technique. Teachers offer students opportunities to make limited independent choices concerning interpretive elements of performance, and do not intervene when interpretive choices are within the parameters of accepted musical convention. But when students make choices that are outside the bounds of acceptability, as defined by the teacher, the teachers lead the students to rethink their choices and select more acceptable alternatives. Some of the interpretive choices that students make are only apparent choices, in that the teachers lead the students to adopt interpretations that the teacher clearly has in mind—in these instances there is no real choice. Students are given no options regarding the technical aspects of playing the instrument, and they follow the teachers' prescriptions to the letter.

Conveying Information

Teachers make very fine discriminations about student performances; these are consistently articulated to the student, so that the student learns to make the same discriminations independently. It is clear that the teachers know precisely what they expect to see and hear from the students, which suggests that their vivid auditory images of the repertoire lead to their detecting even the smallest deviations from the images they have in mind. Teachers articulate clearly and directly what they hear, and their attention is focused primarily on tone production and musical expression (including all of the rhythmic and dynamic variables that contribute to expressive music making). This systematic feedback guides students to listen to themselves as their teacher listens, and shapes students' ability to make independent discriminations about their own playing. Teachers further ensure that students are making appropriate, independent discriminations by asking them to verbalize those discriminations in lessons.

Performance technique is described in terms of the effect that physical motion creates in the sound produced. The sound that students produce is consistently the focus of the teachers' attention. Irrespective of the physical aspect of playing (physical technique) that may be the immediate focus of attention, teachers systematically pair physical motion with its effect on sound production. In this way, physical technique simply supports the main goal of creating characteristic sound quality. Pointing out the relationship between physical motion and the effects that physical motion produces is true not only with regard to tone production, but also in the production of musical effects (e.g., phrase endings, sense of line).

Technical feedback is given in terms of creating an interpretive effect. Once students have learned how a given physical motion affects sound production, teachers are able to use technical feedback to alter musical expression. Teachers guide students toward creating an appropriate musical effect by describing and modeling how the physical movements that change sound can be applied to achieve an intended interpretive effect.

Often, the techniques they describe can be transferred to other phrases in the piece and to other pieces in the repertoire.

Negative feedback is clear, pointed, frequent, and directed at very specific aspects of students' performances, especially the musical effects created. Negative feedback is given succinctly and is pointedly directed at improving performance quality. The frequency of negative feedback is markedly higher than the frequency of positive feedback. The content of negative feedback is consistently quite specific and explicit, making the students privy to the teachers' highly refined auditory discriminations. This contributes to students' learning to make finer discriminations about their own playing. The clarity and directness of the negative feedback facilitates the efficient correction of errors.

There are infrequent, intermittent, unexpected instances of positive feedback, but these are most often of high magnitude and extended duration. In an effort to elicit change in students' performances, teachers provide frequent negative feedback that is directed at improving the quality of performances just executed. Contrastingly, when students achieve important goals, or independently create musical moments that are stunning to their teachers, the teachers give positive feedback that clearly expresses their excitement about the students' accomplishment. The positive feedback is emphatic and detailed. In a given instance, positive statements are repeated several times. This happens at least once in nearly every lesson and is unmistakably differentiated from the communication of negative feedback.

The teachers play examples from the students' repertoire to demonstrate important points. The teachers' modeling is exquisite in every respect. In all instances in which the teachers demonstrate, whether singing, gesturing, or playing, they embody the expressive elements of the music while executing the example nearly flawlessly. The teachers often juxtapose a remarkably faithful imitation of the student's performance with their model of the performance goal, evincing a level of technical command and fluency that is brought to bear in the process of developing artistry.

Appendix B: Email Survey for Participant Identification

Dear _____,

As a doctoral student at Boston University, I am conducting dissertation research in expert applied voice instruction. My study is in the participant identification stage, and I am in the process of gathering a list of exceptional voice instructors at the university and conservatory level.

Would you please assist me in identifying potential participants by taking a few minutes to reply to this email with the names of a few teachers who you feel exemplify outstanding teaching in the field of applied voice. All responses will remain confidential and your participation will not be revealed.

Thank you for your time and help.

Sincerely,

Elizabeth Stanley

Please recommend expert applied voice instructors who might be interested in participating in this research:

1. Name: _____

Institution: _____

Email: _____

2. Name: _____

Institution: _____

Email: _____

Appendix C: Recruitment Letter to Participants

Dear _____,

I am a doctoral student at Boston University and a fellow music educator. I seek your help with an investigation of applied lesson expertise. The purpose of my research is to observe common elements in the applied voice instruction of exemplary teachers.

You have been identified as a vocal pedagogue of the highest caliber by means of survey and evaluation of biographical accomplishment and it is my hope that you will agree to participate in this study.

Participation involves agreeing to allow me to observe and video tape your voice instruction with any of your students whom you consider appropriate for observation. The lessons will be recorded on two separate occasions. Lesson observation may take place in either on campus or private studio locations at your preference. A brief interview of approximately 15 minutes duration and a member check of one lesson observation would be scheduled at a time convenient to you.

I have been an applied voice instructor for over 30 years and understand the importance of what you and your students are accomplishing in their lesson time. I will make every effort to be as unobtrusive as possible.

