EMBODYING SINGING IN THE CHORAL CLASSROOM: A SOMATIC APPROACH TO TEACHING AND LEARNING

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ABSTRACT

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With the intent of improving teaching and learning in choral music education, the purpose of this study was to investigate how somatic (mind-body) instruction facilitated participants’ understanding of embodiment in singing and affected their perceptions of their singing performance. The work of Merleau-Ponty and Shusterman provided a theoretical framework for the notion of embodiment and the inclusion of somatic practice in the choral classroom. The research questions were: (1) How do participants describe their singing performance as a result of participating in experiences of somatic practice? (2) How do participants describe embodiment in singing as a result of participating in somatic practice? (3) How do participants describe teaching and learning in this choral setting as a result of increasing their knowledge about embodiment and participating in somatic practice?

This qualitative study followed an integrated case study and action research design. The participants included five male and six female high school choral singers and their choral music teacher from a suburban school in a Midwestern state. As the participant-researcher, I facilitated somatic explorations based on the Feldenkrais Method® that were intended to elicit a greater understanding of embodiment in relation to singing.

Data sources included participant journals, focus group interviews with the high school students, individual interviews with the choral music teacher, and researcher field notes and reflective journal. The data were analyzed throughout the study using the constant comparative method.
method. Prolonged interaction with participants, data triangulation from multiple sources, member checks, and peer review established the trustworthiness of this study.

The five themes that emerged from the data were as follows: (1) Perceived effects of somatic practice on singing, (2) Singing with conscious awareness, (3) Emerging understanding of embodied singing, (4) New perspectives on learning to sing, and (5) New perspectives on choral music teaching. Participants’ perceived improvements in their singing performance related to reduction of tension, posture, breathing, resonance, articulation, and range. Participants gained a greater understanding of their use of conscious awareness and began to develop an understanding of embodied singing, revealing the interdependence of the body and mind for musical and expressive performing. They also identified insights about learning to sing including the importance of slowing down, reducing effort, sensing differences, and experiencing uncertainty before a new understanding emerged. Finally, the choral music teacher developed an embodied perspective of choral teaching, which included specific strategies for helping students to achieve a more embodied performance.

The findings indicate that a theoretical and practice-oriented perspective of embodiment can provide new possibilities for how choral music educators teach and how their students learn. Somatic exploration as a part of instruction can help develop singing that is expressed more holistically and is inclusive of mind and body. From this perspective, choral music teaching, in essence, is the facilitation of embodied singing. The implications are intended to guide those who are interested in exploring an embodied perspective in choral music teaching as well as in future research.
DEDICATION

I dedicate this dissertation to my former public school music teachers, Gina Murano, Charlotte Haas-Quirk, Kenneth Sipley, and Bonnie B. Nye, who gave me numerous opportunities to participate in music from kindergarten through high school. Each of you was an excellent music teacher who instilled in me a respect and admiration for the music education profession.

Also, I dedicate this dissertation to my former professor, mentor, and friend, Carol McAmis, whose impact on my life has been immeasurable. I am thankful to have knocked on your door more than fifteen years ago, though I had no idea what was in store. Thank you for starting me on this path, supporting me along the way, and ultimately, showing me that the answers always lie within, if I only get quiet enough to listen. What a rewarding journey it has been!
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Chapter One

Introduction

As I prepare to sing the climatic moment in Gabriel Fauré’s “Les Berceaux,” I am determined to give it my all. I breathe deeply filling my chest and abdomen. I exhale powerfully, “Et que les hommes curieux . . . .” As the phrase ascends, I intensify the sound to convey the building drama of the text. I feel my entire body tense and sense that I am running out of breath. I gasp for air before the next phrase and continue, “. . . tentent les horizons qui leurrent!” I squeeze my abdomen and chest in order to wring out every last bit of breath. My tone becomes increasingly strident and forced. I feel a constriction in my throat until I eventually crack on the high note and run out of breath at the end of the phrase. Needless to say, this was not the performance I was intending. I wanted to sing with vibrant and resonant tone, flowing musical line, and emotional expressiveness that the piece required.

“How can I make this better?” I ask my voice teacher.

“First, begin by noticing what you are doing as you approach the high note,” she responds.

I begin to sing the phrase once again and she reminds me to pay attention to what I am doing. I catch myself coming back down on my heels after the high note and then report, “I must be standing on my toes because I felt my heels come back to the floor.” This is something I had not noticed while singing a few minutes earlier.

She nods and smiles, prompting, “Sing it again and this time intentionally rock back and forth onto your toes and onto your heels.”
As I sing and move, I notice that my knees bend when I come onto my toes and straighten when I come onto my heels. The movement also causes my pelvis to swing forward and back. I stop for a moment and exclaim, “That's weird. I feel like I am standing more securely with support from both legs.” Again, I had not previously been aware of my lower body.

“Now sing it and notice what you do with your head.” I sing again and realize that I am jutting my chin and shortening the back of my neck. I begin to understand why I am not able to sing the high note with ease.

“This time nod your head up and down as you sing.” I experience great difficulty in nodding my head; so much so that my voice cracks on the high note.

“Nice work! Now do it a few times and continue to reduce the effort, so that you can nod and sing without cracking,” she enthusiastically exclaims.

Though puzzled, I comply. As I nod my head, I realize that my chest is able to soften and my entire spine begins to arch and round. I pause for a moment to observe the emerging sensations. My feet feel like they are flat on the floor. My legs stand firmly and support my pelvis. My pelvis anchors my spine. My chest and back feel more open and my ribs float up and down with each breath. My throat is much more relaxed than usual. For the first time, I can feel that my spine is supporting my head.

Once again, I begin by breathing deeply, filling my chest and abdomen. This time it feels as though I can take in much more air. As I sing, I feel support from my legs and pelvis and the breath flows out easily. As the phrase ascends, I intensify the sound and rather than becoming tense, I feel a sense of buoyancy and ease in my abdomen and chest. I breathe in between phrases without gasping and continue to shape the musical phrase. My tone is much more
resonant throughout, even when I sing the high note. It is a much more musically satisfying experience.

“That’s so cool!” I exclaim. “It was a completely different performance. It was more like what I had in mind . . . it just wasn’t in my body before.”

At the end of the lesson, my teacher asks me to reflect on what I learned. After a thoughtful pause, I comment, “It’s difficult to put into words. It was as though I wasn’t able to sing the music the way I wanted because I didn’t know how. Afterward, I felt and experienced the music very differently . . . because I had more awareness of my body – my self. I have a much better understanding of this piece and I discovered something new within myself in the process.” Once again, she nods and smiles.

***********

This vignette describes my experience of music learning during a private voice lesson. More than simply a means of developing performance skills, my lessons were an organic learning process that recognized the body as the site of learning and foundation for musical understanding. The purpose of my lessons was, in part, to develop my understanding of the inherent and interdependent connection between mind and body in the context of learning to sing. The lesson described above was just one example of how I became aware of the importance of the body’s role in music making and music learning.

Recognition of and attention to the body as a fundamental part of music instruction in this way was unlike learning that I previously had experienced during my music education. As I began to transfer my knowledge and apply this type of learning as a singer in a choral setting and later, as a choral music teacher, this and other similar experiences raised questions about music teaching and learning: Why did engaging my body consciously help to improve my
performance? How might attention to the body affect the quality of my musical experiences and those of my students? How would attention to the body affect the meaning of such experiences? Why was this perspective not more widely recognized in music education? While it was not until more recently that I discovered the concept of mind and body integration, referred to as embodiment in the literature, my lifetime of learning and teaching music has sparked my fascination with and interest in exploring this notion in the context of music education.

This study was an exploration of embodiment as it relates to music teaching and learning in a choral classroom. It introduced a choral music teacher and choral ensemble members to a new theoretical and practice-oriented perspective of embodiment, which goes beyond the traditional views of the body as technical/motoric and moves toward an embodied perspective of mind and body. From this perspective, participants were encouraged to reconsider the role of the body in understanding the complex interrelation between mind and body in the context of singing in a choral ensemble.

Specifically, this study investigated the implementation of a somatic (mind-body) practice, the Feldenkrais Method\(^1\), as a means to facilitate singing performance of choral music. It also examined embodiment in singing and implications for teaching and learning in a choral classroom. The experiences of a high school choral music teacher and 11 choral ensemble members were the focus of inquiry. I delved into their experiences, perceptions, and understandings of singing as embodied experience.

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\(^1\) Feldenkrais Method\(^\text{®}\), Feldenkrais \(^\text{®}\), Awareness Through Movement\(^\text{®}\), and Functional Integration\(^\text{®}\) are registered service marks of the Feldenkrais Guild\(^\text{®}\) of North America.
Choral music teaching and learning from the perspective of embodiment has not been studied. Therefore, this dissertation is exploratory in nature. As such, the findings of this study may contribute to the understanding of music as embodied and present pedagogical insights for best practice in choral music education as well as for the larger music profession.

The remainder of the chapter presents an overview of the background that frames the study. It includes a brief discussion of the separation of mind and body in Western culture as well as the emergence of the conception of embodiment across academic disciplines. The review of literature discusses embodiment in education, specifically arts education, as well as the various ways in which the body is treated in music and music education. The chapter then provides the theoretical framework that grounds the concept of embodiment for this study and includes a discussion of somatics and the Feldenkrais Method of somatic education in relation to embodiment. Finally, the chapter concludes with the purpose of the current study.

**Background and Context**

The general disembodiment of human experience in relation to knowledge in Western culture can be traced back to Plato who created divisions between the soul and the body (Robinson, 2003). Seventeenth-century French philosopher René Descartes (1596-1650), known as the “father of modern philosophy,” developed an ideology referred to as mind-body dualism in his quest for absolute knowledge (Skirry, 2008). According to Descartes, the most important aspect of human existence is the capacity of the mind for rational thinking. From this perspective, the individual exists only by thinking and the body can only be the object of thought. His famous statement, “Cogito ergo sum” (“I think, therefore I am”), implies that knowledge can be gained only through a process of abstract analysis (Descartes, 1637/1999, p. 18). The legacy of the Cartesian tradition has affected every aspect of Western philosophy,
thought, and education, and has created the need for alternative views of the mind and body (Matthews, 1994; Chan, 2002; Freiler, 2007).

In reaction to mind-body dualism, a conception of embodiment that views being as holistic and integrative has emerged across many academic disciplines, including anthropology (e.g., Csordas, 1994; Rasmussen, 1999), cognitive science (e.g., Gibbs, 2006; Johnson, 1987; Lakoff-Johnson, 1999; Varela et al., 1993), dance education (e.g., Arnold, 2005; Shapiro, 1998), education (e.g., Bresler, 2007) ethnomusicology (e.g., Berliner, 1994; Blacking, 1977; Mans, 2004; Winther, 2005), feminist theory (e.g., Grosz, 1995; Price & Shildrick, 1999), linguistics (e.g., Yu, 2004), medical anthropology (e.g., Schepers-Hughes & Lock, 1987), music cognition (e.g., Leman, 2008), neuroscience (e.g., Damasio, 1999, 2003), philosophy (e.g., Bourdieu, 1984; Bowman, 1998; Dreyfus & Dreyfus, 1999; Johnson, 1987; Lakoff & Johnson, 1999; Merleau-Ponty, 1962; O’Loughlin, 2006; Peters, 2004; Sartre, 1956, Shusterman, 2000, 2004), sociology (e.g., DeNora, 2000; Turner, 1996; Waskul & Vannini, 2006), and somatics (e.g., Hanna, 1970). Within each field, there are context-specific definitions of embodiment as viewed from different perspectives as well as emerging “interdisciplinary discourse on the body” (Weiss & Haber, 1999, p. xiii). A review of embodiment in each of these disciplines is beyond the scope of the present investigation. However, the emergence of discussion across a wide array of disciplines highlights the growing interest in embodiment as a valuable concept of bridging the mind-body division in Western thinking and developing a new paradigm for framing human learning.

**Rationale for the Study**

The rationale for this study is based upon a growing discourse on embodiment in relation to teaching and learning. Discussions of embodiment in education and embodiment in music form the context for the present study.
**Embodiment in education.** For more than a decade, researchers and educators in the field of education have begun to recognize the importance of the intersection of mind and body and its implications for research, teaching, and learning. Heshusisu and Ballard (1996), for example, describe how a particular source of knowing – the somatic and emotive associated with the body – has been undervalued and ignored in social and educational research. Their book provides accounts from educational and social researchers whose personal transformations began when they realized they could no longer ignore the somatic and emotive knowing that informed their professional lives. As a result, the researchers shifted their research paradigms from positivism to interpretivism in order to illustrate how somatic and emotive ways of knowing are a part of formal knowledge construction.

Similarly, others have begun to call for enlarging the traditional concept of learning in schools to include a more holistic view of knowledge and understanding. Matthews (1998), for example, advocates for the inclusion of somatic knowing in education. He defines somatic knowing as “an experiential knowing that involves sense, precept, and mind-body action and reaction – a knowing, feeling, and acting that includes more of the broad range of human experience” (pp. 236-237). In essence, it is an experiential being and doing that is central to human understanding, particularly in the arts (Matthews, 1998). He also maintains that somatic-based learning would enhance the success of all students, particularly those who have not been successful within the traditional, narrower approach to education. Furthermore, he reasons that, because schools do not value embodied learning, subjects such as the arts that rely on bodily knowing are neglected and trivialized in the curriculum.

Ross (2000) also recognizes the absence of embodied experience in education. She contends, however, that the “thinking body” will gain increasing importance as educators
recognize that cognitive processes rely on its physical dimension and senses (2000, p. 31). Like Matthews, Ross describes somatic knowing as experiential and involving the body’s action and reaction. “The arts,” in particular, she writes, “are firmly rooted in these exchanges between the psyche (mind) and soma (body), and the senses and emotion are the conduits of these experiences” (2000, p. 31). These exchanges between mind and body may also describe learning that occurs as a result of embodiment.

Two seminal publications specifically explore embodiment in education. *Unfolding Bodymind: Exploring Possibility through Education*, edited by Hocking, Haskell and Linds (2001), is a compilation of papers presented at the *Bodymind: Holistic Exploration of Cognition, Action, and Interaction in Education* conference held in Vancouver, Canada in 1999. This conference was the first of its kind to explore new possibilities for holistic and embodied forms of pedagogy, research, and curriculum in education.

In the introduction, Hocking et al. (2001) provide context for the collection from a variety of sources, including the writings of Dewey (1929), Merleau-Ponty (1962), Bateson (1972), Varela, Thompson, and Rosch (1991), and Abram (1996). They define two important and related concepts: bodymind and embodiment. Bodymind refers to an inherent unity of body and mind that is conceptually different from the view of Cartesian dualism, which considers the body and mind as separate entities. The editors reference Dewey (1929), who used the hyphenated version of the term body-mind to signify “what actually takes place when a living body is implicated in situations of discourse, communication and participation” (p. 232). In defining embodiment, they cite Varela, Thompson, and Rosch (1991), who use the term to refer to “both the body as a lived, experiential structure and the body as the context or milieu of cognitive mechanisms” (p. xvi). Hocking et al. interpret this definition as the integration of
physical and experiential body, describing it as “a seamless though often elusive matrix of
bodymind world, a web that integrates thinking, being, doing and interacting within worlds” (p. xviii). In other words, bodymind erases any divide, conceptual or actual, between mind and
body, allowing for the emergence of embodiment, which is the integration of thinking, being, doing, and interacting within oneself and the world. These definitions acknowledge the
unification of mind and body as a basis for human action and interaction within the environment.

*Knowing Bodies, Moving Minds: Towards Embodied Teaching and Learning*, edited by Bresler, is the other interdisciplinary publication that defines a variety of theoretical, practical,
and methodological directions in education research centered on the role of the body in teaching
and learning. In her *Prelude*, Bresler (2004) refers to embodiment as a ‘Grande Idée’ (a term
borrowed from Suzanne Langer), an idea of intellectual magnitude with the potential to
revolutionize current thinking and practice in order to resolve problems caused by mind-body
division. For Bresler, embodiment is the integration of mind and body that, by its very nature of
connected knowledge, offers a compelling lens through which to re-conceptualize learning,
teaching, and the organization of schools. Working in a “paradigm of embodiment” allows for
an examination of familiar topics from a different perspective (Bresler, 2004, p. 7). Bresler
suggests that music and the other arts would provide a rich context to explore what embodiment
means for researchers and educators. Accordingly, she calls for the need to examine “somatic
modes of attention” in relation to schooling and curriculum (Bresler, 2004, p. 7). Furthermore,
Bresler notes that traditional forms of bodily instruction, such as the Alexander Technique, the
Feldenkrais Method, and Pilates, for example, which have existed outside of mainstream
education, contain valuable knowledge about the somatic domain. She asserts that these forms
of instruction – also known as Somatics or Somatic Education – may provide a pedagogical
means through which embodied knowledge may be explored in educational settings. Her assertion is noteworthy, as the present study implemented the Feldenkrais Method to facilitate experiences of embodiment in the choral classroom.

In her article contained in this volume, Davidson (2007) further clarifies the need for understanding embodied knowledge in schools. She notes the lack of “thick descriptions of school life that explore the relationship between theories of embodied knowledge and the enacted curricula” (2007, p. 197). Like Matthews and Ross, she argues that arts education provides a unique opportunity for exploring embodied knowledge in schools, because the arts value this knowledge more than traditional disciplines. She points out, however, that simply placing the arts in “the disembodied framework of knowledge” that exists in school diminishes the potential to explore fully embodied instruction and curricula (p. 197).

The *International Handbook of Research in Arts Education*, also edited by Liora Bresler (2007), devotes an entire section to the emerging conceptions of the body in arts education. In her “Prelude,” Powell (2007) categorizes the theoretical and empirical constructs of the body pertaining to the arts into three overlapping approaches. The first approach views the mind as embedded within the body. Knowing, perceiving, and reasoning are embodied, occurring through and dependent upon the body. Phenomenology provides a theoretical framework for this perspective, because it acknowledges the inseparability of knowing and doing and that learning occurs as a result of the lived experiences through interactions with the environment. This approach lends itself to the examination of topics such as understanding the body in space and time, issues related to healthy bodies, and the connectedness between body, instrument, and media.
The second approach examines how the body is the medium for social, cultural, and historical understandings and meanings as influenced by social structures and cultural values. Sociology and anthropology provide a lens to understand participation and representation of cultural practices. From this perspective, performance is redefined as a means to analyze how cultural constructs (such as gender, race, class, age, etc.) are represented through the action of performing.

The third approach, which rejects bounded or static conceptions of the body, relies on postmodern accounts in which the body is read, written, and rewritten in relation to historical context. Post-structural philosophy and feminist scholarship provides various lenses to understand how the body is a site of and for power, social structure, and cultural inscription and to interrogate bodily representations, respectively.

**Summary.** The literature clearly calls for a “re-thinking” of education from a perspective of embodiment, one that acknowledges the role of the body in research, teaching, and learning. From this new perspective, researchers and educators may reconsider traditional curriculum and instruction and include such practices that facilitate and cultivate embodied knowledge.

**Embodiment in music.** Historically, the role of the body in music had been ignored for the most part both in philosophical discourse and in empirical research (Bowman, 2000; Bowman & Powell, 2007; Walker, 2000). A “somatophobia” or wariness of the body throughout music history has diminished or silenced its role in musical experience and understanding (Bowman & Powell, 2007). Bowman and Powell (2007) cite classical aesthetic theory as one example that has minimized the role of the body in music in favor of “experience that is abstract, mindful, cognitively distinguished, and trustworthy” (p. 1089). The impact of this has rendered music as neither corporeal nor embodied.
Within music education, philosophical discussions of embodiment in relation to teaching and learning are absent. This is not surprising, given the prevailing philosophy in music education during the second half of the twentieth century, aesthetic education. Bowman and Powell (2007) argue that Reimer’s aesthetic education did little to advance the role of the body; its contribution instead was a focus on the capacity to develop aesthetic sensitivity. Similarly, Elliott’s praxial philosophy of music education, which emphasizes the “doing” of music as knowing-in-action, neglects the bodily roots of experience in favor of a disembodied cognitive knowing (Bowman, 2000; Bowman & Powell, 2007). In other words, though the body is involved in the “doing” of musical performance, this philosophy does not acknowledge the importance of the body’s role in learning.

Yet in instructional methods and approaches within music education, there is an implicit acknowledgment of the body. Dalcroze, Kodaly, and Orff methodologies use bodily movement as a part of music instruction. Bowman and Powell (2007) note that bodily instruction tends to be limited to the development of performance skills, primarily for young children, and that none of these methodologies is derived from or provides a theoretical grounding for music as embodied. Similarly, Music Learning Theory incorporates the use of Laban movement as a vehicle for teaching concepts such as time, weight, space and flow, and developing rhythmic awareness and coordination (Gordon, 2009; Jordan, 1989). The use of movement is also recognized as a valuable tool in other instructional approaches. Pierce (2007) posits that movement is helpful in developing an interpretation in a variety of teaching settings because it improves kinesthetic sensitivity and awareness to the musical elements of the piece. In choral rehearsals, Galván (2008) suggests that movement can aid vocal technique, intonation, musical phrasing, rhythmic vitality, and stylistic understanding. In her dissertation, Wis (1993)
establishes a philosophical foundation for the use of movement in the choral rehearsal. She described that the conductors whom she observed used gestures that included simulating commonly experienced activities (such as throwing a ball) and those that involved a spatial foundation (such as circling or pointing in a particular direction).

Most choral methods and rehearsal techniques, in contrast, only discuss the body in terms of vocal technique (such as posture, breathing, etc.) and suggest prescriptive directions (such as “Stand with feet shoulder-width apart and with one foot slightly in front of the other.”) to achieve excellence in singing (Collins, 1999; Phillips, 1996, 2003). Subsequently, they treat the body as an object to be manipulated through specific teacher-imposed directives.

Attention to embodiment is evident with the use of somatic approaches in music performance instruction. The incorporation of the Alexander Technique and Feldenkrais Method in vocal instruction (Chin, 2006; Nelson & Blades-Zeller, 2005; Peterson, 2008), the blending of meditative breathing techniques and T’ai Chi movement exercises with vocalises in choral rehearsals (Rao & Pierson, 2005), and the application of Body Mapping in choral instruction (Buchanan, 2007; Conable, 2000) and in conducting instruction (Buchanan, 2007; Buchanan & Jordan, 2002; Jordan, 2004, 2009) are a few examples. However, the inclusion of somatic practices (such as the Alexander Technique, Feldenkrais Method, T’ai Chi, and Body Mapping) is fairly recent and not yet widespread through music education. Nor are somatic practices commonly offered as a part of music education curricula.

The use of body movement that is emerging as a part of music instruction suggests the need for establishing a new theoretical and methodological understanding of the role of the body in music. Various philosophers, ethnomusicologists, and music education researchers have begun to examine the role of the body and what embodiment means for music, both in theory and
research. They draw from different perspectives, including an embodied theory of music cognition, phenomenology of embodied music experience, and ethnomusicology to support their claims and describe the nature of music as embodied. There is no consensus as to the dimensions of musical embodiment; however, this discourse suggests an emerging interest in understanding music as an embodied experience. A discussion of the literature and summary of conceptions of embodiment in music follows.

Stubley (1998) advances a notion of music making as an explorative process of musical decision-making that integrates mind and body. Drawing on the work of Merleau-Ponty and others, she conceives of performing as a blending of thought and action that occurs simultaneously as one lives in and through the music. Stubley also emphasizes the transformative powers of musical performance for developing oneself or one’s identity as musician. In performing, one is so deeply immersed in one’s body that its movements define one’s total sense of being. For Stubley, music making is the synthesis of the body, mind, instrument, sound, and musical actions of collaborative others. Learning to perform is thus, “learning to experience the self as an identity in the making . . . learning to reach out and create a playful space in which the self is open to the possibilities of an other [sic]” (p. 101).

Walker (2000) contends that theories of music cognition and hermeneutics are no longer consistent with current thinking in other domains, such as philosophy, anthropology, and ethnomusicology, because they view the cognitive roles of mind and body as separate. Instead, she proposes an embodied approach to the study of musical knowing and meaning. Accordingly, she describes musical production as both “an internal construction of tonal-rhythmic patterns” as well as “the external process of thought and movement in time and space through which one simultaneously creates and perceives both sonic and movement patterns” (p. 29). She reasons
that these same processes must also be a part of listening. Walker cites the spatiomotor patterns used in performance (such as associating hand positions on the guitar with the sound they produce), the prevalence of physical metaphor in written and verbal musical discourse, and the connections between music and structured movement, such as dance and Dalcroze’s Eurhythmics, as evidence to support her position. She also maintains that an embodied view of knowing and meaning is applicable cross-culturally and reconciles dualities such as thinking and doing, and listening and performing. As a result, it moves us closer to the idea that that the human body is “the source of ‘the music itself’” (p. 29).

In his critique of Elliott’s *Music Matters*, Bowman (2000) argues that part of what makes music important is its ability to provide an understanding of how the body and mind emerge simultaneously. By acknowledging the role of the body, Bowman recognizes “music as a kind of *special celebration of this moment: our here-and-now, embodied mode of being* [original italics]” (p. 49). In other words, music becomes an embodied experience in which humans can appreciate the connection of mind and body in the moment of music learning. For Bowman, music involves knowing, being, and doing in a unique way. His explanation is consistent with Hocking et al.’s (2001) definition of embodiment as the integration of body and mind. Knowing, being, and doing, therefore, are at the heart of understanding what and how it is to be embodied in music.

Bowman (2000) explains that bodily experience is the basis for musical understandings including: rhythm, accent, tempo; texture and timbre; consonance dissonance, tension and release, volume and balance; tonality and modulation; line, phrase, and expression. He maintains that timbre or tone quality is fundamentally experienced in “the way it rubs against, or pierces, or caresses, or resonates with the body” (p. 49). In order to know quality of sound,
Bowman argues that it is experienced within the body in a particular moment in present time. He describes music as an embodied practice because of the body’s responsiveness to it. Bowman suggests that the brain processes music only as well as our capacity to experience the music corporeally. This important point acknowledges the reciprocal relationship between mind and body and suggests the need to provide instruction that is compatible with this understanding of musical development. In other words, there is a need to develop students’ abilities to sense and feel the body as a part of this acting of making music.

Elsewhere, Bowman (2004) elaborates on the role of the body in music in light of the embodied, enactive conception of cognition. This model of cognition maintains (a) the inseparability of mind and body; (b) the material basis of all cognition; and (c) the indispensability of corporeal experience to all humans’ knowledge (p. 31). Bowman suggests that knowledge grounded in bodily experience is not different than knowledge based on intellect; instead, they “are continuous, deeply involved in each other’s construction, and each in turn ecologically situated in the social world” (p. 35). Again, this integrated and interdependent conception of mind and body, which Bowman describes as “an embodied account of musical cognition,” (p. 35) is distinctly different from what is usually known as music cognition. Similar to traditional views of cognition, music cognition regards the body as the passive receptor for stimuli and the mind as the active processor of information and knowledge. This stimuli-processor view of learning precludes any substantive contribution of the body.

Bowman explains that musical instruction from an embodied perspective should involve both performance skills, the ability to produce musical sounds, and listening skills, the ability to construct embodied musical images.
Nurturing musically-skilled performance consists in developing, refining, and enabling the deployment of corporeal schemata, schemata which students assimilate and subsequently use to guide or govern actions in the instructor’s absence. Developing skilful [sic] musical agency entails assuming and assimilating embodied stances, postures, and movements. In becoming skilled musicians, students assimilate the corporeal postures and gesture of a teacher – making them their own, as much a matter of who they become as what they do . . . Thus, musical learning is not so much a matter of what one know as who one becomes: musically skilled action consists in both schematic and somatic identification with an exemplary model – more a process of “becoming” than a process of becoming aware or of “becoming knowledgeable.” (2004, p. 45)

For Bowman, musical learning is an emergent process in which students understand self through experience – that of musical action in performance or listening. Musical instruction, therefore, should assist students in developing the necessary skills to become more effective in the process of “self” development.

O’Neill (2002) echoes Bowman’s assertion in a discussion of possible issues that influence self-identity of young musicians. Her definition of embodiment includes the body as prerequisite for and necessary component of subjectivity, emotion, language, thought, and social interaction. She writes, “Music performance requires ‘real’ physical activity and the body conveys not only expressive meaning, the gestures and facial expressions also convey messages about an individual’s internal state (i.e., anxiety, confidence, emotion, etc.)” (p. 92). That action of musical performance also reveals information about a student’s subjective experience and internal state is further evidence of a unification of mind and body. It also raises the question of
how to address the mind-body connection in musical instruction when helping students to improve their performance.

In her dissertation, which consists of four sub-studies, Juntunen (2004) explores how Dalcroze Eurhythmics facilitates embodiment in musical knowing. She draws from the writings of Dalcroze, Elliott, Dewey, and Merleau-Ponty to create a foundation for understanding embodiment in musical experiences. The first sub-study (2002) examined the principles, viewpoints, and beliefs of seven Dalcroze master teachers regarding pedagogical content knowledge and perspectives of embodiment. It involved periodic interview and narrative inquiry. The second study (2002) investigated practical application of Eurhythmics through a content analysis of the literature on Dalcroze published after 1970 in the United States. The third study, which was published as a separate article co-authored by Westerlund (2001), and the fourth study, which was published as a separate article co-authored by Hynönen (2004), are both theoretical studies. They examined Dalcroze’s discussion of the mind-body relationship in the context of music education philosophy and the role of bodily experiences and movement in relation to the development and expression of musical knowing, respectively. Juntunen and Hynönen (2004) urge music educators to acknowledge the importance of embodiment and bodily knowing in arts education as well as in education in general. They define bodily knowing as “a non-linguistic and non-propositional style of cognition,” which “cannot be articulated in the same way as conceptual knowing” and forms a solid foundation on which conceptual knowing is based (p. 211). They maintain that bodily involvement through movement and awareness should be included in music instruction to create more meaningful experiences through embodied learning.
Pelinski (2004) demonstrates how the human condition of embodiment is fundamentally intertwined in all musical practices and discourses. He draws from phenomenology, neurophysiology, and the combination of both, neuro-phenomenology. Embodiment, he maintains, is required in music perceptions, which are the pre-conceptual and pre-rational basis of abstract thought. Musical perceptions play a role in structuring and configuring musical practices (habits, abilities, techniques) as well as musical meanings. He also argues that, though experiences are subjective to each individual, the social and natural environment also can affect meaning because they are connected.

Alerby and Ferm (2005) contend that learning music results from embodied experiences that one has with the world. Based on phenomenological writings including Merleau-Ponty and Bateson, as well as others, they describe the interconnectedness between body and mind that emerges in the context of experience. Learning occurs as a result of situated and contextualized life experiences in the world and is signified by a purposeful change in which one creates meaning and is able to manage the world in some way. They argue that one dimension of music learning takes place when experiences and knowledge are incorporated in the body and, therefore, they stress the importance of experience in order to understand music. Once one acquires and incorporates embodied musical knowledge, one is able to demonstrate musicality. In other words, musicality is evidence of embodied musical knowledge demonstrated through the moment of performance. In short, they suggest that, in order to know music, one must live music.

Bowman and Powell (2007) explore embodied or bodily accounts of music in an effort to unify the traditional, dichotomous views of performing and listening. They maintain that the body is regarded as merely a technical aspect of performance, while the mind is responsible for
processing the formal structures of sound in listening. They argue instead for mindfulness of music making and the bodily basis of musical listening through a reexamination of philosophical, social, and cultural theories of the body in relation to music.

Bowman and Powell cite Stubley’s (1995) and Bowman’s (2004) notions of embodiment in particular, which were discussed earlier in this section. They argue that knowing (mind) and doing (body) are inseparable in the process of music and that music is a unique form of embodied agency. Furthermore, they contend that philosophical and pedagogical orientations in music and music education ought to embrace this integrative perspective. They propose that mind-body approaches, such as the Feldenkrais Method as well as others, may provide what they refer to as ‘embodied educational practice’ in music education settings. Bowman and Powell also suggest that Richard Shusterman’s (1999) work on embodiment, specifically, his new philosophical discipline, *Somaesthetics*, may provide a framework for exploring such issues in music education.

Woodard (2009) draws from interdisciplinary sources including neuroscience, phenomenology, anthropology, and ethnomusicology and sociology to frame the importance of movement instruction and embodiment in music education. She describes the use of Body Mapping, a somatic education approach founded by Barbara and William Conable, in teaching her piano students, provides examples of pianists’ movement with descriptions of the anatomical structures involved in playing, and reports the impact on their learning and performance. She discusses the influences of bodily perception on observing and learning movement as it relates to music making. She concludes that there is a need for a somatic foundation for music education in order to understand better music as embodied experience and to improve instruction.
Summary. The previous review of literature demonstrates an interest in the topic of embodiment in music among researchers, philosophers and music educators. Though the interpretations of these authors vary, there are commonalities that provide the foundation for the present study. First, human beings have bodies and are embodied. Second, the mind and body are integrated, which eliminates the need to talk of each as a separate entity. Third, the mind and body co-emerge in musical action – performance or listening, for example – and thus, musical experience is embodied. Fourth, experience through the body constitutes a way of knowing (which may be referred to as “embodied”) as well as provides a concrete foundation for abstract, conceptual knowing. As such, experiencing music is necessary in order to understand, know, and make meaning in music. Reciprocally, one shows or demonstrates musical understanding and knowing through a performing body.

Next, with an emerging conception of music as embodied, it is necessary to consider means to facilitate such embodied musical experiences as a part of instruction. In other words, by acknowledging and understanding the role of the body in music experience, one must then consider its implications for the way that music is taught. Bowman and Powell (2007) concede the difficulty in using words to describe bodily experiences, yet suggest the importance and “potentially far-reaching pedagogical significance” of embodied musical instruction (p. 1101). Embodied educational practices – to use Bowman and Powell’s (2007) term – may provide alternate means to explore other ways of implementing and facilitating embodied experiences in combination with music instruction.

The review of literature indicates that the discussion of embodiment relies on various disciplines, and there is no discipline-specific theory of musical embodiment. As a result, there are numerous options for framing the concept of musical embodiment. As previously discussed,
embodiment refers to the integration of mind and body. In an educational setting, embodiment acknowledges the interdependence of mind and body in the learning process. For purposes of this study, embodiment in singing refers to the interdependence of mind and body in the act of singing. It acknowledges singing performance as embodied experience and includes the role of the body in the learning process. Next, a discussion of the most relevant philosophical perspectives of embodiment establishes a theoretical framework.

**Theoretical Framework**

As discussed above, there are several different perspectives and theories that contribute to the conception of embodiment in music. For purposes of this study, I draw from the philosophical writings of Merleau-Ponty and Shusterman to ground the discussion of embodiment. Their work frames embodiment most appropriately as it relates to singing in a choral setting. Phenomenological perspectives from Merleau-Ponty transcend dualistic notions of mind/body, subject/object, etc. and establish the relevance of the experience through the lived body as a perceiving subject, which entails a bodily subjectivity and interaction with the environment/world. His work is most relevant to this dissertation because, as previously mentioned, the body is, in essence, the singing instrument. As such, the body is the perceiving subject through which one experiences an integration of mind and body while singing. Shusterman’s *Somaesthetics*, a new philosophical discipline, lays the foundation for understanding bodily consciousness and allows for the inclusion of pragmatic practice as a means to improve self-function. The following section begins with a detailed examination of each of these philosophical perspectives. Next, I provide a brief overview of Somatics, a field devoted to the study and practice of mind-body techniques, and a detailed description of the
Feldenkrais Method, which is the somatic practice used in this study to facilitate understanding of embodiment in relation to singing.

**Maurice Merleau-Ponty: A phenomenological perspective of the lived body.**

Merleau-Ponty (1908-1961) was an important figure in French phenomenological philosophy, known for his critique of Cartesian dualism (Reynolds, 2005). In his major work, *Phenomenology of Perception* (1962), he defines phenomenology as the study of essences and advances his theory of perception to explain the embodied nature of human existence. He rejects both intellectualism and empiricism, which in the Cartesian tradition emphasize objective thought. For Merleau-Ponty, thinking that is detached from experience separates us from our own selves, the world in which we live, and from other people with whom we interact. Analysis and reflection are abstractions, which are secondary to our lived experience. He states, “The world is not what I think, but what I live through” (1962, p. xvi-xvii). In other words, we come to know the world through our subjective experience of being in the world through the “lived body.”

Merleau-Ponty (1962) challenges Cartesian dualism with his notion of the lived body, which he considers as the site of consciousness and subjective reality of human beings. The lived body includes the living, breathing, acting, and thinking bodily self. Merleau-Ponty reasons that, because it is impossible to disengage from the body, it should not be viewed as an object. As a result, dualities such as subject and object, mind and body cannot exist. The lived body as subject allows for pre-reflective knowledge of self, which is not possible when considering self as an object. The distinction between mind and body occurs not in immediate experience, but only as a result of thinking and reflection. In other words, I experience myself first, before I can think about myself in experience.
According to Merleau-Ponty (1962), perception through the body is the way we come to know the world. It is associated with the pre-reflective and pre-attentional mode of experience, and that mode is the foundation of conscious thought and reflection. Because Merleau-Ponty (1962), like other phenomenologists, is concerned with explaining a given phenomenon as it is experienced, a causal view of perception does not describe the manner in which humans perceive. Thus, he rejects the traditional psychological and physiological model of perception as a mechanistic process of stimulus-response. He argues that a stimulus-response view would suggest that all external stimuli present in the world would cause the same response in all perceivers; yet, he argues that individuals can perceive the same stimuli differently. As Juntunen (2004) notes, we perceive sensuous qualities through taste, smell, sight, hearing, and touch as well as affective and kinesthetic sensations.

Merleau-Ponty’s (1962) lived body includes the first-person and third-person perspectives through perception. He explains that, when his right hand touches his left hand, he is touching and being touched, which give him “double sensations” (Merleau-Ponty, 1962, p. 93). Perception, therefore, is not a passive state, but an active process of receiving sensory stimuli. Because a person is able to sense both internally and externally, action and perception are interconnected. He proposes that perception is a whole-body, context-dependent, meaning-filled activity, which cannot be reduced to its component parts. This is further evidence that there is no lived distinction between the act of perceiving and the things perceived.

One way in which we come to know the world, according to Merleau-Ponty (1962), is through the development or acquisition of habits. For Merleau-Ponty, habit is “knowledge in the hands, which is forth coming only when bodily effort is made, and cannot be formulated in detachment from that effort” (p. 144). From this perspective, one’s ability to acquire a habit
depends on bodily perception and understanding of the action. Merleau-Ponty describes the acquisition of a habit as “the motor grasping of a motor significance” (p. 143). To illustrate, he explains that an experienced organist is able to play an organ that he does not know, with only an hour’s practice. After he becomes accustomed to the instrument, he is able to make the necessary adjustments in his physical movement in order to create a musical performance.

Merleau-Ponty suggests that “the organist’s body and the instrument are merely the medium of the relationship” between the printed score and the resultant sound (1962, p. 145). This example demonstrates that habits are dynamic and are the body’s way of “the coming into possession of a world” (p. 153).

Merleau-Ponty further illustrates the interdependence of body and mind describing speech and gesture. As Wis (1993) points out, the act of speaking typically is associated with the body, whereas the process of thinking is associated with the mind and is not usually regarded as being dependent on bodily involvement. Speaking tends to be view as translated thought. Merleau-Ponty, however, argues that speech is not merely translated thought, but thought that is completed. Language is a person’s act of “taking up of a position in the world of his meanings [sic]” (Merleau-Ponty, 1962, p. 193). As Juntunen (2004) notes, there is no translational act in expressing thoughts through gesture or words; instead the words evoke bodily meaning reciprocally and directly. The word is “first of all an event which grips my body, and this grip circumscribes the area of significance to which it has reference” (p. 235).

Merleau-Ponty’s phenomenology provides an embodied perspective of singing because the body is the perceiving subject through which one learns and experiences the world. The acquisition of a habit demonstrates the importance of the perceiving body in action. Merleau-Ponty’s description of the organist and instrument as the mediator between the musical score and
the sounding music also can be applied to the singer, except that the singer has no instrument other than the body – in essence, his or her own self – to play. In this case, the habit becomes “knowledge in the body” to use Merleau-Ponty’s words. Merleau-Ponty’s discussion of the expression of speech and gesture also applies to the singer, who expresses through song and movement the intentions of a piece. Through Merleau-Ponty’s lens, the song, which the singer sings, is not translating thought, but a completed expression that necessitates the integration of mind and body.

Richard Shusterman: Somaesthetics. Contemporary American philosopher Shusterman² (b. 1949) created a new pragmatic philosophical discipline that he calls Somaesthetics to address several problems. First, in general, philosophies of aesthetics have ostensibly ignored the body. According to Shusterman, this was the result of “the willful neglect of the body in Baumgarten’s founding text of modern aesthetics, an omission reinforced by subsequent intellectualist and idealist theories (from Kant through Hegel and Schopenhauer and on to contemporary theories that emphasize disinterested contemplation)” (2007, p. 137).

Second, despite growing interest in the body in contemporary theory, there is a need for an overarching framework to bridge or connect conceptual and theoretical discourse with body-centered practices, as well as “a clear pragmatic orientation, something that the individual can directly translate into a discipline of improved somatic practice” (Shusterman, 2000, p. 141).

Third, philosophy has been ill-equipped to free us from our culturally constructed views of the body. For Shusterman, “contemporary aesthetic ideals of body remain enslaved by shallow and oppressive stereotypes that serve more to increase profits for the cosmetics industries than to enrich our experience of the varieties of bodily charms” (2007, p. 138).

² Shusterman is the Dorothy F. Schmidt Eminent Scholar in the Humanities and Professor of Philosophy at Florida Atlantic University. He is also a practitioner of the Feldenkrais Method.
Shusterman’s (2007) concept of Somaesthetics embraces embodiment, or the body’s role, in aesthetic experience, acknowledging that the senses are a part of the body and affect its condition. Thus, one’s sensory perception depends on how the body feels and functions. Based on this view, he defines Somaesthetics as “. . . a discipline devoted to the critical, ameliorative study of the experience and use of body as a locus of sensory-aesthetic appreciation (aisthesis) and creative self-fashioning” (2004, p. 51). More succinctly, the purpose of Somaesthetics is “to correct the actual functioning performance of our senses by an improved direction of one’s body” (Shusterman, 1997, p. 267).

The name Somaesthetics itself is a merging of the two words: *soma* and *aesthetics*. Soma, derived from the Greek word for body, refers to “the living, sensing, dynamic, perceptive body” (Shusterman, 2009, p. 133) or “the sentient lived body rather than a mere physical body” (Shusterman, 2007, p. 138). From this perspective, soma recognizes the body as a subject with external qualities (such as beauty and grace), as well as its capacity for subjective experiences and sensations (such as kinesthetic, proprioceptive, haptic [sense of touch], gustatory). Aesthetics refers to the branch of philosophy concerning the nature and expression of beauty. Shusterman also describes Somaesthetics as “an aesthetic of embodiment to revitalize aesthetics through contact with the living body” (2007, p. 137).

The discipline of Somaesthetics consists of three strands: analytic, pragmatic, and practical. *Analytic somaesthetics*, which is primarily theoretical, “describes the basic nature of our bodily perceptions and practices and their function in our knowledge and construction of reality” (Shusterman, 2004, p. 53). In addition, it seeks to examine and explain “the nature of somatic perception and its physiological, psychological, and social conditions,” such as “how the body is both shaped by power and employed as an instrument to maintain it, how bodily norms
of health and beauty and even the most basic categories of sex and gender are constructions sustained by and serving social forces” (Shusterman, 2002, p. 53).

*Pragmatic somaesthetics* focuses on “methods of somatic improvement and their comparative critique” (Shusterman, 2004, p. 53). This component “has a distinctly normative, often prescriptive character because it involves proposing specific methods of somatic improvement or engaging in their comparison, explanation, and critique” (Shusterman, 2007, p. 143). Examples of the diverse practices that pragmatic somaesthetics considers include: “diverse diets, forms of dress, gymnastic training, dance and martial arts, cosmetics, body piercing and scarification, yoga, massage, aerobics, body-building, S/M, and disciplines of psychosomatic well-being like Alexander Technique, Feldenkrais Method, and bioenergetics” (Shusterman, 2000, p. 142). Shusterman suggests that these somatic practices can be divided into *representational*, those geared toward the body’s external appearance, *experiential*, those focused on the aesthetic quality of the body’s experience, and *performative*, those which are “performance-oriented practices” (Shusterman, 2004, p. 54). Certain practices may fall neatly into one category or the other, while other practices may overlap, depending on the intent with which the activity is performed as well as the understanding of its impact or result. Shusterman classifies cosmetics as an example of representational somaesthetics, Zen meditation or Awareness Through Movement of the Feldenkrais Method as examples of experiential aesthetics, and athletics and martial arts as performative somaesthetics. Bodybuilding, for example, because its goal may be either to create better health, a more attractive body, or to improve competitive performance, may be considered to be in all three categories.

Unlike other philosophies that focus only on the discourse of ideas, the discipline of somaesthetics includes a third component, *practical somaesthetics*, which is “[the] physical
engaging in such care – through reflective, disciplined, demanding corporeal practice aimed at somatic self-improvement (whether representational, experiential, or performative)” (Shusterman, 2004, p. 54). Shusterman comments, “This dimension, not of saying but doing, is the most neglected by academic body philosophers, whose commitment to the logos of discourse typically treats the body in mere textual terms” (2004, p. 54).

To summarize, Somaesthesics defines a previously uncharted aesthetic domain – one that acknowledges and examines the experience and use of the body as well as methods, practices, and activities whose purpose is to improve its appreciation and function. Analytic, practical, and pragmatic somaesthetics create a tripartite conceptual foundation that allows for theoretical discourse about the nature of the body-centered aesthetics, the comparison and critique of various methods, and the actual practice of such methods.

The prevailing tenet of traditional Western philosophy (with its roots in Plato as well as Descartes) is that the senses are fallible; therefore, they should not be trusted in a quest for absolute knowledge. This belief has resulted in the valuing of abstract knowledge, ideas, and an absence of the body in philosophy and education. Instead of ignoring the senses (and the body), Somaestersics, in essence, proposes that the body’s full sensual experience should be part of the academic discourse of aesthetics. In addition, it suggests a means of improving the senses and perception, which are the basis of human thought and knowledge, in order to improve the overall human functioning.

Shusterman (2004) offers the following in describing how experiential somaesthetics may be beneficial in an educational setting:
1. Experiential somaesthetics can inform us of our feelings and emotions before they are otherwise known to us, and thus it can help us better manage those feelings and emotions so that they do not interfere in our learning efforts.

2. The awareness achieved through experiential somaesthetics not only gives us better knowledge and management of our feelings (whether in learning or in other aspects of life) but also better control of our movements, hence our actions.

3. Education is not so much a matter of working on particular emotions or movements, but of reorganizing or retraining habits [original italics] of feeling and movement and habits of conduct to which feeling and movement contribute. (p. 56-57)

Shusterman (2004) provides a more expansive view of education, which is similar to Matthew’s (1998) definition of somatic knowing as “an experiential knowing that involves sense, precept, and mind-body action and reaction” (p. 236). Experiential somaesthetics seeks to “reorganize or retrain” habits for improved functional performance, by facilitating awareness of feelings, emotions, and perceptions of self in action. Awareness practice as a part of experiential somaesthetics allows a person to investigate one’s self to expand the sphere of what is available to or possible in one’s experience (Ginsburg, 2009). In short, Shusterman asserts that experiential somaesthetics shapes our understanding of ourselves, which in turn improves our ability to learn more and perform better.

Arnold (2005) argues that the discipline of dance exemplifies Shusterman’s Somaesthetics and is an effective means to understand his aesthetic theory. His discussion of the dancer as the embodiment of expressive form relates directly to the present dissertation because there are parallels between dance performance and singing performance. Arnold asserts that
embodiment is important in teaching and learning of dance because the emphasis is not only on the movements of dance themselves, but on the feeling of those movements. A good dance teacher, according to Arnold, teaches the basic dance steps and encourages students to feel themselves while moving. At the heart of learning or “knowing how” to dance is a performer’s ability “to kine-aesthetically feel” (p. 59). Arnold asserts that the development of a dancer’s kinesthetic feelings is valuable for three reasons:

1. It provides a form of self-awareness;
2. It can be used as an aid to “knowing” whether or not a movement is being done correctly, rhythmically or sensitively;
3. It provides the dancer with an opportunity to feel the movements she makes as lived-body ones rather than as ones that are merely well-drilled but without feeling. (p. 60)

Though Arnold argues for the importance of the embodied experience of the dancer in a subjective sense, he maintains that ultimately, the dancer is concerned with effectively communicating the meaning of the dance, so that the audience will understand what the dance is about. In this regard, embodiment also may be understood in an objective sense.