If you need more information before deciding to participate, contact me by email at lstanley@jessup.edu or by phone at 916.577.2269 (office) or 510.828.5208 (cell). You may also contact my dissertation supervisor Elizabeth Blades Zeller at 303-747-1013 or my Boston University advisor Susan Conkling at drc@bu.edu or 617-358-5093.

All participant voice instructors will receive a report of the research findings and conclusions. Your participation in this study may lead to a greater understanding of expert teaching behaviors within the context of the applied voice studio. Confidentiality of participant voice instructors and students will be maintained.

I am excited at the prospect of observing a voice instructor of your high level of expertise and I hope you will agree to participate.

Thank you so much for your time and consideration,

Elizabeth Stanley

Professor, Department of Music

William Jessup University

Appendix D: Student Recruitment Email

Hello, _____

You are invited to participate in a research study conducted by doctoral student Elizabeth Stanley, M.A. and dissertation supervisor Elizabeth Blades-Zeller, Ph.D. at Boston University because your applied voice instructor suggested you as an applied voice student appropriate for lesson observation. Your participation is voluntary. You should read the information below, and ask questions about anything you do not understand, before deciding whether to participate. Please take as much time as you need to read the attached consent form. You may also decide to discuss participation with your family or friends. If you decide to participate, you will be asked to sign and return the consent form. You will be given a copy of the signed form for your records.

The purpose of this study is to observe common elements in the applied voice instruction of exemplary teachers in an effort to understand how expert voice teaching is similar to and different from expert instrumental teaching.

If you volunteer to participate in this study, you will be asked to allow observation and audio/video recording of your voice instruction with Professor _____. Your lessons will be recorded on two occasions as your lesson schedule permits. A brief interview of approximately fifteen minutes duration will follow one lesson observation at a time convenient to you.

Thank you so much for your time and consideration, I look forward to hearing from you.

Elizabeth Stanley

Appendix E: Informed Consent

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Boston University
College of Fine Arts, 855 Commonwealth Avenue, Room 227, Boston MA, 02215

INFORMED CONSENT FOR NON-MEDICAL RESEARCH Applied Voice Instructor
--

Common Elements Of Expertise Observed In The Teaching Of Exemplary Applied Voice Instructors:
An Extension of Duke and Simmons' The Nature of Expertise

Thank you for agreeing to participate in a research study conducted by doctoral student Elizabeth Stanley, M.A. and dissertation supervisor Elizabeth Blades-Zeller-Skinner, Ph.D. at Boston University. You have been identified as a vocal pedagogue of the highest caliber based on peer recommendation, biographical accomplishments, student accomplishment, and university or conservatory applied voice instruction experience. Your participation is voluntary. You should read the information below, and ask questions about anything you do not understand. Please take as much time as you need to read the consent form. You may also decide to discuss participation with your family or friends. You will be asked to sign and will be given a copy of this form.

PURPOSE OF THE STUDY

The purpose of this study is to observe common elements in the applied voice instruction of exemplary teachers. Central to this purpose is both generation of detailed narrative descriptions of distinct and commonly occurring effective voice teaching behaviors and comparison of those descriptions with those suggested by Duke and Simmons (2006a), in an effort to understand how expert voice teaching is similar to and different from expert instrumental teaching.

STUDY PROCEDURES

If you volunteer to participate in this study, you will be asked to allow observation and audio/video recording of your voice instruction in your normal teaching location with students whom you judge to be appropriate for observation. Students you suggest for lesson observation will be contacted or given the investigator's contact information as appropriate or preferred. Lessons with the students will be recorded for a total of approximately eight hours of lesson observation.

A brief interview of approximately fifteen minutes duration will follow one lesson observation at a time convenient to you. The interview questions are as follows:

1. How long have you been teaching (student's name)?
2. How do you think today's lesson with (student's name) went?
3. What parts of the lesson would you say went well?
4. What parts did not go well?

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5. In what components of voice instruction do you consider yourself most effective?
6. Was today's lesson typical of most?
7. Was this lesson affected in any way by being observed or by the use of recording equipment?

POTENTIAL RISKS AND DISCOMFORTS

There are no anticipated risks beyond a minor risk of discomfort or nervousness associated with lesson observation and audio/video recording. To minimize risk of nervousness the recording equipment and observing investigator will be placed in each studio so as to be as unobtrusive as possible.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

There are no anticipated direct benefits to subjects.

Potential benefit to society is increased knowledge for clearer understanding of applied teaching expertise transferable to other levels and settings within the field of music education. Information gained from the proposed study may further illuminate aspects of effective expert instruction to guide music education and general education teacher preparation and practice.

CONFIDENTIALITY

Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law.

The members of the research team and the Boston University Institutional Review Board may access the data. Information from this study and study records may be reviewed and photocopied by the institution and by regulators responsible for research oversight such as the Office of Human Research Protections, and the Boston University Institutional Review Board.

The IRB reviews and monitors research studies to protect the rights and welfare of research subjects.

The data will be stored in secured data bases and file drawers. Only the principal investigator will have access to data through password protection and secured lock and key. Direct identities of participant voice instructors and students whose lessons are observed will be removed from data in exchange for pseudonyms that correspond to identifiers. Some altered circumstances will be assigned to each participant instructor and observed voice student. Master code of instructor and student identities will be maintained separately from the rest of the data set in secured data bases and file drawers. During data analysis and post study data storage confidentiality of

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audio/video recordings will be maintained by limiting access to the researcher and advisor. No audio/video recorded data or information will be released to any other party. Participants will have the right to member check their interview transcripts and one short lesson video segment previously analyzed by the researcher.