Arnold’s discussion can easily be understood in the context of teaching and learning in a choral classroom because of the obvious parallels between dance and singing. To elucidate, a singer, like the dancer, must rely on his kinesthetic feeling. A singer who has the opportunity to develop his inner sensation may also benefit because, as Arnold suggests, he develops self-awareness, skills for self-evaluation, and experiences the music through the lived body – that is, from an embodied perspective. In the same way, a singer must then be concerned with whether his intention is clearly communicated to the audience in his performance and view his
embodiment objectively where the emphasis is externally directed. In this way, the act of singing (or any other musical performance for that matter) also exemplifies Somaesthetics and is a way to understand in part that which Shusterman intended.

Whereas Arnold discusses Somaesthetics in dance, Holgersen (2010) connects body consciousness and Somaesthetics to music education specifically. Holgersen explains that Shusterman developed four different levels of consciousness, in an attempt to distinguish in a more refined way between Merleau-Ponty’s two modes of intentionality (operative intentionality and act intentionality). Intentionality, according to Merleau-Ponty (1962), is the basis of all consciousness that is grounded in bodily sensation. Shusterman’s levels one and two correspond with Merleau-Ponty’s operative intentionality, which is associated with immediate and spontaneous perception of the world, whereas levels three and four correspond with act intentionality, which is associated with deriving meaning from a situation and taking action. Holgersen adds his own musical examples to Shusterman’s four levels of consciousness.

1. **Corporeal intentionality** is a primitive mode of grasping without conscious awareness. Even when we are asleep we are able to experience music, or perhaps to hear music that is only sounding in a dream. This kind of experience exemplifies Merleau-Ponty’s basic claim that consciousness is installed in perception, which does not presuppose conscious awareness.

2. **Primary consciousness** denotes conscious perception without explicit awareness. This could be the experience of background music, which may invoke certain emotions. We may even be conscious of the emotions without attending to the music itself, or we may sing along with the music without being explicitly aware of our action.
3. *Somaesthetic perception* implies explicit bodily awareness. Relevant music examples might include trained musicians reading music, playing an instrument, or identifying a piece of music by ear, activities that require explicit awareness but not necessarily analytic reflection. Focus is on the activity rather than on our consciousness of the situation.

4. *Somaesthetic reflection* or self-consciousness means that we are “focused on our own self-awareness” (p. 56). Musical activities such as composing, improvising, correcting wrong notes, etc. require awareness of one’s own awareness. In other words, this kind of activity requires act intentionality and to a certain degree analytical reflection. (2010, pp. 35-36)

Holgersen (2010) explains that the four levels of consciousness are useful in that they make it possible to understand different ways of experiencing or being in touch with music. These distinctions are helpful for understanding participation at different levels of consciousness and may provide a means to help clarify “aspects of meaning that might otherwise remain tacitly implicit, lost to reflection or possibly completely overlooked” (2010, pp. 37-38). He also argues that the attainment of the fourth level of consciousness in reflective practice ought to be the goal of music education.

**Somatics.** Both Bresler (2004) and Shusterman (2004) identify specific somatic practices, such as the Feldenkrais Method, as possible means of exploring embodiment in education. The Feldenkrais Method is one approach among several designated as “somatics,” a term coined by philosopher and somatic practitioner Thomas Hanna (1928-1990). In the 1970s, Hanna first used “somatics” to refer to the emerging field of mind-body approaches and, later,  

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3 Thomas Hanna was an early supporter and former student of Moshe Feldenkrais.
founded *Somatics: Magazine-Journal of the Bodily Arts and Sciences*, a seminal publication for the development of this field. For more than a decade, Hanna continued to write about somatics, which has emerged as a legitimate field of study. As Chan (2002) notes, somatics is the convergence of interdisciplinary somatic practices and holistic mind-body philosophy, which sought to challenge Cartesian dualism. As Hanna (1976) explains, somatics views body-mind experiences from an interdisciplinary perspective that integrates philosophy, education, health, psychology, science and arts. He (1983) defines somatics as “the art and science of the inter-relational process between awareness, biological function and environment, all three factors being understood as a synergistic whole: the field of somatics” (p. 4). Somatic practices focus on the structure and function of the body as processes of the living experience, first person perception, and self-awareness (Hanna, 1970). Chan (2002) identifies the four principles on which somatic practices are based: learners are embodied beings, learning is a holistic and integrative process, somatic awareness is the initial catalyst for personal growth, and first person perception is fundamental to learning experiences. These principles are central to the Feldenkrais Method, the somatic practice implemented in this study to facilitate experiences of embodiment in relation to singing.

**The Feldenkrais Method of Somatic Education.** The Feldenkrais Method is named after its originator, Moshe Feldenkrais (1904-1984). According to Reese (n.d.), Feldenkrais received degrees in both mechanical and electrical engineering in 1933 as well as a doctorate in science at the Sorbonne in Paris in 1935. He earned his Judo black belt in 1936 and second rank in 1938. Between 1949 and 1952, Feldenkrais developed this method of mind-body re-education as a result of multiple knee injuries throughout his life, which had eventually left him unable to walk. Unsatisfied with the treatment options offered by medical professionals, he began to
investigate other means to overcome his impairment. He used his knowledge of movement from judo, mechanics from physics, and what he proceeded to learn of anatomy, kinesiology, and physiology to understand how humans learned to move. Feldenkrais theorized that his habitual movement patterns led to his injury and that introducing new sensory-motor experiences would lead to improved function by creating changes in the brain through the nervous system. He experimented by performing minute variations in his movement to become more aware of his own body as a whole. Through experimentation and self-study, Feldenkrais eventually taught himself how to walk again and avoided surgery. All of his experiences helped to shape what is known today as the Feldenkrais Method. He found that his discoveries were also helpful to others, and after many years of teaching, he began to train others to become teachers of his method.

The Feldenkrais Method is a form of somatic (mind-body) education that develops greater awareness of one’s own function (Feldenkrais, 1972). Feldenkrais acknowledged the unity of the mind and body and maintained that moving, perceiving, acting, feeling, sensing, and thinking are inseparable (Feldenkrais, 1964). He explained,

There is little doubt in my mind that the motor function, and perhaps, the muscles themselves are part and parcel of our higher functions. This is not true only of those higher functions like singing, painting and loving, which are impossible without muscular activity, but also of thinking, recalling, remembering and feeling. (Feldenkrais, 1980, p. 1)

Feldenkrais believed that, by improving the quality of how one moves, one could improve the quality of one’s total being. Body movement is the vehicle for learning. The goal is to learn to move with minimum effort and maximum efficiency. Efficient movement means that in any
movement or action, every part of the body that could be moving in service of the movement or action should be involved. Unnecessary muscular contractions or superfluous movements, whether explicitly intentional or operating without awareness, oppose efficient movement and therefore, should be eliminated. Developing awareness of one’s movement frees an individual from habitual patterns and leads to the possibility of more dynamic function. According to Feldenkrais, the purpose of his method is “to expand the boundaries of the possible, to turn the impossible into the possible, the difficult into the easy, and the easy into the pleasant” (1972, p. 57).

There are two parallel and independent forms of the method: Functional Integration and Awareness Through Movement. In Functional Integration, the practitioner (or teacher) guides the student through movement sequences with gentle, non-invasive touch. In Awareness Through Movement, the Feldenkrais practitioner verbally directs students through a sequence of movements. Of the more than two thousand Awareness Through Movement lessons that exist, most lessons are designed to explore a specific function, ranging from early developmental movements (such as crawling, rolling) to highly complex and sophisticated human skills (such as standing on one’s head, and rolling while balancing a book on each hand and foot). Awareness Through Movement lessons generally are done lying on the floor in various positions (on the back, side, or front), but some are done sitting or standing. The lessons are exploratory, non-competitive, and allow participants to progress at their own pace. Feldenkrais students perform the movements slowly and within a range of comfort while attending to the quality of their movement. In this study, participants took part only in Awareness Through Movement lessons.

Feldenkrais (1981), in The Elusive Obvious, discusses awareness as it relates to developing performing ability. He writes,
A violinist, an actor, a writer, or whoever, who is not aware of the importance of awareness of the way one directs oneself in acting or functioning in life will stop growing the moment he achieves what he considers to be the right way of doing. Some pianists of genius when practicing are always aware of their playing and discover an alternative to the habitual. Improvement of talented people comes through their awareness of themselves in action. (1981, p. 96)

While the Feldenkrais Method was not designed specifically for singers, numerous Feldenkrais practitioners have applied the principles of this approach to the study of vocal instruction. Vittucci (2002) and Nelson and Blades-Zeller (2002) describe the application of the Feldenkrais Method to vocal instruction. In order to help clarify what took place in this study, a discussion of their work follows.

Vittucci (2002) discusses the compatibility of the Feldenkrais Method and a well-known instructional singing approach developed by vocal pedagogue Cornelius Reid. To illustrate the comparison, he outlines the principles and strategies of the Feldenkrais Method. They are: (1) Environment and Stimulus = Response, (2) Differentiation, (3) Integration, (4) Rests, (5) Rhythm, (6) Disturbance, (7) Breathing and Posture. Feldenkrais maintained that habits are a learned response to external and internal stimuli. He believed that a person could change a habit, given the proper environment and stimulus. In Awareness Through Movement lessons, the student has the opportunity to experience new stimuli that create new responses. One strategy is to show that a person can move in differentiated and undifferentiated ways. To illustrate, Vittucci describes that, when greeting someone who enters the room to his left, he can turns his eyes, head, shoulders, and pelvis simultaneously in a block movement. His movement is undifferentiated because all of the parts are moving at the same time and in the same direction.
A differentiated movement would involve moving his eyes, head, shoulders, and pelvis one after the other. In an Awareness Through Movement lesson that explores turning, for example, a student moves each part separately in order to bring awareness to unnecessary effort and movement that contradict or oppose the desired action. The reunification of the separate movements into a more efficient action is referred to as integration. Throughout each lesson, a student takes rest breaks that allow the nervous system to register the changes that occur as a result of the movements. While most lessons involve slow, continuous movements, some lessons involve short, rhythmic oscillations (such as a rocking of the pelvis). Wave-like movements help create a sense of ease, efficiency, and connection throughout the entire body. Exploring a variety of movements often reveals habits of which the student has not been aware previously, resulting in a disturbance that can result in expanded awareness. Awareness Through Movement lessons do not teach “correct” breathing or posture; instead, they offer a variety of possibilities and allow the student to select spontaneously the most appropriate action at given moment.

Feldenkrais Practitioner Samuel Nelson and voice professor Elizabeth Blades-Zeller (2002) have collaborated to apply the Feldenkrais Method in voice instruction with the goal of improved performance. In their book *Singing with Your Whole Self: The Feldenkrais Method and Voice*, they assert that a voice student can sing with less effort and more ease by improving his/her kinesthetic awareness with the Feldenkrais Method. They write, “The *Feldenkrais Method* [original italics] uses the body’s neurological language to break down those subtle barriers [that prevent ease and freedom], resulting in an almost magical adjustment that truly frees the singer and the voice” (2002, p. 1). In each chapter, they introduce how awareness of each part of the body relates to singing. They also provide Awareness Through Movement
lessons that allow students to develop an experiential understanding of each concept. Each Awareness Through Movement lesson is broken up into short eight-to-ten-minute modules specifically designed for use during individual practice sessions, private and group voice lessons, or ensemble rehearsals.

Duke (2004) describes how the Feldenkrais Method helps musicians to cultivate a sense of themselves in performance and an understanding of the learning process. Duke, Professor of Music at Northern Illinois University and Certified Feldenkrais Practitioner, teaches a graduate course entitled “A Workshop in Movement and Performance Awareness.” Duke maintains that the Feldenkrais Method allows musicians to overcome internal obstacles to express their musical intentions. “For most musicians, efforts to express themselves are partially blocked, diffused, or deflected. Instead of producing musical sound, efforts to express the music result in physical tension. Consequently, the performer feels expressive, but does not sound expressive” (p. 35). The purpose of his course is to teach students how to become aware of themselves and how this awareness may improve their performance. As a part of the course, students participate in Awareness Through Movement lessons, complete writing assignments as well as personal journals to record their experiences and discoveries, and perform for one another during class. He reports that his students notice changes in the sound and how the performer moves, for example. They also may discuss the connection that one feels as an audience member to the performer. But ultimately they gain a deeper understanding of how being a musician requires the ability to focus on one’s own self-awareness in order to direct one’s learning, practice, and performance.

Summary. As I described at the beginning of this dissertation, the opening vignette described the application of experiential somaesthetics during my voice lesson. By facilitating
awareness of myself while singing, I became more kinesthetically sensitive and was able to reorganize and retrain my habit of singing for that particular piece of music. As a result, I experienced an expanded sphere of what was possible in my singing as well as what was possible in my understanding of the music. In other words, I learned not only to improve my singing performance, but I understood the music itself better because I was able to “know” it better through my body. By bringing to attention to my own body and self-awareness (Shusterman’s level three and four) through my lived body as subject (Merleau-Ponty), I was able to experience and be “in touch” with the music (Holgersen). This experience is what I refer to as “embodied singing.” In short, embodied singing requires focus on one’s own self-awareness, so that one knows what one is doing while singing.

The Need for and Significance of this Study

The concept of embodiment is gaining currency in various academic disciplines, particularly in arts education. Specifically within music education, an implicit understanding of the body is evident through the use of movement and some recent, though by no means universal, incorporation of somatic approaches in music instruction. However, the perspective of embodiment in relation to music teaching and learning warrants further exploration, as no research yet examines what embodiment means for singers, how the incorporation of such practices may facilitate learning to sing, and how this knowledge may benefit choral music teachers. Therefore, the present study seeks to examine embodiment in a choral classroom setting, where the bodies of the singers are the performing instruments, by implementing the Feldenkrais Method as a pedagogical approach. I hope that this study will not only provide a description of how the body constitutes a mode of knowing among singers, but also will suggest how this knowledge can best facilitate music instruction. Finally, this study may inform our
understanding of music as embodied and present insights for theoretical frameworks, pedagogies, and research practices both in choral music education as well as in the larger music profession.

**Purpose of this study**

With the intent of improving teaching and learning in choral music education, the purpose of this study was to investigate how instruction in the Feldenkrais Method (a somatic practice) facilitated participants’ understanding of embodiment in singing and affected their singing performance. The following research questions (adapted from Freiler, 2007) guided this investigation of embodiment in a choral classroom:

1. How do participants describe their singing performance as a result of participating in experiences of somatic practice?
2. How do participants describe embodiment in singing as a result of participating in somatic practice?
3. How do participants describe teaching and learning in this choral setting as a result of increasing their knowledge about embodiment and participating in somatic practice?

**Assumptions**

Based on the researcher’s experience and background as a choral music teacher and Feldenkrais Practitioner, three primary assumptions were made regarding this study. First, singing is an embodied activity. This assumption is based on the premise that the body is the singing instrument and, therefore, is an integral part of the action of singing. Several authors, discussed above, argue that music experience (both performing and listening) is an embodied practice that integrates mind and body in space and time. Perspectives from philosophy and somatics offer additional grounding to support this claim. Second, somatic practices such as the
Feldenkrais Method facilitate embodied learning and understanding of the mind and body connection. This assumption is based on the premise that mind and body are integrated. Somatic practices have been identified as logical and possible means to provide knowledge and pedagogy for teaching about the body. Third, participation in somatic practices in conjunction with singing may inform, influence, or affect one’s understanding of how to sing. This assumption is based on personal experience and anecdotal evidence gathered through teaching and observing students for over ten years.

**Definition of Terms**

Since many of these terms vary greatly, this study adhered to the following definitions:

**Awareness:** The realization or understanding of what is happening within oneself while conscious (Feldenkrais, 1990)

**Awareness Through Movement:** An experiential movement lesson designed to facilitate self-sensing of one’s movement, which is a pre-reflective, consciously aware experience that belongs in the sensorimotor domain (Bruce, 2003)

**Body awareness/consciousness:** Conscious attention to the body and bodily states (Freiler, 2007)

**Embodiment:** Experiencing and knowing the world subjectively through the lived body (Merleau-Ponty); The unity of mind and body in thinking, feeling, sensing, and acting (Feldenkrais, 1972)

**Somatic practice:** Practice(s) that focus on the structure and function of the body as processes of the living experience, first person perception, and self-awareness (Hanna, 1970)

**Somatic learning:** Learning directly experienced through bodily awareness and sensation during purposive body-centered movements (Freiler, 2008)
Chapter Two

Review of Related Research

With the intent of improving teaching and learning in choral music education, the current study examined embodiment as it pertained to a choral music teacher and her students in a choral classroom. It investigated how instruction in the Feldenkrais Method (a somatic practice) facilitated participants’ understanding of singing as an embodied activity and impacted their singing performance. As mentioned in the previous chapter, research on embodiment in educational settings is limited. The review of related literature uncovered fewer than 15 related studies; only studies that used embodiment as a lens are included in this section. The following discussion of the literature begins with research studies of embodiment in educational settings outside of music, predominantly in higher education, and then ends with the few studies in music education. The last section also presents related research studies with the Feldenkrais Method.

Embodiment in Education

As previously stated, several studies have begun to address critically the lack of embodied knowledge in education settings, both in theory and practice. Some of these studies have drawn from somatic disciplines to implement instruction and facilitate this type of learning, while others have relied on other means of facilitating bodily experience. Researchers have explored the concept of embodiment theoretically (Colman, 2003; Simon, 1998) as well as in practice in higher education (Hocking, 2004; Freiler, 2007), teacher education (Chan, 2002), science education (Latta & Buck, 2007), and in relation to a group of student-athletes (Cheville, 1997). Because there is no single framework for studying embodiment, I will provide a brief description of the philosophical grounding of the body in learning, when necessary, as well as
the means used to facilitate embodied knowledge in teaching and learning. This section also discusses the various methodological approaches within each study, as a point of reference for the present study.

Colman (2003), in a philosophical inquiry, explored embodiment, meaning, and subjectivity in order to “enrich existing accounts of the sociohistorical situatedness of different bodies as subjects through a philosophical examination of the role of embodiment in the constitution of subjectivity” (p. vii). Drawing on the psychoanalytical thought of Irigaray and phenomenological philosophy of Merleau-Ponty, Colman suggests that their work offers rich understanding of interplay between embodiment and subjectivity. Her notion of embodiment overcomes traditional assumptions of mind/body and object/subject dualisms.

In another theoretical study, Simon (1998) examined the construction of subjectivity in adult learning in light of Cartesian epistemology and proposed “an alternative conceptualization that re-embeds the subject within the body, culture, and the natural environment” (pp. 11-12). She explored how the Cartesian divide results in adult learning that is characterized as “disembodied, rational, and competence-based activity of a self-directed, life-long learner” (p. 1). Simon demonstrated the limitation of the Cartesian view, which discourages the learner from relying on the “experiencing body” as both subject and way of knowing. By “highlighting the contextual and phenomenological nature of the learning experience, including its cultural and tacit levels,” Simon argued the importance of embodiment to the theoretical and practical dimensions of adult education (p. 2).

In an effort to overcome mind/body dualism, these two theoretical dissertations (Colman, 2003; Simon, 1998) generate new understandings of embodiment in relation to the subjective
experiences of the lived body. They also offer evidence of an emerging understanding of embodied experience as a way of knowing and reflect the complex nature of embodiment.

In a narrative inquiry, Hocking (2004) explored conceptions of embodied teaching based on the enactive view of cognition articulated by Varela, Thompson, and Rosch (1991). With the intent of understanding how this enactive philosophy informs personal and collective senses of participation and identity in the university classroom, he examined the importance of embodiment for adult learning and self-development and how adults’ embodied perceptions of themselves and others support holistic understanding of teaching. Data sources included a literature review of embodied pedagogy, a qualitative field study of perceptions of embodied teaching and learning in a graduate seminar, and the author’s reflection on his own experiences of teaching and learning in the classroom. Hocking offered the following six values that are central to enactive view of teaching: (1) Contemplation, (2) Interrelatedness (which includes collaboration and partnership), (3) Acceptance, (4) Spontaneity and Improvisation, (5) Resilience, and (6) Sustainability. He conceptualized enactive instructional processes as: (1) dialectical, meaning “they emerge through the co-emergence of body and mind as well as the co-emergence of instructors and students” (p. 197); (2) performance-oriented, meaning “(a) they are based on a participatory view of perception, and (b) a range of learning performances can dramatically enhance thinking-through-activity” (p. 197); and (3) self-reflective, which “acknowledges a connection between what we think and how we participate in the world” (p. 197). Hocking concluded,

The themes I chose were embodied themes. I lived with them for many years during and after the field project. They demonstrate that teaching as embodied, open-ended reflection is a convergence of many relationships engaging spiritual, aesthetic, political,
intuitive, and intellectual dimensions of human performance. How these relationships intersect is what distinguishes one instructional environment from another. (2004, p. 180)

With the intent of improving greater cultural sensitivity and competence in an urban school setting, Chan’s (2002) phenomenological case study examined the experiences of teachers who participated in cross-cultural movement experiences. A perspective of embodiment based on social theory and somatic studies (including phenomenology and somatics) served as a frame within which to analyze data from participant observations, individual and group interviews, analysis of video and audio tapes of participants’ movement experiences and their discussions on their experiences, and reflective journals. Findings indicated that the practice of cross-cultural movements may be an effective tool for positively influencing perceptions and competence in teaching. Additionally, teachers experienced an embodied self and interconnectedness with the world. This finding suggests the possibility of facilitating embodiment through somatic experiences. Noting the relationship of embodiment and teachers as agents of social change, Chan concluded that,

If teacher education moves towards embracing embodiment, it will be necessary to treat teachers as embodied beings, and help them understand the dialectical relationship between culture and a social agent. Through cross-cultural movement learning experience, teachers will become aware of different aspects of their bodies in a social context. They will become aware of their habitual patterns and human agency, and come to understand how their socially constructed bodies carry habitus that shape the way they perceive the world and how human agency can bring about social change. (2002, p. 192)

Drawing on the work of Dewey and Merleau-Ponty, Latta and Buck (2007) described the body’s role within teaching and learning as “enfleshed” through experiences of inquiry in the
They cited the experiences of Debra, one of nine middle school science teachers, whose participation in scientific inquiry projects helped her in turn facilitate greater inquiry with and alongside her own students. The authors explained that, “[E]mbodied understandings of inquiry need to be nurtured in teachers’ practices in order to cultivate the necessary mindfulness to teach for inquiry” (p. 327). They described embodied teaching and learning as a process of “building relationships between self, others, and subject matter; living in-between these entities,” which requires “being in the moment, at the juncture between self and other” (p. 317). In arguing for a “pedagogy of embodiment” in teacher education, they concluded,

To disregard the potential power of embodied teaching and learning is inhuman, undermining learners, teachers, and what it means to education. Revealing the role and place of the body within teacher education holds implications for connected knowledge, empowering learners and teachers, fostering the work of learning. (2007, p. 325)

The two studies above examined the role of embodiment in teacher education and suggest that teachers themselves may be positively impacted by experiences of embodiment both in terms of the process of teaching and their relationship to their students. Studies by Cheville (1997, 2005) and Freiler (2007, 2008) focus more specifically on the experiences of the students in relation to their own learning as well as that of others.

In a reflexive ethnographic study, Cheville (1997, 2005) explored dimensions of learning among members of a single women’s intercollegiate basketball team. Grounded in the theoretical framework of situated cognition, the study viewed learning as a bodily and conceptual process influenced by phenotype (race, gender, somatic type) and culture. Data sources included interviews, field notes of participant observation as well as researcher’s own perspective of
embodiment, media sources, and coaches’ practice notes. Findings indicated that the embodied learning of student-athletes was a highly relational activity. Players relied upon fellow athletes through an “embodied intersubjectivity” or sense of connectedness “as part of a relational equation that is a team” (p. 101). Their physical surroundings of the basketball court impacted “the collective codification of schematic orientations to time and space” (p. 64). Cheville suggested that the study challenges assumptions about sports and contributes to the notion that learning is an embodied activity. Because the experience of singing in a choir is often compared to that of a sports team, Cheville’s description of a connection between team members is worth noting.