Data will be maintained until a minimum of three years after the dissertation process is completed according to BU policies. When data is no longer needed it will be destroyed by deletion and/or document shredding.

When the results of the research are published or discussed in conferences, no identifiable information will be used.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

INVESTIGATOR'S CONTACT INFORMATION

If you have any questions or concerns about the research, please feel free to contact:

Principle Investigator: Elizabeth Stanley

Professor, Music Department

William Jessup University, 333 Sunset Boulevard, Rocklin, CA 95765.

Phone: 916-577-2269, Email: lstanley@jessup.edu

Faculty Advisor: Dr. Susan Conkling

Professor and Chair, Music Education

Boston University

College of Fine Arts, 855 Commonwealth Avenue, Room 227, Boston MA, 02215

Phone: 617-358-5093, Email: drc@bu.edu

RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

If you have questions, concerns, or complaints about your rights as a research participant you may contact the IRB directly at the information provided below. You may obtain further information about your rights as a research subject by contacting the Boston University Institutional Review Board for Human Subjects Research at 617-358-6115 or irb@bu.edu.

SIGNATURE OF RESEARCH PARTICIPANT

Date of Preparation: *[insert date]* – General ICF

BU IRB #

I have read the information provided above. I have been given a chance to ask questions. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

I agree to be audio/video-recorded

I do not want to be audio/video-recorded

Name of Participant

Signature of Participant

7/6/2012
Date

SIGNATURE OF INVESTIGATOR

I have explained the research to the participant and answered all of his/her questions. I believe that he/she understands the information described in this document and freely consents to participate.

Elizabeth K. Stanley

Name of Person Obtaining Consent

Signature of Person Obtaining Consent

6-20-2012

Date

Date of Preparation: [insert date] – General ICF
BU IRB #

Appendix F: Interview Scripts

“Thank you so much for allowing me to observe your lesson and for letting me ask you a few questions.”

Initial Interview Questions for Students:

1. How long have you studied with (insert teacher's name)?
2. How did you know you wanted to study with (insert teacher's name)?
3. What parts of your lesson did you enjoy most?
4. What parts of your lesson did you enjoy least?
5. Can you describe anything new or different you learned in your lesson today?
6. Was anything clarified or confusing to you?
7. My research is on applied teaching expertise and (insert teacher's name) has been identified as an expert voice instructor. What about her/his teaching works for you?
8. Was today's lesson typical of most?
9. Was this lesson affected in any way by my presence or by the use of recording equipment?

Initial Interview Questions for Instructors:

1. How long have you been teaching (student's name)?
2. How do you think today's lesson with (student's name) went?
3. What parts of the lesson would you say went well?
4. What parts did not go well?
5. In what components of voice instruction do you consider yourself most effective?
6. Was today's lesson typical of most?
7. Was this lesson affected in any way by my presence or by the use of recording equipment?

Appendix G: Instructor Interview Transcripts

Instructor: Joseph Frank

“Thank you so much for allowing me to observe your teaching, you have been most gracious. May I ask you a few questions?”

1. *Do you require your students to use technology?*

“Yes, I really think it is really important that they see themselves. A lot of them are bringing their computers in, like you saw, or people still record onto VHS, unless you don’t have VHS anymore... or they just record their lessons with their I phones or whatever... but if it’s possible, I really prefer they bring in their video cameras; a lot of them have their cameras too, which they bring in as well.”

2. *“Would you say that their lessons were typical when I was here; it didn’t bother them that I was here?”*

“No, those were typical lessons.”

3. *“In what components of voice instruction do you consider yourself most effective?”*

“I’m a traditional... I’m a technique person but I think I cover all areas, because when I work with choral directors and so forth I get to the technique through pure vowels and deal with what’s on the board you saw which is a very secure way of doing it. But then talking about the support, what happens with the carriage, etc., etc., and your masticators, etc., etc., what should be used and what should not be used. So I’m getting into the technical aspect and some want to know exactly what’s happening, my graduate student Chris... I mean we talk pedagogy, but a lot of the kids don’t want that or they don’t understand it so I have to put it in as best as I can.

But I am a firm believer that there is a technical aspect of things which is based on the breath which is what I base... my teacher was Margaret Harshaw, who worked with Schoen-René who was a pupil of Garcia so you're getting *bel canto* technique. So all of my students spend a lot of time dealing with the breath; the aspect of fighting... you know... breathing... not pushing out but just letting that air... using it..."

4. *One of the things I've been noticing though the observations is how effective modeling is. It's interesting to me when you have the basso profundo and the countertenor... Do feel that the modeling at the octave is as effective as when you can model at pitch?*

"Yes I do, a couple of times it's too high for my own register but I still model the same things as well and I'm able to go down to some of the low notes with Norman. The hardest part we have is the fact that in a State University we are advised not to put our hands on our students so therefore it's a matter of I show them on my body without having them feel anything. Which is I think sometimes is a disservice to the student because they really can't feel it. But most of mine get by doing physical things. I'll have them hold on that and push down so they can feel that isometric confrontation of those muscles down there."

5. *"Where did you get your technique for teaching; in your own lessons or your masters, was there a lot of pedagogy in that?"*

"No, I did this on my own. We had a pedagogy class at Indiana with Ralph Appelman but basically he was teaching his book about the phonemes which I talked about. But no... my teaching... I worked with Harshaw, I worked with Ricci in

Rome and I coached with a couple people but basically I have very good ears and I worked with a lot of apprentice artists. I started teaching at University of Houston in '87 to 89 ...because I'd already been teaching with the young artists programs every place I would sing. And I said I should probably get paid for this... I was doing it just because I loved to do it and you learn by teaching. Some of my students who have gone out, they say, 'Professor Frank's teaching is the best...it's making me a better singer because I have to be able to demonstrate, I have to be able to express what's going on in my voice to somebody else.'" "And I find that my technique works with everybody, coloratura all the way down, because I have a fabulous coloratura. I don't find any difference. We all sing from what Miss Marcia used to call the magic triangle; the crotch, you know the support mechanism is down there. I mean a lot of teachers... their breath isn't as low as it should be."

Instructor: Eric Howe

"Thank you so much for allowing me to observe your teaching, you have been most gracious. May I ask you a few questions?"

1. *"How long have you been teaching H7?"*

"I think we've been together now four years (*Interviewer: and (student) was a long time- He said fifteen years*) "I know (laughter)". Well he's a sweetheart of a guy ...and he's got a huge number of problems as you can hear; and it's like where do we go? (laughter). And he has...he used to screw his face up enormously. And then just figuring out what his sound is has been an enormous thing for him too. He started like this (models)... he came to me as a tenor... now he's probably a bass-baritone;

...he's a bass section leader in a chorus. You probably heard one of my strongest and one of my weakest singers in a way you know and the length of study doesn't make much difference in some of these things."

2. *What parts of student H7's lesson went well today?*

"When she reminds me that she is character driven and dramatically driven; she reenergizes, she recommits, and we start hearing a whole different sound. I thought that was the most interesting piece of what she does. I never know what to expect with K. She brings in every imaginable repertoire and has not been doing her voice. She is a high, high soprano; she's a kind of a coloratura with a big voice. And it's easy for her; she energizes, she just does it... no fear."

3. *What parts of the lesson do you think didn't go well?*

"There are always things I wish we would get to. Not so much with H7, but what I'm doing with H7 that I want to get back to this telephone aria which we haven't looked at in probably a year. Because she does so many styles...she has done some things in...she sings this piece I mentioned it in the lesson *Los Pinguinos* where she goes 'ach, ach I love you' (models) and I said to her last week I get it, it's funny. You are absolutely wrecking your folds to do that. Well, I want to find some way for you to do that that's not so abusive. Well, we didn't get to that today, But she'd been singing a lot of those kinds of styles I wanted to get back into her real voice which is a soprano and the long term, she has some pitch issues, not as bad as it used to be, but she has some tuning issues an especially in the passagio...she over sings the passagio...and her passagio is fairly high, most sopranos are like F#-G she's more

like G-G#. But then she has trouble with the E, F, F#. So I'm wanting to narrow that down and get that a little cleaner. That's a long term thing we didn't really address it today except indirectly with a few exercises. And I didn't address all the pitch things... I got to some of them"

4. *"In what components of voice instruction do you consider yourself most effective?"*

"I'm probably more a technician than an imagery, interpretation, all the musical nuances kind of teacher. My imagination doesn't go where I wish it would go sometimes for the students who respond to 'sing to a blue spot on the wall'. I don't come up with those images. My approach... I am always conscious of the physiology. And I teach the physiology and I keep learning about that and sometimes that gets a little bit...pedantic. I don't share that with my students very often unless they really want to learn it and then I say well it's fine to know that but you're not going to think about that when you sing. So... I come to it from that physiological grounding place and I also think that usually my students have fun in the lessons."

"I try to be a really positive supportive teacher and say yeah that's good now let's make it better instead of no.no, no, no, no. I think that's more of my strengths. I'm sometimes a bit of a rah rah teacher as a result. And I have such, as you've already gathered, a huge variety of students. H7 is pretty much a professional singer, and H5 is anything but, and now the next woman you see is I think a dramatic mezzo who's got a great big voice she's trying to figure out some passagio issues toward the bottom, and again all sorts of holding. She has done a bit of professional cantoring... and has done High Holy Days in small congregations."

5. *“Do you think these lessons were affected at all by me being here and recording?”*

“Very little. I may have told you I have observers not infrequently because I teach ped. classes and that’s one of their assignments come and watch various teachers teach...so people come and observe. And I don’t think it particularly affected...it might have affected H5 a little bit.”

Instructor: Erie Mills

“Thank you so much for allowing me to observe your teaching, you have been most gracious. May I ask you a few questions?”

1. *“How do you think today’s lesson with E2 went?”*

“I thought it went well. I’ve known her now for quite some time; she started study with me in St. Louis. Well I first met her at Northern Colorado University at a master class actually and then we did a couple of summers. So yeah I think it went well...because I’m gone so much of the time I don’t see people as regularly as I would like to or I think that they would like to. I was one of these that I would like to have lessons every week or every other week if possible but with my schedule that’s just not possible with my studio because I’m not here.