Freiler (2007, 2008) examined conceptions, experiences, and application of embodiment as a way of knowing among 12 registered nurses and their instructor in a nursing course. Drawing from cognitive science, situated cognition, and social theory, Freiler defined embodiment as “a way to construct knowledge through direct engagement in bodily experiences and inhabiting one’s body through being-in-the-world” (p. 6). Using a case study action research design, Freiler facilitated five one-hour experiential sessions in which participants took part in embodied awareness activities such as Tai Chi, diaphragmatic breathing, guided imagery, progressive muscle relaxation, yoga as well as others. Freiler collected data from interviews, observation, and documents. Findings indicated that participants gained understanding of embodied awareness through experiential engagement as well as reflection on prior experiences. They were able to apply greater self-awareness in their personal and professional lives to improve their quality of life. Participants recognized value of their experiences of embodiment related to enhancing course content and understanding of cultural relevance and the learning
process in general. Freiler concluded that the experiences allowed for a greater understanding of embodied experiences and were useful in the learning process.

**Summary.** The studies discussed in this section provide evidence both for the valuing of embodiment in educational settings as well as for the conceptualization of embodiment and embodied knowledge, pedagogy, and curriculum. Because subjective experience is the foundation of embodiment, study of embodiment must consider the unique experience of individuals. Embodiment emphasizes the subjective experiences through the lived body in the environment as well as among others and how these experiences contribute to the construction of knowledge for the individual. Practical studies of embodiment involve some enactive, experiential component that facilitates the opportunity of embodied experience in the context of learning. The instructional process has been described as dialectical, performance-oriented, and self-reflective. Freiler’s (2007) study, in particular, helped to frame the research questions and informed the methodology for the present study.

**Embodiment in Music**

As discussed in Chapter One, Juntunen (2004) explored how Dalcroze Eurhythmics facilitates embodiment in musical knowing. In the first sub-study (2002) of her dissertation, Juntunen interviewed seven Dalcroze master teachers regarding their principles, viewpoints, and beliefs regarding pedagogical content and perspectives of embodiment. The specific results of this study indicated that teachers believe that Eurhythmics exercises engage the student in a holistic way (including mind, body, and emotions) and promote personal growth. Because participation constantly requires personal responses and awareness of oneself, they articulated that Dalcroze teaching develops students’ self-knowledge and sense of self as well as a students’ ability to communicate better. The teachers believed that bodily experience feeds the mind and
vice versa, and that Dalcroze practice reinforces the natural connection between the mind and body. There is an importance placed on reflective analysis after experience, which they maintained, is how the connection of bodily experience to musicianship and music making is established. A student learns through observation and imitation of the Dalcroze teacher. As a result of being asked to talk about their actions and experiences, teachers believe that students learn to reflect and discuss their musical experiences.

In an ethnographic study, Winther (2005), as a participant-observer, examined the process of learning in beginning Japanese taiko drumming classes. She found that learning involved two aspects: the embodiment of sounds and the sound of cohesion within the group. Learning the embodiment of sounds emphasized the relationship of the use of the body, breath, and spirit in the creation of particular sounds. Teaching strategies emphasized breaking down the movements into smaller parts as well as the flow of the body and sound. The learning process involved imitation, repetition, and attention to body awareness as well as the resultant sound. Learning the sound of cohesion, the unification of making sound within the group, consisted of two levels: the individual and the group. At the individual level, an individual compared and evaluated one’s own sound within the group and making necessary adjustments in bodily configurations. At the group level, players rely on spontaneous visual and verbal cues as well as indications in the musical score to maintain and reestablish the unification of sound. Winther suggested that the unification or cohesion essentially is embodied sound that is mediated by interaction. In a similar study, Powell’s (2004, 2005) ethnographic study of traditional Japanese taiko drumming “challenges Western conventions that uphold the mind-body dualism by documenting participants’ lived experiences in an educational environment that explicitly engages and encourages mind-body unity” (p. 1098).
Woodard (2009) reports the results of action research that she conducted while teaching Body Mapping to pianists. Drawing on a variety of disciplines including cognitive neuroscience, ethnomusicology, music pedagogy, somatics and sociology, she discussed the theoretical framework for her teaching practices of Body Mapping. Woodard provided examples of pianists’ movement with descriptions of the anatomical structures involved, and discussed the influences of bodily perception on observing and learning movement. She illustrated how improved awareness of the structures and movements of the body can result in the understanding of embodiment. She concluded that there is a need for a somatic foundation for music education in order to understand better music as embodied experience and to improve instruction.

Methodology is an important consideration in regard to exploring embodiment. Each of the previous studies have relied on a particular instructional method that is either inherently musically based (such as Dalcroze Eurhythmics and taiko drumming) or an embodied education practice (such as Body Mapping) that is incorporated into the teaching/learning experience. Because this study uses the Feldenkrais Method as the specific embodied education practice, a discussion of related research studies on the Feldenkrais Method follows.

**Feldenkrais Method of Somatic Education**

Research on the Feldenkrais Method is limited (Buchanan & Ulrich, 2001; Stephens 2004, 2007). The majority of the existing research is quantitative and investigates the effect of the Feldenkrais Method on quality of life issues (e.g., alleviating pain, recovery from stroke and neurological pathologies, improving mobility and balance, etc.) with various populations in medical settings. There is no published research on the Feldenkrais Method in a music education setting. Three studies, however, have investigated incorporating the Feldenkrais Method into dance education. One of these studies examined how the Feldenkrais Method can be used to
highlight a pedagogical approach to dance (Fortin et al., 2002), while the other two examined the experiences of dancers who participated in Feldenkrais classes (Long, 2002 & Diaz et al., 2008).

Fortin and colleagues (2002) studied how the Feldenkrais Method informed a series of contemporary technique classes and highlighted their particular pedagogical approach to dance. This study showed that Feldenkrais Method could be integrated successfully into dance education using a specifically designed class structure and delivery. Long (2002) examined dance students’ perspectives of their learning, after the students participated in an integrated course of contemporary dance technique and Awareness Through Movement over a five-day period. He concluded that using the Feldenkrais Method encouraged an embodied understanding of the self in dance and contributed to students’ curiosity about their own sensory and functional organization. Diaz and colleagues (2008) investigated how a specifically designed ten-week course of Awareness Through Movement informed students’ self-image and its relation to their dancing, learning, and daily lives. They reported that participants experienced “an improved self-image, a greater sense of internal authority, and enhancement of their daily lives as a result of participating in Awareness Through Movement as a part of their dance training” (p. 91).

There is no published research on the Feldenkrais Method with singers; however, during the fall of 2009, I conducted a phenomenological investigation of the experience of five vocal music majors who enrolled in an 8-week college *Feldenkrais for Musicians* course (Paparo, unpublished). Specifically, the purpose of the study was to examine the nature of each participant’s experiences of the Feldenkrais Method and their relationship to his/her own singing. Data sources included semi-structured interviews, participants’ weekly journals, and initial course questionnaires. Data analysis consisted of identifying and coding significant statements about participants’ experiences, which were categorized into four emergent themes: (1) Changes in self-
awareness, (2) Benefits for singing, (3) Learning process, and (4) Value/desire to continue.

Though changes in self-awareness were unique to each person, all participants described more ease in singing as a result of enhanced body awareness and conveyed an understanding of their body as their instruments. They also gained insights into the learning process, identifying specific strategies that they could use in their own practice or share with others. They expressed satisfaction with the course and perceived value in having taken the course; some stated that they intended to continue working with the Feldenkrais Method. The overall essence of their experience may be summarized as a valuable process of self-discovery that provided individualized benefits for singing.

Summary

The review of related literature presented in this chapter demonstrates that topic of embodiment is emerging as an area of scholarly interest and attention in education as well as in music. While the review describes the complexities and diversity in understanding the nature of embodiment in educational settings, there is limited research that informs this topic. As such, additional research on experiences of embodiment in music is needed.

In reviewing the research, qualitative inquiry is the primary methodology. This is a logical choice, since the nature of embodiment relies on the subjective experience of the individual. Case study is the most common design, as it lends itself to focus on the experiences of particular individuals in a particular setting. In the research, group and individual interviews, observation, and written journals are common data collection methods for examining the experience of embodiment. Because there is a lack of embodied pedagogy, somatic practices, for example, may provide a structured approach to providing experiences of embodied learning
in traditional educational settings. A detailed discussion of the methodology of the present study follows in the next chapter.
Chapter Three
Methodology

This chapter presents a detailed description of how this study was conducted. It begins with a statement on the researcher’s lens followed by an explanation of the design, participant selection and rapport, action and procedures, data collection, procedures for data analysis and interpretation, issues of trustworthiness, and limitations of the study.

Researcher Lens

My interest in embodiment in music began as an outgrowth of my undergraduate college experience as a piano major. During the summer between my freshman and sophomore years, I developed a repetitive stress injury from hours of practice. I was eventually diagnosed with tendonitis and carpal tunnel symptoms in my left arm and wrist. Despite numerous doctor’s visits and physical therapy sessions during the fall of my sophomore year, I was unable to play the piano without pain. As a result, I was forced to give up playing and, thus, decided to pursue a degree in music education as a vocal major. Fortunately, my college piano professor at the time suggested that I see another professor who was a voice professor and practitioner of the Feldenkrais Method. Though I had never heard of this approach, I was willing to try it in hopes of regaining my ability to play the piano, something that I had done since age seven. After three Functional Integration lessons with this professor, I was able to play without pain or further injury. At the time, I thought it was miraculous and became fascinated with the Feldenkrais Method. I subsequently enrolled in the professor’s Feldenkrais for Musicians course and began to learn how to apply the method to my own practice. My new understanding of how to use my body more efficiently resulted in relief from my repetitive stress injury, improved my vocal
technique, positively impacted my ability to direct my own learning when practicing, and enhanced the overall quality of my performance as a singer. This knowledge was unlike anything that I had previously learned in private music lessons, music classes, or ensemble rehearsals.

My understanding of embodiment continued to develop as a result of my experiences as a public school choral teacher. One of the challenges I faced was teaching my seventh through twelfth graders, each with varying abilities, how to sing in a group setting. When I first started teaching, I became frustrated that I did not know how to give students the specific attention and instruction that each needed to improve. Despite my best efforts to give clear directions, I realized that my students did not have an internal awareness of how their bodies worked and how to direct their attention to make changes in their singing. Without this knowledge, they had to rely on me to diagnose and make prescriptions to “fix” the problem. But ultimately, I wanted them to take responsibility for and be able to facilitate their own learning. Reflecting on how the Feldenkrais Method had impacted my personal development during college, I eventually decided to pursue the 4-year training to gain the skills necessary to become a certified Feldenkrais practitioner.

During my training program (2002-2006), I developed a heightened sense of body awareness and began to understand what it means to be “embodied” in everyday activities. I gained a deeper understanding of my own habits and unique ways of moving, sensing, feeling, and thinking. These experiences further helped to clarify why I had injured myself in the first place. I realized that the combination of my physical structure and how I used myself to play the piano created either the potential for pain and injury or enhanced performance. I also used this knowledge in relation to my musicianship as a singer and conductor. With a more acute sense of
awareness, I could more easily translate my musical intentions into action; I was able to sing with less tension, better breath support, and fuller tone, and my conducting gestures became less rigid and more expressive.

In addition to my personal improvement/development, I learned how to teach the Feldenkrais Method to others and began to explore ways to infuse the principles of this approach in my own teaching. As I began to share what I was learning with students in my high school choir, I realized that improvements in their singing were immediately evident, particularly in their tone quality. Other changes that students began to report included a sense of ease in singing high notes, a feeling of freedom to express the music, improved coordination of breath, and a clarity in their thinking of how the music should “sound.” These anecdotes led me to believe that the focus or attention to the mind-body connection as part of the learning process yielded a valuable and meaningful experience for my students. In other words, by developing their understanding and sense of embodiment, there was an impact or effect on their musical performance and understanding.

Thus, the impetus for this project emerged over the past 20 years, as has my understanding of what it means to be embodied and how I use that knowledge in relation to my own music teaching and learning. Despite the fact that the role of the body in musical understanding has long been neglected and relegated to a lesser status than that of the mind, my own embodied knowledge and experience suggest otherwise. Furthermore, I believe that, by understanding the integration of the mind and body in relation to music, we may be able to understand more fully music’s significance. It is my hope that this dissertation will contribute to our understanding of how choral singers and their choral teachers use embodiment understanding to further their own musical endeavors.
My experience as a singer, choral music teacher, and certified practitioner of the Feldenkrais Method, along with my knowledge of current theories/research related to embodiment, offers me a unique perspective in understanding embodiment as a way of knowing in music. In addition, I have been able to develop a personal philosophy about embodiment in music teaching and learning; I have taught these ideas in the context of choral music classes as well as Feldenkrais classes. Though these experiences aid in the interpretation of this study, they also may influence and potentially limit my vision of this project, despite my attempt to set them aside in order to view the data in an unbiased manner. Ultimately, however, it is my hope that, by exploring embodiment through the eyes of a high school choral music teacher and her students, this dissertation may begin to explore a number of questions about this topic. From this study, I hope to develop a more thorough understanding of embodiment and its relation to music as well as methods for teaching leading to more thorough musical understanding and rewarding musical experiences.

**Design**

With the intent of improving teaching and learning in choral music education, the purpose of this study was to investigate how instruction in the Feldenkrais Method (a somatic practice) facilitated participants’ understanding of singing as an embodied activity and impacted their singing performance. A qualitative paradigm was most appropriate for this study because it allowed for the investigation of individuals’ experiences of embodiment in a choral classroom and the meaning that participants derived from such experiences. This study followed an integrated qualitative design using case study and action research, based on the methodology of Freiler’s 2007 study.
Yin (2003) defines case study as an “empirical inquiry that investigates a contemporary phenomenon within its real-life context” (p. 13). Case study is a common form of qualitative research that offers the researcher a specific strategy for studying a phenomenon (Creswell, 2007). Because this study will focus on the understanding, experiences and knowledge of the teacher and students within a particular class, it is a case study. More specifically, however, it is an instrumental case study because the “particular case is examined mainly to provide insight into an issue or to redraw a generalization” (Stake, 2005, p. 445). This study ultimately seeks to gain understanding of embodiment in the broader context of music teaching and learning.

Integrated within the case study design is an action research project. Kemmis and McTaggart (1988) define action research as “trying out ideas in practice as a means of improvement and as a means of increasing knowledge” on a particular topic (p. 6). In order to gain an understanding of how embodiment informs teaching and learning in a high school choral setting, I, as the researcher, facilitated activities intended to elicit a greater experience of and sense of embodiment among the participants. Action research consists of a four-step cyclical process: (1) plan, (2) action, (3) observation, and (4) reflection, which is repeated until the research objectives are met (Kemmis & McTaggart, 2005). The objective of this study was not only to gain a better understanding of the phenomenon of embodiment but also to inform and improve the quality of teaching and learning in music education. Action research, therefore, served as a means of inquiry to generate solutions with direct applications to teaching and learning as well as to help connect embodiment theory with practice in a real-world educational setting (Freiler, 2007).

Case and Participant Selection
Because my personal experience was as a public school choral music teacher, I felt strongly about conducting this research in a public school that offered a “real-world” setting. In selecting a choral music teacher for the study, I wanted to choose someone with at least 3 years of experience who conducted a mixed choral ensemble, in order to include both genders in the investigation. In addition, I was looking for a teacher with strong musicianship and teaching skills, an ability to communicate well, and an openness and willingness to participate in this endeavor.

Based on the suggestion from a university music education faculty member, I made an initial contact via phone to Ms. Maggie Riggins, choral music teacher at Dillon High School. I had previously met Ms. Riggins and knew that she was a graduate of Michigan State University. I discussed with her the purpose and nature of the study. She tentatively agreed to participate with her Chamber Singers, pending approval from her school district. After discussing this possibility with her principal, she informed me that she received permission to pursue this project. I subsequently obtained written permission from the school district and human subjects approval from the Michigan State University Institutional Review Board to conduct this study.

Dillon Public Schools, the district where this study took place, is a large, suburban, middle class, and predominately White district in a Midwestern state. The student population of the district is 3,015. There are five buildings: two elementary schools, one middle school, one junior high school, and one high school. The high school consists of 960 students in grades nine through 12.

The music department includes two band teachers, one choir teacher, and four elementary general music teachers. As a department, the teachers implement principles of Music Learning

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4 The names of all participants and the school district have been changed in order to ensure anonymity. Some of the participants chose their own pseudonyms.
Theory in music class and ensemble instruction. The high school music program offers Guitar Class, Music Appreciation, Concert Band, Symphonic Band, Marching Band, Jazz Band, Pops Band, a beginning Women’s Ensemble, an advanced Women’s Ensemble, Concert Choir, and Chamber Singers. Approximately 200 students participate in the high school choral ensembles.

Chamber Singers is a four-part mixed choral ensemble. This year’s ensemble was comprised of 28 ninth through twelfth graders with seven singers on each voice part (soprano, alto, tenor, and bass). Entry into the ensemble is by audition. Auditions are held in March for the following school year. In the auditions, students must vocalize, perform the National Anthem a cappella, echo sing short melodic patterns and sight read a four measure melody of moderate difficulty. During the fall semester, Chamber Singers is a curricular ensemble that meets daily for 85 minutes; during the spring semester, Chamber Singers is an extracurricular ensemble that meets Tuesdays and Thursday after school from 2:40-3:20pm and Fridays during an activity period from 10:40-11:10am.

Chamber Singers rehearse in a large classroom designed specifically as a choral rehearsal room. The room has a high ceiling, tiled floor, and acoustical panels around the room. A permanent three-step platform takes up approximately half of the classroom, behind which are five large portable risers. On each step of the platform is a row of approximately 20 black chairs. Another row of chairs sits on the floor in front of the risers. A baby grand piano, podium, music stand, and tall wooden stool sit in the center of the room. A large white board flanked by a small bulletin board and white board lined with musical staves run along the front of the classroom. A large television and VCR mounted from the wall hang to the left of the boards. In the front left corner of the room is a window and door to the choral office. The window is partially covered with wallet-sized senior photos and an 8 x 11” photo of the Chamber Singers. On the left side of
the room are two floor-to-ceiling windows that jut out in the shape of a wedge. Two music cabinets sit in front of each of the windows. On the wall next to the windows are several photos of Ms. Riggins’s community musical theater performances. On the right side of the room are numerous framed photos of the choral ensembles from recent years, numerous choral ensemble award certificates, and various music posters and college and summer program advertisements.

During the fourteen weeks of this study, the Chamber Singers gave several performances and participated in three state-sponsored choral festivals. They performed an evening concert at the school on March 8. They participated in District Choral Festival on March 9, State Solo and Ensemble Festival on April 16, and State Choral Festival on May 10. For these performances, they sang selections from the following repertoire: “Let Me Fly,” arranged by Robert DeCormier; “Vier Zigeunerlieder (Four Gypsy Songs)” Op. 112b, by Johannes Brahms; “Hine e Hine,” arranged by David Hamilton; “Kpanlonga,” arranged by Derek Bermel; “So We’ll Go No More A-Roving,” music by Daniel Hughes and words by Lord Byron; and “Incline,” by Edwin Fissinger. The Pops concerts were held at the school on the evenings of May 20 and 21. They sang the following songs for the Pops concert: “Livin’ on a Prayer,” arranged by Mac Huff; “Just the Way You Are,” arranged by Alan Billingsley; and “September,” arranged by Mark Brymer.

During my first meeting with Ms. Riggins and the Chamber Singers, I presented the study and its purpose to Ms. Riggins’s students and invited them to participate in an initial Awareness Through Movement lesson, so that they could make a more informed decision regarding their participation in the study. After teaching the lesson, I distributed a student assent form and a parent consent form to every student (see Appendices A and B). All students returned both
signed permission forms. I also distributed a teacher consent form to Ms. Riggins (see Appendix C).

In addition to Ms. Riggins, I selected a purposeful sample of students as the focus of the study. In choosing participants, selection criteria were based on providing the best opportunity for learning (Stake, 1995). My goal was to select willing participants who communicated well both verbally and in writing, as the ability to describe one’s experiences was crucial to the success of this study. I got to know the students through observation and interaction, as well as their weekly journals, and I also noted students’ attendance at rehearsal. While observing students in rehearsal, I looked for their level of participation, body alignment/movement, and ease and expressiveness while singing. In addition, I listened for the quality of their singing voices, accuracy of pitch and rhythm, inflection and musical expression. These observations gave some indication of their level of body awareness and ability to express their musicality through singing. I relied on my experience as a former high school choral music teacher and Feldenkrais practitioner to gather appropriate impressions of each student. When reading their journals, I noted the quality with which they are able to express their thoughts.

About a week before the first focus group interview, Ms. Riggins and I discussed possible participants. We selected students who had: (a) regular attendance at rehearsal, (b) a willingness to participate, including but not limited to time spent beyond class to participate in necessary data collection (i.e., journal writing and interviews), (c) a level of comfort and ability to describe their experiences. In accordance with Stake’s (1995) recommendation about the importance of balance and variety among participants to maximize the opportunity for learning, I also felt it was important to have a focus group that had a balance of male and females and that they varied in terms of number of years of participation in the ensemble.
After discussing each of the students one by one, we narrowed the list to 11 students and were unable to reduce it further based on these criteria. Because I felt that 11 participants were too many for individual interviews, Ms. Riggins and I discussed creating two focus groups based on gender. Having two groups – one with five males and one with six females – provided the following benefits. First, it allowed for a more manageable number of participants in each interview, which provided ample opportunity for participants to share as well as to interact with one another. Second, it eliminated Ms. Riggins’s concern about the peer pressure that adolescents sometimes experience as a result of mixed gender classroom environment. She noted that the female students, as a group, were more mature and articulate than the male students. She felt that the female students might dominate the conversation and that the male students may be less likely to participate as a result. Third, from a logistical standpoint, it made scheduling the interviews easier, as the male students could meet on a day after school when the female students had Women’s Choir rehearsal and vice versa. Fourth, it allowed the opportunity to look for similarities and differences among the responses of the two focus groups. In Chapter Four, I introduce each of the 12 participants (11 students and one teacher) in this study.

**Procedures**

This project spanned 4 months (February through May) and included approximately three school visits each week during regularly scheduled ensemble rehearsals. Prior to beginning the action research portion of this project, I observed Ms. Riggins and students in rehearsal on a few occasions. Each week of the project, I led participants in somatic explorations based on Feldenkrais Awareness Through Movement lessons during regular rehearsal time throughout the week, totaling approximately 30 minutes to 1 hour of instruction per week. On Tuesday and Thursdays, the explorations took place during the designated warm-up time at the beginning of
each rehearsal and/or in conjunction with rehearsing repertoire. On Fridays, the entire period was devoted to somatic exploration.

During each session, I frequently reminded participants to observe the following guidelines while doing the lessons: (1) Move slowly with attention; (2) Reduce effort; (3) Stay within a comfortable range; (4) Pause between each movement; (5) Breathe; and (6) Rest as needed. In Chapter Four, I provide a timeline and description of the action of this project including each Awareness Through Movement lesson and the source of the lesson (see Appendix G for resources on the Feldenkrais Method).

**Data Collection**

Using a variety of methods for data collection in case study research enables the researcher to collect extensive data that will lead to a vivid description of the case (Creswell 2007; Yin 2003). It also allows for triangulation, which increases the trustworthiness of the findings. Data sources for this study included the following: (1) field notes and reflective journal of the researcher, (2) teacher and student participant journals, (3) focus group interviews, and (4) teacher individual interviews. This section discusses each of these methods of data collection.

**Field notes and reflective journal.** During the first week of the project, I recorded field notes by observing first as an “outsider” (Creswell, 2007, p. 130). This gave me an opportunity to observe Ms. Riggins, students, and the interactions that occurred in the classroom. My experience as a high school choral music teacher and Feldenkrais practitioner and my knowledge of embodiment provided the lens through which I viewed the ensemble. I made special note of how much attention was given to the body as the site of learning and in what ways, so that I could make comparisons as the project progressed. Beginning the second week, I became a participant observer, or “insider” (Creswell, 2007, p. 130), as I began to lead participants in
movement and sound explorations and Awareness Through Movement lessons. I continued to record my observations of the participants as a means of data collection throughout the duration of the study, recording both descriptive and reflective notes (Creswell, 2007). In addition, I kept a journal in which I recorded my own thoughts and impressions throughout the project. Journal writing is an appropriate data source to provide the researcher’s perspective on the process of research as well as to highlight the role of the researcher as research instrument (Janesick, 2004).