Of course she had this baby two months ago...I thought it went quite well, I just have to get her to think...I thought it went quite well. K is one of these people who is too into the character and not enough into singing. You just keep doing the good movement and then when you get to be thirty or forty or fifty...”

2. *“In what components of voice instruction do you consider yourself most effective?”*

“My experience and my knowledge. I work with a lot of young professional singers. Mainly you’re coaching. I can’t help but talk about some technical things because I just see it happening and I...it’s got to be fixed. But there are only so many minutes in a lesson too...and you’re talking about style and you try to work it all in...a little bit technical with the artsy and the musical and the languages. It doesn’t matter what level people are at, you say the same things to them...it’s just that their ability to give you what you want or what you’re asking for will not be as high. I like to think one of the things I instilled...that this was hard work, it took discipline, it took a lot of practice. I was very fair but I was very hard on people too but in a nice way. I remember the day I said to a student, it’s not about you and I said and it’s not about me...it’s about what the composer wrote and that’s what we’re going to try to do because we owe it to the composer because Mozart, Schubert, Schumann, Debussy they’re gonna be around a lot longer than any of us.”

3. *“Do you think either of these lessons was affected in any way by my presence or by being recorded?”*

“I don’t think so. If it affected E2 it affected her in a good way. She’s tough on herself.”

Appendix H: Instructor Member Check Email Request and Responses

Hello _____,

I hope you had a wonderful holiday and that all is well! Thank you again for allowing me to observe your applied voice instruction, I have learned a great deal from watching the videos of your teaching. As a component of the dissertation research I am sending you a summary of the effective teaching behaviors I observed in the first 30 minute segment with Student ___. If you would, please look it over and send me any comments you might have as a member check of the lesson segment or of your teaching in general. You may comment on the form itself or as a response to this e-mail, whichever you prefer. Thank you again for taking time out your very busy schedule. I appreciate your generosity!

Thank you again,

Elizabeth Stanley

Dear Ms. Stanley

Sorry for not responding earlier...

I'm back at school - dealing with multiple issues.... no rest for the wicked!!!!

as for your summary - I'm truly impressed by what you observed... As a teacher, we do things naturally, but there is method to our madness, as you were able to discern.

One comment - regarding "attention to drama and acting" should read "because you're PRAYING to the Virgin". Other than that, I will keep the observations and refer to them on occasion. I'm thrilled you were able to use the material for your dissertation. (Given my crazy limited schedule as Director.)

Prof F

Dear Elizabeth,

Happy New Year! This looks good to me and thanks for sending it. I wish you all the best on this degree and please keep me posted on your progress.

All the best in 2013 and beyond.

Regards,

E

Hi Liz, and Happy New Year to you!

I looked through the summary you sent - it's fascinating, and quite affirming! All looks good - one minor misspelling: "passaggio" has two double consonants :-) I didn't see any other errors or items for comment.

I'm looking forward to reading your final paper - was happy to be a small part of it, and also to get to know you a bit. Having read the summary you sent, I believe your final product will be very useful to my graduate pedagogy students, and to voice teachers in general. Thank you for doing this research - I hope we'll stay in touch!

Best,

Eric

Appendix I: Example Student Interview Transcript

“Thank you so much for allowing me to observe your lesson and ask you a few questions.”

1. “How long have you studied with Professor Mills?”

“Oh...let’s see, probably since around 2008 or so. But the first year of that or so was long distance flying in to do a couple of lessons and then flying back to Colorado.”

2. “How do you think today’s lesson went?”

“Great!”

3. “Do you think having me observe bothered you at all?”

“Oh no! (Laughter)”

4. “What parts of your lesson did you enjoy most?”

“For me the best part is knowing what to focus on for the rest of the summer. It’s a little bit jarring coming back after having Owen...it’s a little ...you know...because I’ve been practicing but when you get into a lesson situation you really see what you have to work on...kind of where you are...there’s all those things that are the same and things that are different.”

5. “Was there any part of this lesson you did not enjoy?”

“A couple of parts where...man...I need to work on that! So it’s just the personal oh that slipped a bit since having the baby.”

6. “How did you know you wanted to study with Professor Mills?”

“I did a master class with her.”

7. “Was anything clarified for you today through the lesson?”

- “Yeah, there were some really good exercises to work on for continued support throughout the slower, longer phrases especially.”
8. “My research is on applied teaching expertise and Professor Mills has been identified as an expert voice instructor. What about her teaching works for you?”
- “ She’s very frank and to the point and there are teachers I’ve had before that are a little more...they’ll try to ease you into things and kind of gently tip toe around what they are really trying to say. She is very effective at just saying ‘here is what is going on...here are things to try to fix it’ and that appeals to me”.
9. “Last question. Do you think your lesson was affected by me being here at all?”
- “No. Oh no. No!”

Appendix J: Codebook

Etic Codes Derived from Duke and Simmons' (2006a) 19 Common Elements of

Expertise

Code	Description	Example
Appropriate repertoire; repertoire within technical capacity	Teacher assigns repertoire within students' capabilities, student is not struggling with notes, and teacher focuses on excellent fundamental technique.	"So now all of the arias that you brought to me because you do your homework, that you wanted to sing, we can start looking at these again because you now have these notes that you can play with. I mean just to be able to hit a high note isn't, you have to be able to spend time on it."
Clear technical ideas; unhesitating speech; knowledge/experienced- based judgements	Teacher conveys clear ideas about technical execution with little hesitation, suggesting vivid auditory image.	"So get off of ties, bigger beats in the melismas; instead of thinking ogni note, at least eight."
Focus on sound quality; detects technical error; repeated trials	Teacher focuses on sound quality, identifies technical problems, directs student to repeat trials until sound quality is acceptable.	"Keep it spinning so that when you add the melody to it it's going to feel natural. But if you sing [models the passage, chanting in a non-energized tone and falling under pitch], you're singing a straight sound and then you have to think 'okay, I have to lift it.'"
Important technical goal; Important expressive goal	Teacher sets musically-technically important target.	"It's going sort of in your snoz . . . You hear how it's getting stuck in there? You have to get it out of there."

Code	Description	Example
Attainable goal; audible change	Teacher sets attainable target; identifies underlying fundamental issue, asks for performance adjustment, audible change occurs.	“You cannot croon this. I’m hearing [models, singing the phrase at pitch with mumbled consonants juxtaposed with a clearly articulated version], <i>Un’ombra . . . Un’ombra di pace si mo</i> . All those initial consonants have to be up and over.”
Lengthy comparison	Teacher describes positive change over time, provides lengthy description of student’s improvement over time.	No examples in lesson data
Through-performed piece; error-halt	Teachers have students perform pieces beginning to end, interrupts performance when errors occur.	[Halts performance]“Yes. Yes, you’re going through them too fast. Again its tempo, but it’s in this nice two . . . Take a bigger breath before those . . . <i>Ah no. Ah no . . .</i> I have to have the groups of four. . . Now I want all of the notes.”
Audience perception	Teacher provides feedback describing audience perceptions.	“All the girls will go aflutter!”
Error correction;	Student sings through repertoire-exercises; teacher interrupts performance to address errors, immediately recognizes and corrects error.	“The main trick is just to figure out where the phrases start. So you just went [plays accompaniment, models imitation an octave down] <i>he went away</i> . [models target breath, phrasing] <i>Oh, oh but he was.</i> ”

Code	Description	Example
Repeats trials; persists	Teacher sets target directed at sound production-appropriate interpretation, directs student to repeat performance trials, applies various feedback and modeling, persists to goal achievement.	“Okay there! You feel how much tension, do it again, feel for the” [gestures with both index fingers touches corners of mouth].
Detects technical flaw; superseding flaw	Teacher immediately recognizes-addresses technical flaw, technical error supersedes previous target, teacher directs repeat performance trials until student corrects technical flaw.	[Shakes head, models raised-upper lip, puckered mouth position] “When you go to an [i] vowel you sometimes want to chew (move) it.”
Rapid pace; quick actions	Teacher and student alternate activities quickly, teachers activities are brief, teacher offers succinct feedback and directives.	“Get the position [models breath with [æ] mouth position, performs the vocalise falsetto at pitch, points to mouth, taps upper lip], it’s right there.” (Student) Performs, attains correct [æ] vowel position midway through the exercise. (Teacher) “See where it ends up getting?”

Code	Description	Example
Story break; elaboration break; demonstration break	Teacher initiates lesson break; departs rapid lesson pace to perform extended demonstration, tell a story, or elaborate on lesson discussion; teacher then resumes rapid pacing.	<p>“I mean it’s like when Renata Scotto first was, the first 1974 TV broadcast of Boheme, she was chunky. And after it was over she said [imitates Renata Scotto] ‘Joey I look terrible and I’m also singing out of the side of my mouth.’ [Returns to normal voice] Cause we were doing Butterfly in San Francisco. So, she said, ‘I can’t have,’ she actually went to a coach. Number one, she lost the weight and then she was looking at herself in the mirror so that she looked normal. Because once it’s on that video thing, its posterity.” [Plays starting pitch] “Okay, right there. Aneliti.”</p>
Interpretive option	Teacher offers student real or circumscribed interpretive choice options.	No examples in lesson data
Fine discrimination; student discrimination	Teacher communicates clear auditory target, detects deviation from auditory image, asks student to verbalize independent discriminations.	“Sing into the next pitch without doing [models interval of a fourth with exaggerated ‘h’] ha ha with the ‘h’s’. That’s not <i>bel canto</i> . Okay good.”
Physical motion correlated	Teacher points out how physical motion correlates sound quality and musical effects.	No examples in lesson data

Code	Description	Example
Technique linked to interpretation; physical motion linked to interpretation	Uses technical feedback to alter expression. Describes technique in terms of interpretive effect. Demonstrates physical movement to achieve interpretive effect.	No examples in lesson data
Negative feedback	Teacher offers succinct and specific negative feedback.	“You’re already monkeying with it . . . Wide neck . . . No, don’t pull up. . . [shakes head] No, I want the larynx to stay relaxed. Take a breath . . . [gestures, pulling hand wide apart] you see what happened?”
Lengthy positive feedback	Teacher offers lengthy, emphatic positive feedback.	No examples in lesson data
Expressive Modeling; excellent modeling; juxtaposed imitation	Teacher provides excellent models of expressive elements and accurate imitation of student performance juxtaposed with modeled target goal	[Halts, models the section at pitch with clear articulation, dramatic pacing, vocal inflections, and facial expressions] “ <i>I live in a black marble palace full of black panthers and white doves.</i> ”