**Journals.** In addition to field notes and my researcher journal, I asked Ms. Riggins and student participants to complete journal entries reflecting on their experiences of the week. At the end of rehearsal on Fridays, I passed out a single sheet of paper with journal prompts (see Appendix E) to those who were willing to write reflections. It was my intention to have participants complete weekly journals throughout the entire project. However, the number of participants who turned in journals decreased slightly each week and significantly after I selected the focus group participants (week 6), despite my best efforts to encourage them to do so.

I believe that participants’ journal writing waned mainly due to the fact that students had numerous demands on their time (such as academics and other extracurricular activities), and that writing a journal for an extracurricular choral ensemble may not have been a high priority for them. As the study progressed, participants became increasingly busy with several Chamber Singers’ performances as well as with other extracurricular activities. This was especially apparent in the increase of absences during rehearsals at the beginning of spring sports season due to conflicts with practices and games. Some participants expressed that they felt badly that they did not complete journals, acknowledging an understanding that it was important for the project. In addition, because I had no authority to require participants to comply with my request, participants may have been less likely to do so. I mention this because my experience
with teaching high school students is that some students only do what is required of them because there is a consequence (such as a lowered grade). Requiring or forcing participants to complete journals would have violated their right to decline participation in this voluntary project. Therefore, I relied on individual’s personal willingness to complete journals. Other reasons for the decrease in journal writing may have been that once the novelty of the project wore off, participants were less inclined to write. Finally, answering similar questions about their experiences each week may have become tedious or repetitious.

After week 7, I asked only the focus group participants fill out a final questionnaire (see Appendix F) to gather additional information. Because these individuals were a part of the focus group interview, I reasoned that they might have been more willing to complete the questionnaire than students who were not involved with the focus group interviews. Indeed that was the case, and all but one participant completed and returned the questionnaire.

Despite the fact that not all participants completed journals throughout the project, I did receive some journals each week. Most of these journals were thoughtfully written and yielded useful data that served two purposes for the project. First, the data from the journals were a source of triangulation – the participants presented their thoughts about their experience to enrich what I observed. Second, the journals provided an opportunity for participants to reflect on and communicate their experiences of movement and sound explorations and Awareness Through Movement lessons as they related to their singing.

**Interviews.** In addition to gathering participants’ descriptions of their experiences through journals, I conducted two rounds of formal focus group (students) and individual (teacher) interviews. Seidman (1998) described the process of interviewing as a meaning-making experience and states, “At the root of in-depth interviewing is an interest in
understanding the experience of other people and the meaning they make of that experience” (p. 3). As such, these interviews provided an opportunity to gain an understanding of participants’ experiences of embodiment and the meaning they ascribe to these experiences in the context as members of Chamber Singers. The first round of interviews focused on initial experiences and impressions of embodiment as facilitated in the first half of the project. Information gained from these interviews gave me some feedback about the intervention and, in part, helped guide the second half of the study. Interviews at the conclusion of the project continued to explore participants’ experiences as well as how participants viewed these experiences in relation to their singing performance. Two sets of interviews also provided an opportunity to compare emerging understanding of embodiment in singing from two points in time during the study.

The first round consisted of two focus group interviews with eleven student participants – five males and six females – and one formal interview with Ms. Riggins. These interviews took place once approximately half way through the project during week 6. The boys’ focus group interview took place on March 22, 2011 and the girls’ focus group interview took place on March 25, 2011. The interview with Ms. Riggins occurred on March 27, 2011. The second round also consisted of two focus group interviews and one interview with Ms. Riggins. These interviews took place at the end of the project during weeks 13 and 14. The boys’ focus group interview took place on May 16, 2011 and the girls’ focus group interview took place on May 23, 2011. The interview with Ms. Riggins occurred on May 22, 2011. I audio-recorded all interviews using GarageBand software on my laptop and used a secondary recorder for backup. I transcribed each interview from these recordings immediately following the interviews.

For each focus group interview, the student participants met in the choral rehearsal room after school. As everyone arrived, I arranged one chair for each participant and myself in a small
circle. After all participants were present, I invited them to sit around the circle. I then placed my personal laptop computer on a tall stool in front of me in the center of the circle. After welcoming the participants and thanking them for their willingness to participate, I tested the recording by having each person state their pseudonym. We then listened to the recording to make sure that each participant’s voice was loud enough to be heard. I then read the interview script and followed a semi-structured interview protocol (see Appendix D). I asked questions to clarify participants’ responses, as needed.

The first interview with Ms. Riggins took place at the local library near where she lived and the second interview took place on the back porch at her home. Whereas the interviews with the student participants were guided by a predetermined list of questions, the interview with Ms. Riggins was open-ended. During the first interview, I spent a great deal of time getting to know Ms. Riggins. I inquired about her musical background, her musical training and teacher preparation as a part of her undergraduate experience, and her first years of teaching. We also discussed her experiences and observations of the project. During the final interview with Ms. Riggins, I read anonymous quotes from student participants to prompt the discussion. It provided Ms. Riggins an opportunity to share her perspective and interpretation of what they said. Throughout the project, I also had numerous informal conversations with Ms. Riggins that occurred either before or after rehearsal. A few of these conversations also were recorded and transcribed.

**Data Analysis**

While reviewing all transcriptions, field notes, and journal entries, I coded by hand and analyzed the data for emergent themes using the constant comparative method of data analysis (Glaser & Strauss, 1967). I examined each set of weekly journals and interviews as one data set.
While reviewing the data sources, I underlined and labeled significant statements that described each participant’s experience and understanding of embodiment. I also wrote analytic memos, jotting down anything related to and was significant about the coding and analysis that came to mind (Saldaña, 2010). After reviewing the codes for similarities and emerging trends in participants’ experiences, I refined the codes, grouping them into categories and subsequently themes, which van Manen (1990) refers to as “the structures of experience” (p. 79). Throughout initial analysis, I used an inductive process, in which “findings emerge out of the data, through the analyst’s interactions with the data” (Patton, 2002, p. 453). In the final stages of analysis, I then used a deductive process by “testing and affirming the authenticity and appropriateness of the inductive content analysis, including carefully examining deviate cases or data that don’t fit the categories developed” (Patton, 2002, p. 454). I searched field notes to provide both corroborating and disconfirming evidence for emerging themes and perspectives (Creswell, 2003; Stake 1995).

Stake (1995) advocates the use of several forms of data analysis and interpretation that are specific to case study research. These include: categorical aggregation, direct interpretation, and naturalistic generalizations. In categorical aggregation, which is similar to the process described above, the researcher considers a collection of instances for emerging meanings. In direct interpretation, the researcher draws meaning from a single instance. Both are appropriate in this dissertation as it is an instrumental case study. Naturalistic generalizations are developed through the analysis process to make explicit for the reader what was learned. In the context of this study, the reader may gain a new understanding of experiences of embodiment in a choral classroom.

**Trustworthiness**
Creswell (2007) recommends the use of at least two validation strategies to ensure a study’s trustworthiness, a term coined by Lincoln and Guba (1985). These strategies include the following: (1) prolonged engagement and persistent observation in the field, (2) use of multiple and different sources to provide corroborating evidence for triangulation, (3) peer review to provide a check of the data analysis process, (4) refinement of working hypotheses as the inquiry advances in light of negative or disconfirming evidence, (5) statement of researcher bias from the outset of the study, (6) member checks to assure the credibility of the findings and interpretations, and (7) rich, thick description that will allow readers to make decisions regarding transferability (Creswell, 2007).

In order to ensure the trustworthiness of my data, I adhered closely to Creswell’s suggestions. First, my attendance at all rehearsals but one, and at two concerts allowed me to observe participants consistently over the course of this 14-week project. My regular presence enabled me to become a part of Chamber Singers and to develop appropriate relationships with Ms. Riggins and her students. Second, I gathered data from multiple sources, including field notes, journals, and focus groups and individual interviews, that made it possible to compare one source against another in order to triangulate data. Third, I asked participants to review transcriptions of interviews and make any necessary changes in order to assure that I had accurately represented their thoughts. I also asked Ms. Riggins to comment on the credibility of my initial data analysis as a further member check. Finally, I submitted my findings for peer review by a fellow graduate student versed in qualitative research as well as a Feldenkrais Practitioner. These strategies helped to enhance the credibility of the findings of this study.

Limitations
As previously stated, the numerous conceptions of embodiment reflect the difficulty of describing this phenomenon, in part because of the individual, personal nature of subjective experiences. This may be the case particularly for high school students. As a result, their ability to communicate verbally about their experiences and the meaning they ascribe to them may have limited the scope of this investigation. While their choral music teacher incorporated traditional physical exercises such as stretches and relaxation techniques as a part of the daily warm up, none had had prior experience with the Feldenkrais Method. Therefore, while the newness of these experiences may have delayed the participants’ abilities to integrate and reflect upon their understanding and meaning of such experiences in relation to their singing performance, descriptions of their experiences were a result of direct participation in Feldenkrais instruction in the context of this study. While every attempt was made to select a variety of participants, ultimately only those students who were willing to participate in interviews and write journals could be chosen as participants. Additional limitations include the amount of time for intervention and observations, which was dictated in part by the school schedule, and the number of possible participants, given the number of student enrolled in the class and the teacher of the class.

So why then choose a public high school setting? The choice to conduct this research in the context of a high school choral ensemble was deliberate in order to understand embodiment in a choral classroom given the constraints of a real-world setting. The findings of this study will more likely “ring true” for a wider audience of music educators given that it took place in and was subject to the constraints of a public school setting. Furthermore, this dissertation illustrates how it is possible to incorporate experiences of embodiment as a part of a school choral curriculum. As with all qualitative research, the results of this study are specific to the
participants in this particular setting and cannot be generalized. However, information from this study may be transferable to similar situations (Creswell, 2003); music educators could adapt or modify ideas from this research for use in their own classrooms.
Chapter Four

Participants and Action Research Process

This chapter introduces each of the participants, including Ms. Riggins and the 11 student participants. Next, the chapter outlines the action research process, including a description of my role as facilitator and how I initially went about planning the sessions. Finally, it discusses what was done in the acting and observing phases of the action research process and how the action was adjusted in light of what happened over the course of the project.

Participants

Ms. Maggie Riggins. Ms. Maggie Riggins was in her fourth year of teaching junior high and high school choral music in the Dillon school district. She holds a Bachelor of Music Education and had completed two of three summers of course work toward her Master of Choral Conducting, which she finished the following summer. Despite the fact that she is only 25 years old, she is an accomplished musician and teacher. Though she has received numerous accolades for her choral ensembles, she is still open to learning and welcomed the opportunity to participate in this study.

Ms. Riggins grew up in a musical family who encouraged her participation in music. She explained, “When we realized I was not athletic (she laughs) and that I needed something to fill my extra time, besides watching movies, . . . we decided [I should take] piano lessons and then I joined a children’s choir” (Interview, March 27, 2011). At age 12, she also began to participate in community theater. She continued to sing throughout middle school and sang in her first Honors Choir in seventh grade. In high school, she sang in the advanced ensemble for 4 years

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and in regional honors choirs and the All-State Honors Choir. During her senior year, she assisted her choir director with the beginning Women’s Choir and enjoyed the experience so much that she decided to pursue music education. As an undergraduate music major, she performed leading roles in several musical theater productions and sang with two ensembles that performed at national conferences of the America Choral Directors Association. She completed the 5-year music education program in 4 and 1/2 years.

After graduating mid-year, she taught as a short-term substitute before accepting her current position in Dillon. At the end of this school year, she became the first tenured choral music teacher ever in the district. Her first musical experiences with the students at Dillon were extremely positive. “My Chamber Singers were very talented and had just been wasted during the previous semester because they had had a non-music substitute while their teacher was on maternity leave. So they were really excited to make some music” (Interview, March 27, 2011). At the end of that school year, 16 students out of 20 in the ensemble graduated. As a result, the next year’s ensemble was much less experienced and did not have the same level of musicianship as the previous year’s ensemble. That year, she founded the advanced Women’s Choir, which participated in a mini-conference with four other women’s ensembles from area schools and a local university. After performing at the regional choral festival during her third year, Ms. Riggins’s Chamber Singers ensemble was chosen as one of five choirs from the region to be considered among the top 30 performing ensembles in the state. Though they ultimately were not selected as one of the finalists, Ms. Riggins submitted their recording for participation in the state music conference. They were selected and performed this past January as one of the featured choral ensembles. In addition, her ensembles have received ‘Superior’ ratings at District Festivals and State Festivals the past 2 years.
At first glance, Ms. Riggins can easily be mistaken for a high school student. At five feet seven and a half inches tall, she is a youthful and attractive woman. She is a stylish dresser and usually wears a long-sleeve blouse with a short fitted jacket or sweater, dress pants, and low-heeled shoes. On dress-down Fridays, she may wear jeans and a Dillon school choir T-shirt or a denim jacket over a T-shirt, Capri pants and sandals. She has shoulder-length brown hair that is stylishly cut to frame her face. She wears make-up to highlight her natural features. She has a captivating smile that radiates warmth and beauty. Ms. Riggins jokingly says she relies on her looks and personality to attract and keep students in the program.

Though she does not believe in astrology, Ms. Riggins describes herself as a true Gemini because of her “split” personalities. On one hand, she is focused and extremely organized. She has a strong work ethic and easily handles numerous administrative responsibilities of her job as well as the coordination of the regional state choral ensemble festival. One the other, she is fun-loving, social, and emotional. She is compassionate and genuinely cares about her students. She lights up as she shares that her students performed well in the state competition and received a superior rating.

The two different sides to her personality are apparent in the way that she interacts with her students. In one moment, Ms. Riggins commands respect from her students with a stern glance or silences the room with a directive delivered at full voice. In the next moment, she is joking by sharing a funny or embarrassing story that holds her students’ attention and has them in hysterics. In short, she manages her classroom with a unique blend of authoritative control and humor that is often self-deprecating. She sets high expectations for students’ behavior and performance and communicates her displeasure when her expectations are not met. At the same time, she is supportive and nurtures her students.
One of the first things that I noticed is the strength of her relationship with her students. They adore her and affectionately call her “Riggs.” Students frequently hang out in her office or in the choir room before and after class. A few students routinely make a point to check in with Ms. Riggins. It is not uncommon to hear her students sincerely say, “We love you, Riggs,” on their way out of the room.

**Chamber Singers.** As a group, the students were easy to work with and took direction well. Because they had had student teachers in previous years and guest clinicians prior to their state conference performance, they were used to working with adults other than Ms. Riggins. For the most part, they were well behaved. But like typical high school students, they were chatty at times during rehearsal. When learning choreography during rehearsals, Ms. Riggins frequently had to remind them not to talk. On the whole, they were very welcoming toward me.

**Jeff.** At five feet six inches, 16-year old Jeff is the shortest male in the group. His compact stature belies the fact that he is a varsity wrestler. Jeff frequently stands with his legs and feet outwardly rotated and arms crossed, making his shoulders slope and his chest look wide. He tends to be quiet, soft-spoken, and somewhat withdrawn during rehearsals. Yet there are moments when he flashes his vibrant smile and eyes under his curly light brown hair, revealing a funny and social side to his personality. For example, during the first choreography rehearsal, he commented, “I hate dancing!”

Jeff has a good musical ear and is a confident singer. This is his second year in the ensemble. Though only a sophomore, he was voted section leader in Chamber Singers by his peers. His tenor voice has a breathy, reedy quality that is somewhat strained from singing pop music. He has performed leading roles in the school musical, plays percussion in Marching
Band, and taught himself to play guitar. Reading music with solfège and sight singing are new to him. Academically, he is advanced in math and takes courses at a local college.

**Finn.** Fifteen-year-old sophomore Finn made an impression on me when he sang the solo in “Let Me Fly.” As he walked up to the microphone, I noticed that he leaned from side to side with each step, almost like a waddle. I also noticed his short spiky blond hair, braces, pale complexion, acne-splotched face, barrel-shaped chest, and stocky build. Though he sang in tune and with confidence, he tensed his shoulders and chest so much that I was surprised he was able to sing as well as he did. I later learned that this was his first year in Chamber Singers and that he had never sung previously in choir.

In addition to singing, Finn plays the saxophone in Marching Band, Symphonic Band, and Pops Band and is a great sight-reader and musician. He is also on the diving team. He describes himself as “a nice person who really enjoys being a goofball.” Though he appears to have somewhat of a nervous, skittish personality, he is responsible and well liked by his peers.

**Bubba.** Bubba caught my attention during my first observation when he fainted and collapsed to the floor. A non-life-threatening heart condition causes him to become light headed and occasionally faint. A 17-year-old junior from Canada, Bubba has shaggy brown hair with bangs that cover his forehead. He often stands with rounded shoulders and holds his head forward of his spine. He sings bass and is in his second year of Chamber Singers. Though he wants to be a leader, he has to work hard musically, especially when it comes to tuning with others in his section. He struggles to read music as well as text in large part because he has severe dyslexia.

What he may lack in certain areas, he makes up for with his very outgoing personality and friendly nature. He is social with his peers and easily distractible during rehearsal. He dates
a short blond varsity cheerleader who sings soprano in Chamber Singers and, one day, wore a t-shirt that read “Dillon Cheer” on the front and “Kelly’s boyfriend” on the back. Bubba is also a volunteer firefighter, which demonstrates his compassion to help others.

**Marty.** Bubba forced Marty to join choir when they were both freshmen. Like Finn, Marty had not sung previously. A 17-year-old junior, Marty is tall, slim and has defined musculature, dark hair, and an olive complexion. He sings bass and is in his second year in Chamber Singers. He takes voice lessons and has an airy tone quality that lends itself to singing pop music. He hears pitches very well, but is the least beat competent of all the students, according to Ms. Riggins. His lack of physical coordination was evident during choreography rehearsals, as he had difficult timing his movements to the music.

In addition to Chamber Choir, Marty has sung in Concert Choir for three years and was a lead in the school musical this past fall. In his spare time, he enjoys playing video games and hanging out with friends. He has an odd sense of humor and does silly things to make his friends laugh, particularly his best friend Stefano.

**Stefano.** An 18-year old junior, Stefano is tall and lanky with patches of facial hair and messy brown hair. He speaks with a lazy articulation and has a quirky personality. Self-described as “crazy,” “hyper,” “happy,” and “cocky,” he occasionally exclaims the nonsense word, “Spooya!” seemingly for no particular reason. Despite his goofy antics from time to time, he has endeared himself to his peers and Ms. Riggins because he is easy to get along with and is a genuinely nice young man. In fact, he was one of the first students to greet me regularly with a high-five and a “Hellooooooo, Mr. Paparo.”
In terms of his singing, he has a young baritone voice that is not overly developed. He has sung in choir since second grade and currently sings in Concert Choir as well. This is his first year in Chamber Singers. In addition to singing, he plays soccer and runs track.

**Daniella.** Daniella’s shoulder-length brown hair frames her long face. She wears dark rectangular glasses, which sit on her straight nose, and an expression of intense concentration on her face, especially as she sings. She has lots of tension in her entire body and carries herself awkwardly. She frequently stands rigidly with locked knees and her weight on her right leg. She heaves her chest as she inhales to sing. Daniella is quiet and sometimes withdrawn, as if deep in thought. She describes herself as “indecisive” and “not good at multitasking.”

This is her first year in Chamber Singers, though she has sung in choir since fourth grade. She is a good musician and sight-reader. She sings with no vibrato and her voice blends well in the soprano section. In addition, she plays the French horn and is a member of Marching Band, Concert Band, Women’s Select Choir and Concert Choir.

**Alison.** Alison is small in stature and has a medium build. She wears her wavy light brown hair in a ponytail at the back of her head. This 17-year-old senior describes herself as “loud and proud,” which is a fitting description as she is self-confident and acts like an adult-in-charge. During choreography rehearsals, she makes numerous suggestions and asks questions as if to point out something that Ms. Riggins has missed. Yet, she can be very friendly and outgoing.

Alison is a versatile musician, singing soprano or alto as needed. She tends to be very physical and forceful with her singing. Ms. Riggins describes it as “using lots of muscle in the sound.” During rehearsals, her voice is apparent in choir. This is her second year in Chamber
Singers, and she also is a member of Women’s Choir and Concert Choir. In addition to playing saxophone in Marching Band, Symphonic Band, and Concert Band, she is a swimmer and diver.

**Jenny.** Fifteen-year-old Jenny has long, curly blond hair and a round face. She is of medium height and build. She seems serious most of the time and is not particularly friendly or outgoing. When it comes to singing, this sophomore is analytical and technical, and is nicknamed “The Robot Singer” because she shows little emotion. She tends to be self-critical, which, according to Ms. Riggins, has hindered her vocal progress. When she sings, she does not open her mouth much, partially in order to control her pitch accuracy. As a result, she has a nasal, straight sound, particularly in the upper range. Her voice is sometimes strident and sticks out in the soprano section. While doing choreography, she is a leader. Her movements are crisp and precise. She is confident and definitely in control.

In addition to singing in Chamber Singers, she plays saxophone in Symphonic Band, Jazz Band, and Marching Band. She will be the drum major next year. She also plays piano and enjoys musical theatre.

**Madeline.** With freckles, rosy cheeks, rectangular-shaped glasses, and shoulder-length brown hair that she wears with a headband, Madeline looks like a friendly and approachable young woman. Self-described as “outgoing” and “social,” she is genuinely kind toward others. Her warm personality also is apparent when she sings. She tends to be very expressive with her body and face when performing.

This 16-year-old junior is a strong musician. She plays flute in Marching Band and occasionally accompanies the Chamber Singers on piano. She has sung in choir since second grade and also sings in Concert Choir and Women’s Choir. This is her first year in Chamber Singers. According to Ms. Riggins, her alto voice can be strident in the lower range, due to a
collapsed soft palate. But because she has a good ear, she is careful to make adjustments when she attends to it.

Kathy. Kathy’s dark oblong-shaped glasses and parted shoulder-length straight hair contrast her pale round face and delicate features. She is slender and of medium stature. Kathy often has a neutral expression on her face but then becomes animated, revealing her outgoing personality. She describes herself as “expressive,” “nice,” and “having a tendency to care about things a lot.” During interviews, she is thoughtful, reflective and willing to share her experiences freely.

A 17-year-old senior, Kathy sings with a dark, warm alto tone and lots of vibrato. Her jaw often shakes when she sustains long notes; she is aware of this habit and wants to change it. Referring to her dancing during choreography rehearsals, she commented, “I am so bad.” In addition to Chamber Singers, she has sung in beginning Women’s Choir for four years, and Concert Choir and Women’s Select for three years. She also is a swimmer.

Brittany. Brittany has a vibrant smile, shoulder-length wavy black hair, medium-colored skin, and an hourglass figure. She is part White and part Latina; she speaks English and Spanish fluently. “Friendly,” “humble,” “honest,” and “trustworthy” are words Brittany used to describe herself. This 17-year-old senior is good-hearted and kind toward others. She is well liked by her peers and was voted Homecoming Queen this year.

As a singer, she has a solid alto voice and tends to be a leader in the section. She shapes her vowels well and sings with balanced resonance and vibrato. This is her second year in Chamber Singers. She has sung in choir since fifth grade and also sings in Concert Choir and Women’s Select. She writes, “I love singing everywhere and anything! I love baking. My favorite artist is Michael Bublé.”
**Researcher as facilitator.** My role in this study was twofold. In addition to my responsibility as researcher, I also facilitated the action research project implemented in this choral classroom. As a result, I was also a participant in this study. This project was a reflection of my personal and professional insights as a choral music teacher and drew on my knowledge of the Feldenkrais Method, the somatic practice used to facilitate experiences of embodiment. As project facilitator, I planned and led the experiential activities. Though I was responsible for decisions regarding the project’s design and implementation, I consulted with Ms. Riggins throughout the entire process. In fact, I viewed this process and project as a team effort between Ms. Riggins and myself. Though we were collaborators in a sense, I also was aware at all times that I was a guest in her classroom and behaved accordingly. I never conducted the ensemble or even stepped onto the podium at any time during this project. I purposely avoided assuming the role of conductor to avoid influencing the ensemble’s musical performance. Because the students are well-trained musicians, my conducting them would have altered the outcome of the study in ways that were not intended or desired. When facilitating movement explorations and sharing rehearsal time with Ms. Riggins, I either walked around the room, stayed behind the piano, or stood off to the side of Ms. Riggins.

Similarly, because I did not want my ideas to influence the outcome of the study, I purposely did not share my thoughts about embodiment with the participants. When they asked me to clarify what embodiment meant, I told them that I did not want my ideas to affect theirs. In keeping with the philosophy of the Feldenkrais Method, I was confident, that through the process of self-discovery, participants would be able to generate their own ideas about embodiment from their experiences. I taught the lessons with this in mind, recognizing that
participants would come to their own understanding in their own time and that their understanding might be different than mine.

**The Action Research Process**

The action research component of this case study consisted of a cyclical process of planning, acting, observing, and reflecting (Kemmis & McTaggart, 2005). The next section addresses the initial planning and discusses what was done in the acting and observing phases of the action research process and change that were made over the course of the project.

**Initial Planning.** Prior to the start of the study, I met with Ms. Riggins to discuss how I could implement this project effectively in a way that complemented and supported her goals for the Chamber Singers. She stated that there would be adequate time during the spring semester after their performance at the state conference, because at that point the students would have learned the majority of their repertoire for the year. She also said that they would still have to learn one additional piece for competition as well as music for the Pops concert. To that end, I suggested that, as a part of my project, I also could facilitate experiential activities in conjunction with the repertoire on which they were working. It afforded participants the opportunity to connect the explorations to their singing performance in the context of the repertoire and perhaps facilitate improved performance. Ms. Riggins liked that idea. After discussing the schedule, Ms. Riggins and I agreed that I would take approximately 15 minutes during rehearsals on Tuesday and Thursday and the entire 30-minute rehearsal each Friday. On Tuesdays and Thursday after I led the warm up, Ms. Riggins would rehearse repertoire for their upcoming performances.

Given this schedule, it made the most sense to teach an Awareness Through Movement lesson on Fridays, because each lesson generally ranges in duration from 30 to 45 minutes. In planning, therefore, I needed to select shorter lessons or abridge longer lessons, given the allotted
time on Fridays. On Tuesdays and Thursdays, I decided to review parts of the Feldenkrais Awareness Through Movement lesson taught on the previous Friday as well as introduce elements from other lessons. These activities occurred in conjunction with warm-up and/or with repertoire in order to help participants transfer experiences in Awareness Through Movement lessons to their singing. As the project evolved, I also attempted to tailor the lessons to the participants’ needs relative to the demands of their performance repertoire.

As described in Chapter Three, Awareness Through Movement lessons are not intended to develop singing ability directly. In fact, only one Feldenkrais lesson involves speech and sound production with the voice. Therefore, the integration of the Awareness Through Movement lessons in choral music teaching is my unique contribution to this project. I developed this approach based on my own private lesson experiences and mentorship with a Professor of voice who is a Feldenkrais Practitioner. I also referred to the book, *Singing with Your Whole Self: The Feldenkrais Method and Voice*, by Nelson and Blades-Zeller.

Because there are hundreds of Awareness Through Movement lessons, I relied on my knowledge as a choral music teacher and Feldenkrais Practitioner in selecting particular lessons that would be most appropriate for high school-aged singers who had no prior experience with the Feldenkrais Method. With this in mind, I created a tentative curriculum of basic lessons that could be applied to inform participants’ understanding and experiences of singing. In keeping with the Feldenkrais approach, the lessons provided an opportunity for exploration in a variety of positions (such as lying on the back, lying on the side, sitting, kneeling, standing, etc.). Descriptions of the specific lessons follow.

Though I had created a tentative curriculum, I modified the plan throughout the project based on several factors. First, through my ongoing observation, I was able to identify specific
needs of the participants. For example, once I realized that many students were not aware of how to support with the lower half of their bodies while singing, I was able to include experiences that helped them explore the relationship of the spine, pelvis, legs, and feet. When observing, I also was keenly aware of their response and reaction to a particular experience. There were occasions when there was a dramatic change in their tone quality, for example, as a result of the exploration, while at other times there was little noticeable change. Sometimes I asked for students to share their observations with a peer or the entire ensemble. Their verbal and non-verbal responses gave me some indication of their level of engagement and understanding of the particular experience. Second, despite our original schedule, there were several times when I was not able to work with the ensemble due to school vacation days or rehearsals with the choreographer. Weeks when we did not meet on Fridays, I chose to teach a shortened Awareness Through Movement lesson on either Tuesday or Thursday. Third, I regularly discussed with Ms. Riggins the plan for the rehearsal or the week and again was able to tailor my activities to complement and support her goals. For example, the ensemble was having problems with intonation while singing an a cappella piece due to tension and excess effort, so I decided to provide some explorations that were designed to help them sing more efficiently to improve their performance.

Prior to beginning the action of this project, I observed Ms. Riggins and ensemble members rehearsing on several occasions. During these observations, I noticed that the students were well trained musically. Ms. Riggins began each rehearsal with warm up routine that consisted of several vocalises. When learning new repertoire, they sang from octavos. When practicing repertoire for the state conference, they rehearsed from memory and sang with their eyes glued on Ms. Riggins. As they rehearsed, I noticed that some students were rigid and
leaned forward as they sang, suggesting that they did not have much awareness of their bodies while singing (which tends to be common among high school-aged singers). I had a hunch that they were taught to think about being expressive only with their faces when performing because, at one point during a rehearsal, Ms. Riggins had students make exaggerated expressions on their faces in an effort to remind them to convey the message of the piece. Some students stood out to me more than others because of the amount of tension they seemed to have as they sang. Madeline was an exception; she looked at ease as she sang and tended to move with the music.

When I shared some of my first impressions with Ms. Riggins, she confirmed my observations. Regarding awareness of their bodies when performing, she explained,

Yeah, they don’t do a lot of [movement] and I found this when we were preparing for the state conference – that they really don’t move a lot. We were working on ‘Kpanlongo’, the African piece. And I was like, ‘Move! You need to move more. What’s going on? Bend your knees. Move around. It’s okay!’ . . . The first week of making them move was the most awkward of my teaching, largely because they are just not used to doing it. They don’t understand that that’s part [of it]. (Interview, April 12, 2011, p. 6)

Though they appeared to be somewhat restricted in their awareness of their bodies, they occasionally used movement when rehearsing repertoire and during warm up. Ms. Riggins had students move their arms in a figure-eight pattern as they sang while imagining that they were moving through different substances (such as chocolate pudding, water, and air). They also moved around the room, stepping the pulse of the piece. These activities were geared toward helping students to explore the flow and phrasing of the music. The majority of the use of movement, however, occurred during the warm ups. Students used physical motions and gestures during some of the exercises to show the articulation or phrasing and to remind
themselves not to go flat on the descending lines of the vocalises. During my first observation of the warm up, I recall being pleased that they used movement in this way. But as my observing continued, I soon realized that the movements had become such a routine that they had lost their effectiveness. They moved without an understanding of how the movement related to their singing. In essence, the students were simply “going through the motions.”

In terms of their singing, the students seemed to sing with full, mature voices much of the time. In general, they began their sound with a hard attack. The tone quality was somewhat forced and not always well supported by the breath, particularly at the ends of phrases. Some of the students appeared to run out of air before the end of the phrase. In order to make it to the end of the phrases, I could tell some students were using staggered breathing, while others tried to squeeze out every last bit of air, creating tension throughout their bodies. The soprano sound was the least well blended of all the sections. I frequently heard individual voices with competing vibratos. The altos’ sound was generally good, but they occasionally sang with too much weight, especially in their lower range. The tenors sometimes strained for high notes and were more prominent than the basses, whose sound was the least present in the ensemble. On the whole, the ensemble tended to go sharp consistently when singing a cappella repertoire.

Ms. Riggins occasionally gave students feedback or instruction regarding the use of their bodies in terms of how they were singing. Her comments were limited to short directives regarding breathing (such as “Take a good breath.”), resonance (such as “Bring the sound more forward.”), and shaping of vowel sounds (such as “Drop your jaw on the word ‘hear’.”). Though this type of feedback or instruction seemed to be limited, my observations only occurred prior to and during the project and may not be representative of the instruction during the first half of the year, which is generally a time when many choir directors spend more time on fundamentals of
singing. It is possible that giving students short directives served to remind them of ideas that had been taught in more depth previously in the course of the year. I provide the details of my observations because it informed the initial planning of the action for this project and will allow the reader to understand more fully the context of this study.

Because the relationship between conductor and ensemble has a bearing on the quality of sound and musical performance, I also made some observations about Ms. Riggins’ movement when conducting. She frequently stood with her knees locked, pelvis tilted forward, a pronounced sway in her back, and rounded shoulders. Her conducting gesture was angular and sometimes jerky in terms of the flow of her arm through space. Generally, she conducted in a high plane in front of her face with large gestures. She seemed somewhat tense; she lacked an ease of movement in her gesture.

During the first interview, Ms. Riggins shared some of her thoughts about her own conducting.

Tension in conducting . . . is something that I’ve been tackling for three years . . . My first summer in the [masters] conducting program [my professor] asked me to bring video [of my conducting] into my lesson. [As] I am watching the video, I am just like mortified – I had not been mortified when I had seen it the thousand of times before that – conducting from the spring concert and I watched with every class at the end of the year and I am watching it with [my professor] and I am thinking, ‘Oh, no. That gesture is huge. Where am I going from there? What dynamic do I want? Fortissississimo.’ And I’ve a very hard time – and I know that you’ve noticed this, but I have a very hard time with low gesture and so I am spending all of this time to get my gesture lowered, which it feels so strange with me and then I’m having to pretend to carry a laundry basket and all
sorts of things . . . and I think that that naturally translates to my singers. (Interview, March 27, 2011, p. 24)

Based on my observations, I realized that tension while singing and conducting was an issue for both Ms. Riggins and her students. As a result, I would have to help students first begin to differentiate between necessary and unnecessary effort while singing. I was curious to see what impact the Awareness Through Movement lessons would have on their performance as they became more kinesthetically sensitive and how these experiences would inform their understanding of embodiment in singing.

**Acting and Observing: Facilitating the Sessions.** Implementing the intervention is the acting phase of the action research cycle, followed by observing its outcome. This next section describes what actually occurred in the acting and observing phases of this action research. I also include selected participants’ reactions to the intervention in order to explain how the plan was adjusted throughout the study. As previously stated, the intervention or action in this study consisted of my leading participants in Feldenkrais Awareness Through Movement lessons as well as movement and sound explorations based on these lessons. I refer to these activities as explorations because they are open-ended, non-goal oriented, and allow the participant to explore different ways of moving and singing. Below, I provide an explanation of the activities during each week, including a description of each Awareness Through Movement lesson and the source of the lesson (see Appendix G for resources on the Feldenkrais Method). While each lesson centers on a particular functional movement (such as breathing), the emphasis during lessons is on observing how one moves rather than on the actual movements themselves. In other words, the movement is the means for self-observation.
Week 1. The first movement explorations centered on the action of turning. I chose this action because turning is an important component in numerous other movements (such as walking or reaching for a pen). Because it is a common action, turning lends itself well to teaching first-time Feldenkrais participants to experience how they move and to explore the components involved in turning. Improvements in turning can have a recognizable effect on alignment and breathing, which also affect singing performance.

On Tuesday, February 15, I began the action of this study with a short, introductory Awareness Through Movement lesson, “Easy Flexibility” (Zemach-Bersin, Zemach-Bersin & Reese, 1990, pp. 21-31). While sitting in chairs, participants explored turning their head, eyes, upper body, and lower body in various combinations. This lesson was designed to increase their ability to turn by eliminating superfluous effort and involving the entire spine in the action.

On Thursday, February 17, we began the warm-up with a body scan. I invited participants to observe systematically different parts of themselves while standing. Then I had them hum a descending five-note pattern and observe different parts of themselves while singing. We then reviewed movements from Tuesday’s lesson and combined the movement exploration while singing various vocalises. This exploration was designed to help participants notice what they do when they sing and consciously direct their attention to different parts of themselves through scanning and moving.

On Friday, February 18, I taught an Awareness Through Movement lesson, “Coordination of the Flexor Muscles and of the Extensors” (Feldenkrais, 1990, pp. 109-114). While lying on their backs, participants explored twisting the spine by: (1) crossing legs at the knee and then slowly lowering them toward the floor; (2) creating a triangle with outstretched arms and touching hands and then slowly lowering them to the floor. While in these positions, I
guided them to breathe in a see-saw like pattern by: (1) inhaling to expand the chest and exhaling to expand the belly; (2) inhaling to expand the belly and exhaling to expand the chest. This lesson was designed to balance the flexor and extensor muscles, which contribute to erect alignment in standing, and improve the rib cage movement for breathing.

After the first lesson on the floor, Stefano told me that he had had surgery on his knee about three weeks prior to the start of this project. He reported that the lesson had relieved the soreness in his knee and enabled him to walk without favoring it. Later in the first focus group interview, he reiterated his observation,

Before you got here when I would sing, I would pay a lot of attention to how I was standing because of my knee – I just got surgery, so I’m stressing about my knee – but after doing all the movements – I would tell you after doing them – my knee feels more relaxed and the pain in my knee would just go away. So after doing all those movements, it felt really good. (Interview, March 22, 2011, p. 15)

The following are examples of journal reflections in which two participants, Kathy and Ms. Riggins, describe their experiences of the first week.

The movements this week made me very relaxed. At first, I notice there was a lot of tension and some things were difficult. After repeating difficult movement, I focused on not trying so hard, which made it easier. At the end of lessons, I was sometimes tired. I thought it was very interesting. It’s not what I expected and I have not seen anyone study body movement in choir this much. It affected my singing a little bit. Sometimes I noticed a little less tension in my jaw and better breathing after a rehearsal. (I have a lot of difficulty with these two things.) I am interested to see how everything we do will relate to our overall singing habits. (Kathy, Journal, Week 1, February 22, 2011)
I found that during the first twisting lesson, I felt a lot of tension in my tongue and jaw (pressing my tongue to the roof of my mouth) and was holding my breathing, but after it was pointed out I was able to relieve that tension. After the floor exercise, I felt dizzy standing and then felt like I had less control over my voice when we sang. That loss of control made my sound more free and less pressed or forced than it usually would. (Ms. Riggins, Journal Week 1, February 22, 2011)

**Week 2.** On Thursday, February 24, participants began the warm-up with a body scan, systematically observing different parts of themselves while standing. Then I had them sing the pattern Do-Re-Mi-Re-Do-Re-Mi-Re-Do on the “oo” vowel and observe what parts of themselves moved as they sang. I asked them to pick a body part that moved as they sang and intentionally move it more while singing. After experimenting with this for a few moments, I asked them to stop moving that body part and consciously inhibit that body part from moving as they sang. I then had them reflect on their experience and how it impacted their singing. This exploration was designed to help participants notice what they do when they sing and consciously direct their attention to different parts of themselves through scanning and moving. Following this exploration, I led participants in vocalizing and had them sing and move, reviewing the turning movement from Tuesday’s lesson.

On Friday, February 25, I taught an Awareness Through Movement lesson, “Differentiation of Pelvic Movements by Means of an Imaginary Clock” (Feldenkrais, 1990, pp. 115-121). While lying on their backs with knees bent and soles of the feet on the floor, participants explored gentle rocking movements of pelvis in different directions, using an image
of a clock as a guide. This lesson was designed to refine awareness of and control over the position of the pelvis and improve alignment of the spine.

The following are examples of journal reflections in which two participants, Jenny and Ms. Riggins, describe their experiences of the second week.

When I was moving while singing, the tension in my body was released. I also felt like the weight was lifted off of the vocal chords. It surprised me how much I had to concentrate on not moving. My body was focusing so much on not moving that I would tense up. My sound was more free [sic] and when I wasn’t moving my sound didn’t have any vibrato or resonance. (Jenny, Journal, Week 2, March 3, 2011)

Most of the movement was driven by my hips, but I found it very difficult to move my pelvis down or up without the help of my legs (feet pressing the floor). Also, as the movement grew quicker I found that my head was doing a lot of moving, similar to nodding. Because our eyes were closed and the other participants weren’t in contact with me, I felt like I was the only one doing the movement. I also felt like my slower movement was more controlled but tended to be “jerky,” whereas the faster movement was smoother, but the movement was larger. I didn’t find any effect on my singing except, perhaps, for a more relaxed body allowing for freer tone. (Ms. Riggins, Journal, Week 2, March 3, 2011)

**Week 3.** Because there were no rehearsals on Tuesday, March 1 or Friday, March 4, I decided to use the time on Thursday, March 3 to teach an Awareness Through Movement lesson, “Equalizing the Nostrils” (Feldenkrais, 1994, pp. 25-29). While seated in chairs, participants experimented with exhaling through the nostrils and mouth to make sound. They first spoke
using different combinations of the articulators (lips, jaw, teeth, and tongue), which is part of the original lesson. I then had the students sing while using different combinations of the articulators. This lesson was designed to equalize the flow of breath through the nostrils and improve the coordination of the articulators for clear diction.

After that rehearsal, Ms. Riggins made the following comment about the ensemble sound after observing students’ exploration with the articulators: “There was a combination of forward placement with rounded embouchure, creating in tune singing that was still beautiful. That’s what I am after” (Field notes, March 3, 2011). Later during that same rehearsal, Ms. Riggins had worked to get the ensemble to create more rounded vowels when singing “Incline.” I therefore suggested that we continue to work with the articulators in the context of rehearsing “Incline” at the next rehearsal. Another area of concern was the issue of tuning in “Let Me Fly,” particularly in the men’s sections. Ms. Riggins commented,

The men tend to sing back [in the throat] when singing the “uh” vowel; it’s difficult to get them to do anything else other than that. And I have chosen repertoire that highlights that, especially “fly” with the descending line [in “Let Me Fly”] . . . The problem is that, with their training, I taught them that rounded vowels are the name of the game. Especially for the young beginning singers, when I hammer vowel shape, they go way back [with placing their sound] and now I’m having to introduce the more forward [placement] with rounded mouth shape. (Field notes, March 3, 2011)

The following are examples of journal reflections in which two participants, Daniella and Madeline, describe their experiences of the third week.

Inhaling through the nostrils seemed impossible with allergies but . . . I did it. Singing with an open mouth before felt less resonant while after felt more resonant. Leaning back
in my chair was really helpful instead of feeling like I had to sit straight up. I like how you said to go with whatever posture you were feeling so I leaned back in the chair. This helped me to actually have good posture when singing in rehearsal and it was effortless. It also helped my sound to be less drawn back. (Daniella, Journal, Week 3, March 10, 2011)

Singing with an open mouth before felt regular because it’s what I’m used to but singing with an open mouth afterwards was different. I could tell the way that I sang and it was easy to sing with more strength and pick a placement to put my voice in. I thought it was weird at first but as we went on it was really cool to become more aware of my voice placement and really hear what my voice sounds like with a closed versus open mouth. I felt like I had more awareness and control over my voice placement. I also felt like I had more strength and breath support after having to sing with my mouth closed. (Madeline, Journal, Week 4, March 10, 2011).

**Week 4.** In preparation for their evening concert on Tuesday, March 8, Ms. Riggins and I agreed that we would spend the afternoon rehearsal reviewing repertoire, and I would provide some movement explorations specifically geared toward the performance of these pieces. A few of my observations about the students’ performance of “Incline” was that they went out of tune particularly at the ends of phrases, consistently drove the pitch up, and lacked clear diction. Ms. Riggins commented, “‘Incline’ was lining up really well about two weeks ago, but now not so much” (Field note, March 8, 2011). I attributed that in part to their lack of awareness of the relationship between the breath and the articulators and thought that as a group they might benefit from reviewing the exploration with the lips, teeth, tongue and jaw while rehearsing
“Incline.” To facilitate this exploration, I asked them to sing the first page of the piece: (1) with the teeth and lips together, (2) with the lips together, and (3) with the teeth together. These variations provided an opportunity to feel how they use the teeth, lips, tongue, and jaw to create the sounds of the words. After they did so, I had them sing the first page again. The exploration resulted in clearer diction, fuller sound, and better intonation during their performance (Field notes, March 8, 2011).

In their performance of “Let Me Fly,” I again noticed the tuning issues on the word “fly” due to the resonance of the vowel sound, which Ms. Riggins and I had discussed after the previous rehearsal. Because the students sang with such enthusiasm, as with “Incline,” they used up most of their air at the beginning of the phrase and then ran out by the end. I noticed that some of the students looked like they were pressing the jaw down in order to sing the word “fly,” which was compounded because of the lack of breath support at the end of the phrase. To bring their attention to how they were singing this sound, I thought that I would help them to explore the relationship of the head, jaw, and breath.

For this exploration, I first had the students slowly open and close their jaws and notice the quality of the movement. I then had them nod their heads up and down slowly and then synchronize the nodding with the opening and closing of the jaw. Once they were able to feel how the jaw opens when the head tilts back and how the jaw closes when the head tilts forward, I then had them sing a few phrases of “Let Me Fly” while moving in this way. Finally, I had them sing the same passage without moving so that they could feel and hear the difference.

The difference in their performance was remarkable; they sang beautifully in tune with a balanced resonance. When hearing this, Ms. Riggins’s face lit up with a smile of recognition and she walked away from the music stand and around in a small circle while continuing to conduct.
She enthusiastically exclaimed, “I want to throw myself off the stage that was so good!” (Field notes, March 8, 2011). Later in conversation after rehearsal, she shared her surprise that the students were able to make such a dramatic change so quickly as a result of the movement exploration, since they had been working on that piece since the beginning of the year and she had been trying to get them to sing that better in tune. She said, “Eight months of working on getting it in tune . . . and it changed so quickly. I thought it was a placement issue; it was a ‘muscling’ issue” (Field notes, March 8, 2011). By “muscling,” she meant that they were using too much effort to sing that resulted in a pressed and out of tune sound. Ms. Riggins commented that they needed to “relax more” (Field note, March 8, 2011). Though there was a tremendous change in their performance, the change diminished with each successive repetition of the word in the piece. Ms. Riggins noted, “After the exercise, they go back into their old placement issues” (Field notes, March 8, 2011). I suggested that more time and repetition is needed until they can sing it consistently in the new way. As a result, I offered to create a “cheat sheet” of explorations that Ms. Riggins could do during warm up for their first adjudication, which was the next day.

Following our discussion of the students’ performance and the changes that resulted from the explorations, I asked Ms. Riggins to share her observations and give me some feedback. Reflecting on her own conducting in “Let Me Fly,” she said,

I am a controlling conductor. As a singer and conductor, I hold a lot of tension, especially in the shoulders. I have trouble relaxing, which is just a control issue. As we went through [the explorations], I was doing less and less controlling. I was freer. It was more about the phrase and less about beat. (Field notes, March 8, 2011)
On Wednesday, March 9, Chamber Singers performed in the district festival. On Thursday, March 10, I asked Ms. Riggins how the performance went and if she had used any of the activities on the sheet that I had provided for her. She said that she did use the explorations as a part of the warm up, but during the performance students ended up singing sharp during “Incline” as they had in previous rehearsals.

Because there had been such a positive experience with Tuesday’s activities and Ms. Riggins reported that Chamber Singers did not perform as well as she would have liked, I decided to continue to have participants explore the use of the tongue and the jaw. I began by leading participants in a scan of the mouth, noting the relationship of the tongue to the teeth and jaw. I had them sing the pattern Sol-Fa-Mi-Re-Do on the “ah” vowel and observe the movements of the tongue and jaw. I then had them explore the movement of the tongue by having them slide the tongue along the teeth on the inside and on the outside and by sticking the tongue out and up and out and down. We then applied these explorations while singing “Incline.” Each time they sang the piece while moving their tongues they were absolutely in tune. I played their cadence at the end of the first page after each time they sang so they could hear that they were accurate. Following this exploration, I had students discuss their observations in their sections. Marty commented that the bass notes were easier to sing and were more in tune. I too heard more of a presence in their sound as a section (Field notes, March 10, 2011). Jeff mentioned that he was more aware of the tongue in his mouth as he sang and that the tenor sound was more unified (Field notes, March 10, 2011). Ms. Riggins also expressed her surprise that they were able to sing it in tune today when they had not been able to do that the day before at district festival (Field notes, March 10, 2011).
On Friday, March 11, I taught an Awareness Through Movement lesson, “Sinking the spine between the shoulder blades” (Feldenkrais, 1995, pp. 629-634). While lying on their fronts with elbows placed under the shoulders and the upper body slightly lifted off the floor, participants explored various ways of sinking the chest slowly towards the floor. This lesson was designed to improve the mobility of the rib cage and spine.