Etic Coding Summary

Goals and Expectations	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
Repertoire within student capabilities ^a	6/8	3/3	8/9	5/5	6/6	7/7
Teachers guided by clear auditory image	8/8	3/3	9/9	5/5	6/6	7/7
Teachers demand consistent standard of sound quality	8/8	3/3	9/9	5/5	6/6	7/7
Technically important lesson targets	8/8	3/3	9/9	5/5	6/6	7/7
Achievable lesson targets	8/8	3/3	9/9	5/5	6/6	7/7
Teachers draw comparisons between past and present lesson work	1/8	0/3	1/9	3/5	1/6	2/7
Effecting Change	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
Pieces performed beginning to end ^b	6/8	3/3	8/9	5/5	6/6	7/7
Course of music directs lesson; errors elicit stops	8/8	3/3	9/9	5/5	6/6	6/7
Tenacious working to accomplish lesson targets	8/8	3/3	9/9	5/5	6/6	7/7
Technical flaws addressed immediately	8/8	3/3	9/9	5/5	6/6	7/7
Rapid lesson pace	8/8	3/3	9/9	5/5	6/6	7/7
Intuitively timed lesson pace breaks	8/8	3/3	9/9	5/5	6/6	7/7

Teachers permit students' interpretive choice	1/8	1/3	1/9	2/5	1/6	4/7
Conveying Information	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
Teachers make fine discriminations	8/8	3/3	9/9	5/5	6/6	7/7
Performance technique described in terms of effects of physical motion	0/8	0/3	0/9	0/5	0/6	0/7
Technical feedback given in terms of creating an interpretive effect	0/8	1/3	0/9	0/5	0/6	0/7
Negative feedback pointed and frequent	8/8	3/3	9/9	5/5	6/6	7/7
Infrequent but extensive positive feedback ^c	0/8	0/3	0/9	0/5	0/6	0/7
Teachers demonstrate important points; modeling is exquisite	8/8	3/3	9/9	5/5	6/6	7/7

Note. Results of etic coding in relation to Duke and Simmons' (2006a) standard: appearance in "nearly every lesson taught by all three teachers" (p. 11, emphasis in original). Each etic code was applied between zero (viz., comparisons between past and present lesson work, interpretive choice) and 33 (viz., positive and negative feedback) times in each lesson segment.

^a Three segments contained vocal exercises only. Exercises were appropriate to the student's vocal development.

^b Three segments contained only vocal exercises. Exercises were appropriate to the student's vocal development.

^c Observed positive feedback was brief. There were no occurrences of lengthy positive feedback.

Emic Codes

Code	Description	Example
Anatomy and physiology	Teacher refers to human anatomy and physiology of singing (e.g., body alignment, breathing, phonation, articulation range, registration, resonance).	“Be careful of letting this get slouchy” [models collapsed sternum, ribcage, and shoulder posture juxtaposed with upright expanded sternum, ribcage, and shoulder posture]
Student question-comment	Student asks question-makes observations about the mechanics and process of singing.	“Is that with clarity in the, within the runs?”
Collegiality	Teacher responds to students’ questions and comments.	“Well there are some runs that were not as they should be...for example [models, imitating student’s performance of a melisma].”
Safety-rapport	Teacher demonstrates rapport (e.g., mutual respect, honesty, encouragement, sense of playfulness and good humor).	(During student performance) [gestures hourglass]“Yeah, great. What we’re really doing is just getting a better balance in the passaggio, because it’s tended to be a little too thick you know and the tuning goes a little funny and it gets a little bit of a breathiness and not at all now, which is great.”
Mirror-recording technology	Teacher used devices such as mirrors and lesson recordings.	“Watch yourself in a mirror . . .”
Visual scanning	Teacher focuses visual attention on the student, refers to visible physiological flaws, cues, and physical tension.	“If I see . . . you sometimes, you want to chew (move) it.”
Imagery	Teacher uses metaphorical information to teach technical or expressive aspects of singing.	“I’d like you to imagine Frankenstein bolts. . . in your throat for the low notes”

Code	Description	Example
Gestures	Teacher uses non-verbal gestures (e.g., hand and finger positions, arm movements, facial expressions, and postural change) to communicate information, directives, and feedback.	(While student continues singing) [gestures hand circling] . . . [points toward student, indicating approval]”
Keyboard	Teacher uses keyboard instrument to support vocalises, model-correct pitch and rhythm concepts, and accompany song repertoire.	Teacher plays the melody on piano with the student, halts and plays a pitch that the student has sung incorrectly, then plays the correct pitch.
Language diction	Teacher addresses language pronunciation (e.g., idiom-specific vowels, consonants, diphthongs, and syllabic stress) or diction related to the singing voice (e.g., vowel modification and consonant articulation timing and positioning).	“I think I’ll read to you, so that we get a little more of the cadence of the words.”
Text expression; drama	Teacher describes or models song text meaning, provides dramatic and contextual information about repertoire.	“ <i>I’ll list</i> . It’s from ‘I’ll enlist’, that’s what that comes from . . . <i>I’ll list, I’ll list as a soldier and follow my</i> . I have to have more knowledge of what you’re saying because these are all strophic folk songs and they tell a story.”