The following are examples of journal reflections in which two participants, Finn and Madeline, describe their experiences of the fourth week.

What I was sensing in my body was tension in my shoulder blades, but the more we did it the easier it became. My reaction was I feel less tension in my shoulders, and this struck me positively. Yes, it impacted my standing because my shoulders are usually tense, but now they are more relaxed. (Finn, Journal, Week 4, March 15, 2011).

I was more aware after the spine sinking exercise of my body’s tendency to sink down. I thought I’d try to correct it and then my body would sink back down. After doing all the arm movements, my arms were more grounded to the floor when we went to lie our backs. My experience reaction, I feel as though the arm sinking into the floor is important for some reason but have no idea why. And maybe this is like the theme for the whole thing, if you never explore outside what you know then you have gained/lost nothing but challenge could = more relaxed singing. (Daniella, Journal Week 4, March 15, 2011)

**Week 5.** On Tuesday, March 15, I taught an Awareness Through Movement lesson, “Relaxed Shoulders” (Zemach-Bersin, Zemach-Bersin & Reese, 1990, pp. 57-81). During the exploration, participants explored shoulder circles, first with the left and then with the right. I
had them sing the pattern Do-Re-Mi-Re-Do-Re-Mi-Re-Do on the vowels “oo-ee-ah” intermittently to observe the relationship of their shoulder movement with their singing. Following the exploration, Finn shared that the movement of his shoulder was jerky, especially when moving down. But after moving the shoulder toward the ear and the ear toward the shoulder, it was smoother and easier to move the shoulder up and down (Field notes, March 15, 2011).

On Thursday, March 17, I began rehearsal by having participants sing three vocalises: Do-Re-Mi-Fa-Sol-Fa-Mi-Re-Do on the syllables “zee-ah”; So-Fa-Mi-Re-Do and “ming-ming-ming-ming-mah”’ and Sol-Ti-Re-Fa on “zah.” The movement exploration began with a brief body scan while sitting. Following this, participants moved both shoulders in circles simultaneously and noticed how this related to the chest and spine. I then had them sing the first vocalise again to notice any difference. I noticed that their sound was much fuller and the “ah” vowel was much rounder following the movement explorations. Some of them in particular seemed to have more expansion in the chest for breath (Field notes, March 17, 2011).

The following are examples of journal reflections in which two participants describe their experiences of the fifth week. Kathy wrote, “At first I found it difficult to move my shoulders while I was singing. After about halfway thought, I relaxed and there wasn’t as much tension” (Kathy, Journal, Week 5, March 22, 2011). Alison comment, “The lighter my chest, the straighter my back and the more relaxed my shoulders, the fuller and more in tune my singing sounded” (Alison, Journal, Week 6, March 22, 2011).

On Friday, March 18, I taught an Awareness Through Movement lesson, “Differentiating of Parts and Functions in Breathing” also known as “See-Saw Breathing” (Feldenkrais, 1990, pp. 100-108). In this lesson, participants explored see-saw breathing (inhaling to expand the chest
and exhaling to expand the belly; and inhaling to expand the belly and exhaling to expand the chest) on the back, front, side, and in kneeling. This lesson was designed to bring awareness to the breath cycle and how it adjusts to the various positions of the body.

The following are examples of journal reflections in which two participants, Daniella and Kathy, describe their experiences of the fifth week.

It made me realize I tend to let my chest sink a lot which translates into worse air probably = me feeling more tired even though bad posture would seem easier. I thought moving where the air was whether chest or stomach helped my chest expand to get more air. (Daniella, Journal, Week 5, March 22, 2011)

I could only make my chest more when I was breathing if I forced it to. Normally, when I’m not paying attention I think I breathe from a lower place. The see-saw movement took me a while to understand. I couldn’t do it at all when we were lying on our front side. Afterwards, my breathing felt more relaxed. (Kathy, Journal, Week 6, March 22, 2011)

Week 6. On Tuesday, March 22, Ms. Riggins began rehearsal with their regular warm up routine. Following that, I had participants review the see-saw breathing movements and then combine them with singing their last vocalise. Because the movements required in this lesson are different from the way that most people breathe, it was not surprising that most participants found this exploration to be very challenging (Field notes, March 22, 2011). Alison explained, “During the see-saw breathing, I notice that it was difficult to channel the breath. It took some time to focus my energy on my breath” (Alison, Journal, Week 6, March 29, 2011). Madeline, who seemed to be in the minority, expressed the following in her journal. “When we did the see-
saw breathing, I could really feel my body opening up. I felt really tall and like I had so much more room to breathe. It really helped my singing because I had better breath support.”

(Madeline, Journal, Week 6, March 29, 2011).

On Thursday, March 24, we continued to explore breathing. I led participants in a discussion of the components of breathing and had them show the relative movements of the ribs, diaphragm, abdomen, and pelvic floor with their hands. They first practiced synchronizing the motions of each body part with their inhalation and exhalation and then vocalized while demonstrating the movements. (See Evoking Sound, 2009, by James Jordan for a description of this exercise, originally developed by Body Mapping teacher Lea Pearson.) Though this exploration was not based on the Feldenkrais Method, I thought that it would be worthwhile to help clarify students’ understanding of the breathing process and how it relates to singing.

On Friday, March 25, I taught an Awareness Through Movement lesson, “Basic Flexion” (Reese, 1987, Track 3B). While lying on their backs, participants explored flexion (movements of bending forward) by pressing the feet, tilting the pelvis, and lifting the head in different combinations. This lesson was designed to activate the flexor muscles and reduce the tonus of the extensor muscles in order to balance upright alignment.

The first round of interviews also took place during week six. I conducted the first focus group interview with the boys immediately following the rehearsal on Tuesday, March 22. I conducted the first focus group interview with the girls immediately after school on Friday, March 25. My first formal interview with Ms. Riggins took place on Sunday, March 27.

I gained important information from the first round of focus group interviews that guided the second half of the project. Some comments during the first focus group interview such as Jenny’s, “I realized how important it is to support the diaphragm when you are singing”
Interview, March 25, 2011, p. 8) suggested that participants did not clearly understand certain aspects of process of breathing. Though the diaphragm is the primary muscle of breathing, it is an involuntary muscle, meaning that it is not within our conscious control. During inhalation, the diaphragm contracts and lowers to expand the lungs. During exhalation, it relaxes and returns to the resting position to contract the lungs. It is a common misunderstanding among singers that one “engages the diaphragm” (see *What Every Singer Needs to Know About the Body*, Malde, Allen & Zeller, 2008). Because breathing is a fundamental component of singing with which members of the ensemble had some difficulty, I decided that we should continue to explore the breathing process. I decided that showing a brief animated video of how breathing worked might be helpful.

I also learned that some of the participants did not understand either the purpose of the lessons or the relationship to their singing. Kathy, for example, did not understand the relationship of tapping the heel of the foot and lifting the head (Interview, March 25, 2011). Jenny explained that she could not figure out how “the pelvis stuff” related to her singing (Interview, March 25, 2011). In general, participants understood more clearly the purpose of the explorations when they moved parts of their bodies that were involved directly with singing (such as the tongue and jaw). Participants were less clear about the purpose of the explorations when they moved parts of their bodies that were not directly involved with singing (such as the pelvis, legs and feet). I was not particularly surprised to hear this for several reasons. First, as previously mentioned, none of the participants had had prior experience participating in somatic practice. Second, a certain amount of uncertainty is expected as a part of this exploratory and non-goal oriented learning process, which I learned from my own experience as well as my experiences of teaching others. Furthermore, as one becomes more sensitive to bodily
sensations, a person can feel how the pelvis, legs and feet, for example, directly affect alignment and breath support, and, subsequently, singing performance. Because some participants reported that they did not experience changes in their own bodies or their singing as a result of the explorations, I realized that they might not understand singing from an embodied perspective through participation in somatic practice. I also recognized that their lack of understanding could have been a result of the way that I was teaching the lessons. From that point forward, it was my intention to teach the movement explorations with greater focus on helping the participants to notice differences. I tried to be as clear as possible without suggesting what they should be feeling or revealing my ideas about embodiment in order to allow them to come to their own understanding.

Also during the interview, Ms. Riggins remarked on the differences between her traditional choral warm ups routine and the sound and movement explorations. She was surprised though that the explorations effectively warmed up the students’ voices, considering that they did fewer vocalises. This revealed her belief that a certain number or type of exercises is required. She noted that students were less engaged during her warm ups because they had become so routine. She identified several differences between her regular warm ups and the movement explorations that engaged students and helped them to become more aware of and change their singing. She also mentioned that, when she participated in the explorations, she did not notice what the ensemble as a whole was doing. She expressed a desire to be able to listen to the students and suggested that we make a recording in order to compare their singing before and after the explorations. During our conversation, I also proposed that, during the second half of the project, she move from the role of participant to the role of observer and then facilitator.
**Week 7.** Based on our discussion from the first interview, Ms. Riggins and I decided that we would record the students singing before and after the movement exploration so that we could listen and discuss what we heard. On Tuesday, March 29, I began by having students sing “Twinkle, Twinkle, Little Star,” a simple tune with which they were all familiar. I taught participants a variation of the basic flexion lesson that they had learned the previous Friday. During this lesson, they were seated and explored movements of bending forward by lifting the heels, tilting the pelvis, rounding the spine, and lowering the head in different combinations and then combined the movements while singing “Twinkle, Twinkle.” We finished as we began by singing the song one last time without moving.

Immediately after rehearsal, I played the first recording for Ms. Riggins and asked her to comment on what she heard. She described their performance as “punchy,” “weighted,” meaning that each note was emphasized and there was not much connection between each note (Field notes, March 29, 2011). She commented that there were noticeable “vibrato issues at the ends of phrases” in the women’s voices and that in general she heard “more women and less men” (Field notes, March 29, 2011). I then played the last recording and asked her to do the same. She commented that the sound was “blended more,” meaning that she heard fewer individual voices and more unified sound from the ensemble (Field notes, March 29, 2011). She also noted that the men’s voices were easier to hear than the first time, which created more of a balance within the ensemble. Finally, she also said the students’ “breath was less forceful,” resulting a smoother and more rounded tone quality (Field notes, March 29, 2011).

On Thursday, March 31, I had participants feel the vibrations in their bodies as they sang. I first had them sing simple song, “Oh, When the Saints Go Marching In,” and then invited them to place their hands on different parts of their body. After feeling the vibrations in themselves
while singing, I had participants place their hands on the back of the person standing next to them. They then discussed with each other their observations of what they felt. Each time that they explored where they felt vibration, their sound as a group became louder and more resonant (Field notes, March 31, 2011). The purpose of this exploration to help participants feel vibration in themselves while singing and understand that the body is a resonating instrument.

**Week 8.** There were no rehearsals from Friday, April 1 to Friday, April 8 due to Spring Break. Prior to the first rehearsal back after the break on Tuesday, April 12, I reminded Ms. Riggins of her observations during our first interview regarding students not paying attention during warm up. As a result of our conversation, Ms. Riggins spontaneously tried a different approach to how she normally led warm ups.

Ms. Riggins began by modeling her usual first warm up, Sol-Fa-Mi-Re-Do on the syllable “bee” with a light vocal tone. Students responded as they normally did, which is by singing it with a heavy, weighted sound and use the gesture of point up with a finger and arm. Hearing that they were singing with too much weight in the sound and that they went out of tune as they descended, Ms. Riggins stopped them and asked why they point up. Someone said, “So we don’t go out of tune.” Then Ms. Riggins had them do any motion to show their idea of a sense of lift while still descending. Ms. Riggins asked volunteers for three motions that they thought worked. They tried each one of the motions and then she let them choose whichever one they thought worked the best for them. She noticed that most of the students ended up changing their motion and picking a motion that one of their peers had suggested. She thought that it was interesting that the third motion, which someone volunteered, was a descending motion rather than an ascending motion, and yet it still reminded them about not going flat. She and I noticed that they were in tune and that the sound was more blended that usual (Interview and Field notes,
April 12, 2011). She said that she never spends much time on that vocalise because it starts in C major, which is in the lower range for the sopranos and tenors. She spent more time on it by having the students choose their own motions and try out the motions of their peers (Interview, April 12, 2011).

The second vocalise was Do-Mi-Sol-Mi-Do-Mi-So-Mi-Do on the syllable “hah,” which was a relatively new exercise (Interview, April 12, 2011). The third vocalise consisted of arpeggiating a major chord on the syllable “noo” to extend through the range. While doing this, Ms. Riggins began with playing each note of the arpeggio as the students sang, but then stopped. During our conversation after the rehearsal, she explained,

Normally, I arpeggiate it and I started arpeggiating with them and I thought that’s not what I want because especially the women do (she sings demonstrating a break between each of the pitches of the arpeggio) and that’s not what I want. What I want is (she sings demonstrating legato slide between each of the pitches). (Interview, April 12, 2011, p. 3)

Because the use of the piano to demonstrate legato between notes was counterproductive, she continued playing only the chord instead. She ended warm up with sirens on the lip trill in order to help students use their breath in the top of their range, which she felt was not happening the way that it should (Interview, April 12, 2011). Afterward, she commented that four exercises were fewer than normal, yet the students were engaged and sang in tune (Interview and Field notes, April 12, 2011).

Part of her change in understanding occurred as a result of leading the warm ups in a different way than she was accustomed. She engaged students by having them generate their own motion to show their understanding and asked for examples. In so doing, the students had to act intentionally, which required awareness of what they were doing. She also was listening
and reacting to what they were doing and changing what she was doing as a result. Immediately following the rehearsal, Ms. Riggins shared her observations of her warm up. She commented, “Today doing the warm ups . . . it was very organic . . . I realized how easy it would be to implement even small stuff into the regular rehearsal without taking a lot of time . . .” (Interview, April 12, 2011, p. 12). Later in our conversation, I pointed out how changing how she did warm ups allowed the students to have a different experience. I said, “You changed you and they changed also” (Interview, April 12, 2011, p. 4). Ms. Riggins responded, “Right. But normally, I change me and then I change them” (Interview, April 12, 2011, p. 4), suggesting that she would lead every aspect of the warm up instead of letting the students have some ownership in the process by having them notice what they were doing. She added, “So that was different. And it worked! (She smiles.) I would love to try it out with my larger groups that are more inhibited than Chamber is . . . because that would be interesting” (Interview, April 12, 2011, p. 5).

On Thursday, April 14, Ms. Riggins again led the warm up and this time incorporated a few specific movement explorations. She had students sing their regular vocalise, Do-Mi-Sol-Mi-Do-Mi-Do-Mi-Do on the syllable “hah.” She then asked them to do the see-saw breathing first without singing and then while singing. She also had students equalizing the nostrils as they hummed. During the rehearsal, I led students in an exploration while rehearsing the second song from the Brahms set of four songs. After students sang it with Ms. Riggins conducting, I had the students lie on the floor. I first had them bend their knees and stand their feet on the floor, and then had them roll their pelvises, arching and rounding their lower backs. I then had the students sing while moving. The students then crossed their right legs over their left and moved their knees slowly to right and back to the center. I then had the students sing while moving. The students then crossed their left legs over their right and moved their knees to the left and back to
the center. Once again I had them sing while moving. Finally, I had them return to doing the first movement of pelvis one last time on the floor while singing. After the exploration, I had students stand and sing the Brahms once again. Ms. Riggins and I noticed that their tone quality was fuller, their intonation was much improved, and they seemed to have more breath to sustain the phrases (Field notes, April 14, 2011).

For the fourth song of the set, I had students experiment with bouncing imaginary balls of different sizes and weights. As students bounced the “balls,” I directed their attention to the quality and ease of their movement. I then had the students sing as they bounced the ball. Students then tossed an imaginary ball back and forth with another member of the ensemble as they sang. Finally, students as a whole tossed the ball back and forth with the conductor. While this activity used gestural movements of tossing a ball, the emphasis was on how students were moving and their use of attention to what they were doing. Like the other movement explorations, there was not an intention to relate their movement to the music directly; although it is understandable that students did tend to move with the music. This activity was designed to sensitize students to the relationship of their movement to their sound in the context of the ensemble.

On Friday, April 15, I taught an Awareness Through Movement lesson, “Shoulder/Hip Circles on the Side” (Segal & Yaron, 2003, pp. 50-53). While lying on their sides, participants explored making small circles with their shoulder and hip. This lesson was designed to improve the mobility of the shoulders and hip and to clarify these movements in walking.

**Week 9.** On Tuesday, April 19, we continued to explore breathing, specifically the relationship of the breath to the onset of the tone. To begin, I had participants vocalize Do-Mi-Sol-Fa-Re-Ti-Do on the vowels “ah – ee.” I asked participants to speak the “ah” vowel followed
by the “ee” vowel and notice the differences in forming each vowel as well as where they
focused the breath while speaking each vowel sound. I had participants imagine the path of the
airflow through the respiratory tract (from the nose and mouth to the lungs) and then speak each
vowel sound as they continued to follow the path of the airflow. Finally, I had them sing the
same vocalise at the beginning, noticing any differences in their singing. This exploration was
based on an Awareness Through Movement lesson “Thinking and Breathing” (Feldenkrais,
1977, pp. 162-171) and was designed to help participants coordinate the exhalation with the
onset of the tone.

On Thursday, April 21, I showed a brief animated video of the breathing process (See
Stough Institute Images and Video at http://jessicawolf.net/stough_institute.html). I had
participants notice what they felt in their own breathing and to see how that compared with what
they saw in the video. I had participants physically place their hands on their ribs, chest, and
abdomen to feel how each part moved. They sang Sol-Fa-Mi-Re-Do on “ah” while noticing the
movements of breathing. I then had them then sing the opening of “September” noticing the
movements of breathing. There was no rehearsal on Friday, April 22 because school was not in
session.

**Week 10.** On Tuesday, April 26, I taught an Awareness Through Movement lesson:
Improving Balance (Wildman, pp. 109-112). While standing, participants crossed one foot over
the other foot and explored movements of the pelvis, head and eyes, chest, and spine. This
lesson was designed to improved balance by clarifying the relationship of the pelvis, spine, chest
and head. On Thursday, April 28, there was no warm up because the entire rehearsal was
devoted to learning choreography.
On Friday, April 29, I taught an Awareness Through Movement lesson, “Chanukia, the candle holder” (Feldenkrais, 1995, pp. 103-109). While lying on their backs, participants began with arms out to the side at shoulder height and bent up with hands toward the ceiling as if holding a candle. From this position, they lowered the forearms in the direction of the head and in the direction of the feet. They also explored movements of the pelvis and head in relation to the movement of the shoulder girdle. This lesson was designed to improve the movement of the shoulder girdle and arms by differentiating the movements of the shoulder girdle from the pelvis, chest, and head.

Week 11. On Tuesday, May 3, more than half of the rehearsal was devoted to finishing choreography for the Pops concert. During the other part of the rehearsal, Ms. Riggins reviewed repertoire for their upcoming state choral festival. Because there was limited time, Ms. Riggins ran through and briefly rehearsed each of the pieces. During each piece, I had the opportunity to share one idea with the students. While rehearsing the Brahms, I pointed out how I noticed that the students were working very hard to sustain their breath to the ends of the phrases. I encouraged them to apply the idea from the movement explorations of observing where they were using more effort than they need to and to reduce that effort. Surprisingly, there was a change in their singing just from the suggestion that they could reduce the effort. The sound that they produced was a bit softer, but it was less forced. The musical line had more flow and connection to the breath (Field notes, May 3, 2011). During the rehearsal of “So We’ll Go No More A-Roving,” I noticed that students were standing rigidly and restricting the movement of the chest for breathing. I had students place their hands on their knees and arch and round their backs while singing. This exploration required students to become aware of how their spine, chest and pelvis related to their breathing. It resulted in a more legato line and students were
seemed to have more breath at the end of the phrases. When they performed the piece without moving, Ms. Riggins gave her approval with a nod of her head (Field notes, May 3, 2011). There were no rehearsals from Thursday, May 5 or Friday May 6 because the Chamber Singers traveled New York City for their choir trip.

**Week 12.** On Tuesday, May 10, I taught an Awareness Through Movement lesson, “Rhythmic Coordination” (Stransky, 1987, pp. 189-194). This lesson was performed lying on the back. Participants rhythmically tapped different parts of the body gently against the floor. The lesson was designed to differentiate various movements of the body and organize movement in rhythm.

On Thursday, May 12, participants seemed tired and had low energy. As they entered the room, most either sat or lay down on the risers. Rather than have them stand immediately, I decided to have them explore the relationship of the breath to the onset of the tone in various positions. I first had them notice how they were sitting or lying and what parts of themselves moved with they breathed. I asked them to begin with humming, noticing the inhalation and exhalation. I then asked them to change positions (i.e., if they were lying down, change to sitting, etc.) and continuing to hum and notice any changes. Eventually I had the students transition to standing and once again had them hum and notice any changes. Because the students were rehearsing for their Pops Concert, the entire rehearsal on Friday, May 13 was devoted to reviewing music and choreography for the upcoming performance.

**Week 13.** On Monday, May 16, I conducted the second and final focus group interview with the male participants. For the last week of explorations, I decided that we would focus the relationship of the spine, pelvis, and legs in order to help participants solidify their understanding of skeletal support while singing. On Tuesday, May 17, I led participants in an exploration of
tilting the pelvis and arching and rounding the lower back while lying on the floor. After doing the movements, participants vocalized and combined moving and singing. On Thursday, May 19, participants explored arching and rounding the spine in standing with and without singing. On Friday, May 20, participants continued exploring the movements of the pelvis and spine while lying on their backs by arching and rounding the lower back and pelvis with feet together and feet out to the side.

**Week 14.** I conducted the second focus group interview with the girls immediately after school on Monday, May 23. My second formal interview with Ms. Riggins took place on Sunday, May 22. I attended to final rehearsals to pass out interview transcripts on Tuesday, May 24 and to collect them on Thursday, May 26.

**Summary**

This chapter introduced the 12 participants, Ms. Riggins and her 11 students. This background and information provides an understanding of the context of this study and allows the reader to determine if the results presented in the next chapter may be transferable to similar situations. It also discussed the action research process, including what was done in the acting and observing phases and how the action was adjusted in light of what happened over the course of the project.
Chapter Five

Toward Embodied Singing: Action Research Case Study Findings

With the intent of improving teaching and learning in choral music education, the purpose of this action research case study was to investigate how instruction in the Feldenkrais Method (a somatic practice) facilitated participants’ understanding of embodiment in singing and affected their singing performance. The research questions that guided this investigation were:

1. How do participants describe their singing performance as a result of participating in experiences of somatic practice?
2. How do participants describe embodiment in singing as a result of participating in somatic practice?
3. How do participants describe teaching and learning in this choral setting as a result of increasing their knowledge about embodiment and participating in somatic practice?

This action research process involved planning, acting, observing, and reflecting (Kemmis & McTaggart, 2005). The previous chapter detailed the planning, acting, and observing phases of this study. This chapter presents the findings obtained from an analysis of the data.

Five major themes with sub-themes emerged from the study: (1) Perceived effects of somatic practice on singing; (2) Singing with conscious awareness; (3) Emerging understanding of embodied singing; (4) New perspectives on learning to sing; (5) New perspectives on choral music teaching. Though there is some overlap between themes due to the nature of this study, each theme is presented separately in order to highlight the major findings of the study. The first two themes answer the first research question. The third theme answers research question two. The fourth and fifth themes answers research question three. To help the reader gain an
understanding of the experiences of the participants, the emphasis throughout is on letting
participants speak for themselves. Illustrative quotations taken from interview transcripts
attempt to portray the variety of participant perspectives and capture some of the richness and
depth of their experiences in this study.