Emic Coding Summary

Voice Teachers Work with largely Invisible and Fully Embodied Instrument	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
	8/8	3/3	9/9	5/5	6/6	7/7
Vocal anatomy and physiology						
Student Question- comment	8/8	3/3	9/9	5/5	6/6	7/7
Collegiality	8/8	3/3	9/9	5/5	6/6	7/7
Safety-rapport	8/8	3/3	9/9	5/5	6/6	7/7
Mirror	8/8	3/3	9/9	5/5	6/6	7/7
Recording	8/8	3/3	9/9	5/5	6/6	7/7
Voice Teachers Often Concentrate Exclusively on Technique	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
	8/8	3/3	9/9	5/5	6/6	7/7
Visual scanning						
Imagery	8/8	3/3	9/9	5/5	6/6	7/7
Gestures	8/8	3/3	9/9	5/5	6/6	7/7
Keyboard	8/8	3/3	9/9	5/5	6/6	7/7
Extensive Familiarity with Texts used for Singing	Erie Mills		Joseph Frank		Eric Howe	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
	8/8	3/3	9/9	5/5	6/6	7/7
Language Text	8/8	3/3	9/9	5/5	6/6	7/7

Note. Results of emic coding in relation to Duke and Simmons' (2006a) standard: appearance in "nearly every lesson taught by all three teachers" (p. 11, emphasis in original). Each code was applied between one (viz., statements about lesson recordings) and thirty (viz., non-verbal gestures) times in each lesson segment.

Appendix K: Glossary

Animato: Italian “animated” or “lively.”

Applied Music Lesson: American term for one-on-one study course in performance as opposed to theory.

Appoggio: Italian *appoggiare* “to lean”; Coordination of a dynamic balance of the respiration, resonance, and phonation systems in singing.

Bel Canto: Italian “beautiful singing”; operatic singing originating in 17th century Italy stressing ease, purity, and evenness of tone production and agile and precise vocal technique.

Bottle: Phonating through a drinking straw into a partially filled water bottle. The exercise is used to provide sensory feedback related to support, tonal freedom, air pressure, and negotiating the *passagio*.

Carriage: Positioning of the body or of body parts; a way of bearing the body;

Coloratura (Soprano): Italian “coloring”; a high, agile voice.

Cords: See folds

Cupa: Italian “deep.”

Diction: The articulation, pronunciation, and style of speaking a language according to defined criteria (Blades Zeller, 2002).

Epsilon: [ɛ]; IPA phonetic symbol for open e sound.

Falsetto: Vocal register in the male voice, imitative of the female voice, produced by applying only medial vocal fold compression (Blades-Zeller, 2002).

Folds (vocal folds): Two small bands of muscle within the larynx, composed of vocalis muscle, the vocal processes of the arytenoid cartilages, and vocal ligament (Blades Zeller, 2002). These muscles vibrate to produce the voice.

Fundamental Technique: Basic aspects of singing; posture, breath management, tone quality, resonance, registration, diction, vowel formation, and body tension (Blades Zeller, 1993).

Imagery: The use of images to teach vocal technique and musical interpretation (Blades Zeller, 2002).

Image Instructor: Instructor often utilizing imagery to teach singing technique.

IPA: Abbreviation for International Phonetic Alphabet. A set of symbols and modifiers designed to provide a consistent and universally understood system for transcribing the speech sounds of any language.

Isometric: Exercise or a program of exercises to strengthen specific muscles by pushing one muscle or part of the body against another or against an immovable object.

Lhasa apso: The Lhasa apso is a small, hardy dog with an undershot bite. The incisors of the lower jaw overlap the incisors of the upper jaw.

Messa di voce: Gradual crescendo and decrescendo on a sustained pitch.

Pedagogy: The science and art of teaching.

Passagio: Italian “passage,” the point of register transition at which two of the three vocal registers (high, middle, and low) meet.

Phoneme: Small units of sung texts which distinguish one utterance from another.

Physical Motion: Relating to the body and as an act, process, or instance of moving.

Physiological/ Pedagogical Voice Instructor: Voice instructor utilizing a mechanistic approach that works toward correct placement and manipulation of singing physiology while incorporating a pedagogical understanding of the vocal process to voice students.

Physiology: Dealing with the functions and functioning of living matter or functional processes in an organism or any of its parts.

Postulant teacher: Personnel from business, industry, or other career fields with domain specific experience and knowledge who enter the field of education without prior teaching experience or preparation.

Rapport: Mutual understanding, respect and trust between people. Sympathetic relationship in the applied studio setting based on mutual respect, good communication, and face-to-face interaction (Clemmons, 2007).

Repertoire: Musical literature that a person is learning or has prepared to perform.

Resonance: the reinforcement and intensification of sound produced by transmission of vibrations to a cavity.

Support: Aspects of physiology coordinated to manage breath and air flow in singing.

Technician/Technical Voice Instructor: Instructor utilizing scientific, physiological information about aspects of phonation, respiration, and posture to teach technique.

Vocal Coach: Voice specialist who coaches singers, helping them with the pronunciation, singing and interpretation of a role.

Vocal Pedagogy: The science and art of teaching singing.

Vocal Register: a range of tones produced with similar vocal fold configuration.

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