Perceived effects of somatic practice on singing performance

“Wow! All this affects our singing?” – Stefano

“It made me sound better. It made me sound different, more in tune. I knew how to do that
before, but now it was more effortless and it was easier to do. And I didn’t know that I could do
that before.” – Alison

Stefano’s statement (Interview, May 16, 2011, p. 13) conveys his astonishment that the
activities in which he and his fellow participants engaged over the course of this study had an
effect on their singing performance. While the expression of his reaction may have been the
most dramatic of the participants’ reactions, all participants reported changes in their singing as a
result of participating in the movement explorations, as Alison indicated above (March 23, 2011,
p. 7). As expected, the lessons affected each participant differently; not everyone had the same
experience with each lesson. In other words, participants had different experiences with the
same lesson. One participant may have found a lesson to have a particular impact while another
participant may have experienced a different impact or no impact at all. Though the participants’
experiences were unique, there were some similarities among participants’ experiences with
certain lessons as well as in their overall experience as a part of this study. Ms. Riggins also
described the perceived effect of the movement explorations on the ensemble as a whole. In an
effort to convey clearly the findings both from the perspective of individual participants and Ms. Riggins, as choral music teacher, I divide this theme in two sections and present the subthemes under each heading: Participants’ individual reflections and Ms. Riggins’s ensemble reflections.

**Participants’ individual reflections.** Participants described a variety of changes in their own singing performance as a result of participating in somatic practice. Seven specific subthemes emerged from the data: (1) relaxation/reduction of tension, (2) alignment/posture/balance, (3) breathing, (4) resonance and blend, (5) articulation, and (6) range/register. Participation in the somatic explorations of this study allowed participants to develop these aspects of their singing more fully.

**Relaxation/reduction of tension.** As noted in some of the examples from the previous chapter, participants generally experienced a sense of relaxation, reduction of tension, and increased ease and range of movement after participating in explorations and Awareness Through Movement lessons, all of which made their singing easier. Marty, for example, felt “more relaxed and loosened up” in certain parts of the body, such as his shoulders and chest, when singing after Awareness Through Movement lessons (Interview, March 22, 2011, p. 5). On other days when he did not do a lesson, he noticed that he felt tense in those parts of the body, which made it more difficult for him to sing in his higher range and project his voice. Stefano explained a similar experience.

I feel that all the movement [lessons] helped somehow because every movement would kind of loosen up your body and you would feel more relaxed. And when you can sing when you are relaxed, you can just sing better because you don’t have as much to worry about – it’s really hard to sing with your shoulder up near your ears – you can’t sing like that . . . [Afterward] my shoulders were down lower. I could stand taller. My spine felt
good. I was able to sing better and just be more relaxed. (Interview, March 22, 2011, p. 6)

In her journal, Daniella summed up her experience more succinctly, “The more relaxed I was, the less strained my singing was” (Daniella’s Journal, Week 1, February 22, 2011).

**Alignment/posture/balance.** Participants also discussed changes in alignment, posture and balance as a result of experiences of somatic practice and in relation to their singing. Jeff generally experienced changes in his alignment after lessons. “I feel slouched, relaxed when we start and we’ll do a movement [exploration], usually my back’s straighter and I am sitting up and can support myself easier” (Jeff, Interview, March 22, 2011, p. 8). Brittany mentioned how changes in her posture affected her singing. “When I stood up [after the twisting lesson], I felt that my posture was a lot better and it was more relaxed singing than it was the first time” (Brittany, Journal, Week 1, February 22, 2011). Finn described a similar experience in his journal. “My experience of these explorations was it helped make improvement in not only my singing, but also in my general posture” (Finn, Journal, Week 1, February 22, 2011). Madeline described that she frequently stands with one foot crossed over the other because she does not feel balanced standing with feet parallel. After a lesson that explored balance, she commented, “It was cool to see when I did become balanced, I could sing better because I was more balanced” (Interview, May 23, 2011, p. 4).

**Breathing.** Because breathing was a focus of the some of the explorations, it is not surprising that participants commented on their breathing in relation to singing. Stefano, for example, described his observations during the see-saw breathing lesson, stating, “After doing all the movements, not only was I more relaxed in my chest area and my stomach, but I could actually take in more breath, so I could sing higher notes because I had more breath support
Following the same lesson, Finn explained that his sound was fuller because he was singing more “on the breath” (Interview, March 22, 2011, p. 7). When asked to clarify what he meant, he responded, “Singing on the breath [means] you are singing with all the breath that you can use . . . projecting it to make a warm, bright sound” (Interview, March 22, 2011, p. 7). Madeline described her observations from the same lesson in her journal.

I noticed how I really breathe and noticed what moves in my body when I breathe. It was neat to feel my lungs and chest expand. I felt that by the end, I had more room inside my body. Some of the exercises made me feel longer and that I had more room in my body. When I became aware of my breathing I realized I can hold so much more breath than I had previously been using. This made singing easier because I had more air and was aware of proper breathing and what my body was doing. (Madeline, Journal, Week 5, March 22, 2011)

**Resonance and blend.** Several participants described changes in how their voices resonated after certain explorations. Alison reported,

While exploring equalizing the nostrils, I noticed afterwards I was more open and my sound was more free [sic]. My left nostril was also more resonant than my right, which made me pay closer attention to my equality while singing. My reaction was of fascination. I had never experimented with my nasal cavity before. I had a positive experience with plugging different sides of my nose with different hands. It made me aware of my resonance. These experiences caused me to be more aware of my singing tone and to be more aware of changes while singing. (Alison, Journal, Week 3, March 10, 2011)
Jeff, Marty, Stefano and Brittany experienced a shift in resonance of their singing voices as a result of experimenting with the nostrils and the articulators. Each explained that they normally felt their voices resonated more in the throat or chest than in the nasal cavities. In addition, Marty noticed that his sound was more unified with the rest of the choir and that he found a “nice spot” to sing that allowed his voice to have “a nice bite to it” (Interview, March 22, 2011, p. 5). (Marty did not mean that his voice took on a nasal tone quality. Instead the more “forward” resonance when added to his existing “back” resonance created more of a balanced sound.)

**Articulation.** Participants described changes in how they were able to articulate words while singing. For example, after exploring the movements of the articulators, Alison commented,

> My reaction was one of curiosity. I did not know what the articulators with lips, teeth, jaw and tongue had to do with singing, but I was anticipating a change in my sound. The changes in articulation caused my sound to be more free and balanced. Also, the increased articulation made me more aware of my tonality and resonance. (Alison, Journal, Week 3, March 10, 2011).

After the same lesson, Madeline explained,

> I thought it was a great way to really work on making the right vowel shapes and sounds and not focus so much on sound or words. After these I focused more on shape and tuning my vowels, so my singing improved. (Madeline, Journal, Week 3, March 10, 2011).

From her perspective as a participant, Ms. Riggins explained that her jaw felt less tense and “sort of unhinged” (Interview, March 27, 2011, p. 27).
I never noticed that I clenched [my jaw] before doing any of this kind of stuff and then I think also that moving the tongue while I’m singing . . . obviously I am not making any sense when I am doing it, but there is something about that motion that then when I add in consonants, it makes it a lot easier and less disruptive to the [musical] line . . . simply because I have been gobbledigooking it the entire time before. (Interview, March 27, 2011, p. 27)

The explorations helped her to notice that she clenched her jaw and to improve the smoothness of the legato line in singing.

**Range and registration.** As an alto, Kathy’s lower range is stronger than her upper range and singing in her upper range is difficult for her (Interview, March 25, 2011). She explained that the lesson that made the biggest impression throughout the entire project was a short exploration of following the airflow while breathing. “I remember it was the first time that I could comfortably sing some of those notes without feeling any strain” (Interview, March 25, 2011, p. 2).

Bubba also reported that it was easier for him to sing in his higher range and that his overall range increased (Interview, March 22, 2011). Brittany explained her observations of her singing range,

Because I am an alto, like Kathy said, it’s harder for me to have more support when I am singing higher and I notice throughout aaaaaaall [she elongates this word] of the exercises that it is easier for me to sing higher and it’s um . . . like free to sing higher. I don’t know what it is. I think it’s really easy for me to sing low. It’s comfortable for me. And I think that when I sing high, it’s kind of uncomfortable. I don’t really like it. My
voice is not as strong there, but I think this really helped me just see that I can sing nice
(trailing off). (Interview, March 25, 2011, p. 12)

Alison described the effect of the lesson that explored the relationship of the back, pelvis
and legs during week 13 on her ability to negotiate change of registration of her voice.

I really liked that [lesson] and it stuck with me the whole week. I used it when I was
rehearsing for the Pops concert a lot because it made me – I heard my voice was more
connected and smoother and my breaks were easier to climb over, like there wasn’t that
skip – I hate that skip– it kind of smoothed it over. It just felt a lot easier to sing the high
note in “Seasons of Love.” (Interview, May 23, 2011, p. 3)

The fact that her “breaks were easier to climb over” suggests a change in her ability to execute
physically the transitions from one register to the next. As a result of the “smoother”
coordination, she experienced greater ease in singing the high note.

**Ms. Riggins’s ensemble reflections.** Ms. Riggins also reported perceived effects of
somatic practice on the singing performance of the ensemble as a whole. In the previous section,
I presented findings from the perspective of individual participants according to subthemes. In
this section, however, I discuss Ms. Riggins’s accounts of two specific, selected moments that
occurred in rehearsals, during which she perceived changes in the ensemble’s singing
performance as a result of participating in somatic explorations. These accounts convey her
observations of the effect of the somatic explorations as well as her reaction to the students’
improved performance. These examples were among the most dramatic changes that occurred
and were mentioned by participants in interviews as well as recorded in my field notes. Though
both examples illustrate improvements in the ensemble’s intonation while performing repertoire,
they also demonstrate other changes in singing (such as resonance, articulation, breathing) and,
therefore, do not fit neatly into specific subthemes, as in the previous section. Furthermore, to describe these examples in context allows for a greater understanding of what occurred. In addition, sharing the findings from the perspective of the choral music teacher corroborates the findings of individual participants in the previous section.

During the first interview, Ms. Riggins commented specifically on two occasions early on in the project during which she was astounded by the changes in the students’ performance of repertoire as a result of the movement explorations. The first of these occurred during a rehearsal on March 8, 2011. As mentioned in the previous chapter, the boys, in particular, were consistently singing out of tune in “Let Me Fly.” Every time they sang the word “fly,” their “ah” vowel sounded more like an “uh” vowel and caused them to be under pitch. Because the word occurred frequently throughout the piece and usually at the end of a descending line, it was especially noticeable and problematic in their performance. Following the exploration, which clarified the relationship of the head and the jaw, the students were able to perform those moments in tune.

Ms. Riggins recalled,

I think it must have been the week of the concert when we were rehearsing in the auditorium and they sang something in tune for the first time and I thought I was going to throw myself off the stage . . . We had had that conversation earlier that week about how I know what their weaknesses are and yet I choose repertoire that shows them. Specifically, the men with the “ah” vowel and how it tends to – because they are very young singers – [I have] two seniors that aren’t great leaders and then a really large class of sophomores and juniors and two freshmen. I know that they do that yet, [but] I [picked] “Let Me Fly” where they sing “fluh” a thousand times in a descending line. And
then I’m like, “Sing in tune!” And I am yelling at them and all sorts of things [to get them in tune]. And . . . while doing the “Ah” vowel and they were moving their head and all of a sudden it was in tune and I just thought . . . because that was our opener for the state conference and I’ve been working on that since August and at this point, it’s March [and they had still been singing it out of tune]. That was so good, I wanted to take the great leap off the stage. (Interview, March 27, 2011, p. 14)

The dramatic change in their singing elicited an intense response from Ms. Riggins, in part because she felt like she had done everything that she knew to do to fix the problem (Interview, March 27, 2011). The exploration of the relationship of the head and jaw seemed to affect students’ ability to execute the phrase with improved vowel clarity, intonation, and resonance (Field notes, March 8, 2011).

The other example that Ms. Riggins mentioned during the first interview occurred two days later on March 10, 2011. As discussed in the previous chapter, the ensemble was singing consistently sharp when rehearsing “Incline.” In fact, Ms. Riggins reported that they had ended a half step sharp when they had performed it during festival the day before. After exploring various combinations of using the articular while singing, the students were consistently in tune. She explained, “After Festival on Wednesday, they’re sharp – a half step in both pieces. We come back on Thursday and you’re doing the tongue thing with them on ‘Incline’ and it’s in tune . . . I was like, ‘WOW!’” (Interview, March 27, 2011, p. 15). This exploration seemed to affect students’ ability to execute the phrase with improved articulation, intonation, resonance and breath support (Field notes, March 10, 2011).
To summarize the effect of the somatic explorations in this study on participants’ singing performance, Ms. Riggins provided the following reflection on her experience and that of her students.

Doing all of these [lessons] has had the same effect [on me] as it’s had on them. It’s easier to sing . . . There is something about the warm ups and the physicality that just made it more natural to sing and less tense and less difficult or less strained than before. So it’s been interesting that they feel the same way because I’ve been singing for so much longer than them. It’s like I have really bad habits, if they have bad habits that they’ve developed over 15 years or whatever and I have bad habits that I’ve developed over 25. You know that’s a long time to be singing and figuring out how to muscle through things.

(Interview, May 22, 2011, pp. 24-25)

These three accounts conveyed Ms. Riggins’s reaction to and observations of the changes that occurred in the ensemble’s overall singing. The changes included improvements in the ensemble’s intonation, resonance, articulation, and breathing, and occurred as a result of the somatic exploration.

**Summary.** All participants reported changes in their singing as a result of participating in the movement explorations. As expected, the lessons affected each participant differently; not everyone had the same experience with each lesson. Because the singers had differing issues in their singing performance, it is not surprising that their experience varied from one another. Yet, though the participants’ experiences were unique, there were some similarities in changes in their singing performance. Seven specific subthemes emerged from the data: (1) relaxation/reduction of tension, (2) alignment/posture/balance, (3) breathing, (4) resonance and blend, (5) articulation, and (6) range/register. In general, participants described a general sense of relaxation and
reduction of tension while singing. Participants also reported improved alignment, posture, and balance, which allowed for easier singing. Some experienced fuller expansion of the rib cage and abdomen in their breathing as well as better breath support. Participants also reported more balanced resonance that was more unified with the rest of the choir. Some participants described an improved ability to articulate their words while singing. Finally, some participants experience increased range and improved coordination of vocal registers.

Ms. Riggins also described the perceived effect of somatic practice on the ensemble as a whole. She identified two specific moments that occurred during rehearsals to illustrate improvements in the ensemble’s performance. Though in the examples she mainly discussed the improvement of intonation while performing repertoire, there were other changes in singing that occurred such as increased resonance, improved articulation, and improved breathing. By presenting this theme from two perspectives, the participants’ perspective on their individual observations and Ms. Riggins’s perspective of the ensemble as a whole, it allows for greater understanding of what occurred and lends further evidence to corroborate the findings of the study.

**Singing with Conscious Awareness**

“When you’ve done it for so long in so many ways, it’s just a habit – you just know how to sing.”

– Alison

“When I sing there is something that is the normal, what you are used to. What is it? Your habitual singing? I guess I want to say . . . Like a habit; it’s just how you sing.” – Brittany
“Sometimes our choir teacher is like, ‘Don’t go on autopilot’, because . . . I mean, it tends to happen. You get to a concert and you just kind of glaze over and do what you’ve done in rehearsal and you don’t really think about breath support and placement and posture and all these different things and how your body is positioned.” – Jeff

“Habit” and “autopilot” emerged as two important ideas related to how participants described their singing performance and understanding of how they sang. As Alison’s and Brittany’s statements (Interview, March 25, 2011, p. 4 and p. 15, respectively) indicate, participants referred to a habit as a tendency to sing in a particular way to which they had become accustomed over time. Participants realized that they had certain habits related to singing. A few participants were aware previously of their habits, but most participants were not, indicating that they lacked conscious awareness of how they sang. Once they became aware of their habits, many realized that certain habits often were counterproductive to their singing. They also reported that conscious awareness was necessary in order to create a new, more productive habit for singing.

Participants also referred to “autopilot,” a term that Ms. Riggins introduced, in relation to their understanding of how they used their attention while singing. As Jeff’s comment (Interview, March 22, 2011) alludes to, autopilot is a state of being in which participants withdraw conscious awareness of themselves while singing. This experience is what I describe as “tuning out” or “zoning out.” Participants reported that they occasionally went on autopilot during rehearsal or performance, though they mentioned that this was not advantageous. As a result, they were not attentive to their singing performance.
Participants also explained the importance of conscious awareness while singing. By being consciously aware of their bodies, participants felt they were able to stay present and notice how they were singing and ultimately, give a more musical performance. In this section, I discuss in detail participants’ understandings of habit and autopilot and how these ideas relate to the use of conscious awareness while singing.

**Habit.** Participants understood habits as tendencies to carry out an action the same way every time. Alison, for example, described how she always held her books in her right arm and carried her purse on her left arm as an example of a non-musical habit. She also offered the following analogy to clarify further the idea of habits in singing.

It’s like going into a sport. It’s like going into soccer where you know how to run, but you train to run differently. You are learning how to run the correct way . . . or quote “correct way” in soccer. It’s like singing. You go in[to choir] knowing how to sing – you sing to the radio all the time – but it’s like a different type of singing, so you kind of learn the “right” way to sing. (Interview, March 25, 2011, p. 16)

Alison’s analogy and statement at the beginning of this section reveal a few important ideas. First, her ability to sing, like her ability to run, has developed over a long time. Second, she has a particular way of singing to which she is accustomed. Third, being in choir is an opportunity to learn to sing that is different from how she would normally sing with the radio. Fourth, there is a “correct” way to sing in a particular context.

Brittany’s statement at the beginning of this section conveys a similar understanding of a habit as “the normal” or “habitual” way that she sings (Interview, March 25, 2011, p. 15). In short, a habit is “just how you sing” (Interview, March 25, 2011, p. 15). She also added, “And I think that this exercise really shows that we have habits and they are not all good (Interview,
March 25, 2011, p. 15). This statement indicates that the activities in which she participated during this study helped her to become aware of her habits and that some of them were not productive for singing.

Other participants also reported that participation in somatic practice during this project helped uncover their own habits that affected their singing in both positive and negative ways. Finn, for example, explained,

I feel that there are some things that I do while singing that will make me sing better or make me sing worse, and [by] focusing on all the little things that happen while you are singing, it allows you to focus on the things that you realize that maybe you shouldn’t be doing. (Interview, March 22, 2011, p. 16)

To illustrate, Finn shared a specific example that occurred while exploring the articulators.

When we were doing the mouth exercise and [Mr. Paparo] said make sure not to push the tongue on the top of your mouth . . . I didn’t even realize I was doing that and after you pointed it out, I was able to focus on it and fix it and it helped improve my singing a little bit. (Finn, Interview, March 22, 2011, p. 16)

Finn became aware of something unproductive that he was doing that had become a habit (pressing his tongue to the roof of his mouth). His use of conscious awareness of that action was what enabled him to inhibit that particular action. As a result, it had some impact on his singing.

Though participants said that they noticed both good and bad habits, Jenny was the only participant to identify a productive habit. The see-saw breathing lesson confirmed Jenny’s habit of breathing for singing. She explained that she found it extremely difficult to breathe only in her chest, as was a part of the exploration. From this experience, she concluded that she had developed a habit of breathing deeply to expand her chest and abdomen. As a result of trying
different ways of breathing, she stated, “I actually realized how hard it was for me to breathe in just my lungs and how much less air and how much less powerful [my sound was]” (Interview, March 25, 2011, p. 8).

Though Jenny mentioned a habit that supported her singing in a positive way, she also was reminded of her habit of clenching her jaw. Reflecting on her experience of the tongue and jaw explorations, she commented, “I have a lot of jaw tension issues as [my voice teacher] tells me – like I don’t open my jaw. And it made me open my jaw a lot more and it felt freer” (Interview, March 25, 2011, p. 3). Whereas the experience of breathing affirmed her habit of healthy and productive breathing, the exploration of the tongue and jaw allowed her to release the tension in her jaw and experience a different, new way of singing. Jenny described a connection between her habit of jaw tension and her ability to sing in tune. She explained,

I can hear myself better when I am more constricted here (indicating her mouth, jaw, throat) . . . So then I can hear whether I am in tune or not. I am always about being in tune or not. So starting this kind of stuff [the explorations] has made me realize that I can be in tune and have a better sound – like I don’t have to hear, if I know what it feels like. So that’s a totally different thing for me, opening and trusting . . . not trying to hear myself all the time. (Interview, March 25, 2011, p. 5)

Jenny’s discovery that she is able to sing and hear herself was an awareness of her habit that her clenched jaw was related to how she thought about hearing herself when she sang.

All of the other participants discussed habits that were counterproductive to their singing. Kathy explained habits that related to her breathing while singing. Exploring the four steps of the breathing process helped her to breathe differently when she sang. Kathy said,
I felt like I was the opposite of [Jenny] – I don’t always sing – breathe – the way that I should. I just breathe through my lungs and restrict what I am doing. So I realized that when I actually had to move my air – when we did it with what opens up first in the process of breathing – when I actually had to think about it, then when I did breathe that way I was like, ‘Woh’ – because I guess I hadn’t ever been shown that – I guess I had, but I had never incorporated that into my singing before, so when I did do that I see a big difference in how I was singing with incorporating that. (Interview, March 25, 2011, pp. 9-10)

Kathy also reported that she noticed a habit in the way that she prepares to sing. “I notice that for some reason, I always want to take a short and fast and quick breath. I don’t want to take the time to actually take a good, quality breath in” (Interview, March 25, 2011, p. 17).

Jeff described a similar experience when he discovered his habit of resonating in his throat and chest. The equalizing the nostrils lesson helped him to bring attention to where his voice resonated.

Before we did [that lesson], I was just kind of singing, singing normally, and I guess that that’s – you don’t really focus on bringing the tone forward and into your nostrils and so when we brought attention to it, it’s – automatically . . . my whole resonating cavity when up into my sinus cavities and the sound – I could tell it was much more bright and forward and resonating in the sinus rather than in the chest or the throat cavity. (Interview, March 22, 2011, p. 3)

Jeff’s use of the word “singing normally” suggests a particular way of singing that indicates his understanding of it as a habit. Furthermore, he indicates that he does not really pay attention to
where he is creating the resonance until he brings his attention to it. When he resonated in the
nasal cavities, his singing caused less strain on this throat (Interview, March 22, 2011).

Stefano explained that, after plugging his nose while singing, he felt the airflow through
his nose, which created a more forward resonance. The exploration had helped him to realize the
path of his airflow and that it was possible to create a change in resonance. He stated, “After a
little while when I didn’t [hold my nose], I started singing how I normally sing, which is in my
throat and mouth” (Interview, March 22, 2011, p. 3). Again, his use of the word “normally”
indicates his habit of resonating in the throat and mouth and that the exploration yielded a
different experience of singing for him.

Madeline shared a discovery about the way that she stands after the “Improving Balance”
lesson and how it related to singing. The following is an interview excerpt:

Madeline: I stand [with one foot crossed over the other] a lot of the time I guess because I
don’t notice how out of balance I am sometimes. My weight is never balanced between
the two legs. I am always leaning to one side or the other side. I always stand with my
feet like that just because I think it’s cool. But when we did that [lesson] and we had to
switch them . . . I noticed just how out of balance I was. So it was cool to see when I did
become balanced I could sing better because I was more balanced.
SAP: So you felt that one leg crossed over was what you were used to and when you
crossed it the other way –
Madeline: When I crossed it the opposite way, I was like, ‘Wow!’ I thought I was going
to fall over or something. (Interview, May 23, 2011, p. 4)

Through the course of the project, participants similarly became aware of what they were
doing as they sang and experienced non-habitual ways of singing that helped clarified how they
were singing and provided new possibilities and options to sing differently. Madeline stated this succinctly, “It show us what we can do to change those habits, if they are bad or notice the good things about the habits that we have” (Interview, March 25, 2011, p. 15).

Participants’ experiences reveal that they were not aware of their habits for the most part. When they brought their attention to what they were doing during the movement explorations, they realized some of their habits. Bringing attention to what they were doing in the moment allowed them to be consciously aware of their actions and identify them as habits. In other words, their experiences suggest that conscious awareness of their singing is a form of self-knowledge, which is necessary in recognizing their actions as habitual. The subtheme of conscious awareness follows at the end of this theme.

**Autopilot.** “Autopilot” is an idea that came from Ms. Riggins’s experience during her own high school graduation ceremony. She explained,

I don’t remember my high school graduation. I was there. I sang the National Anthem. I got an award in the middle. I don’t remember what I wore. I don’t remember the ceremony. I don’t actually remember being there. I don’t even remember the hour afterward. And it was because I was going through the motions in order to preserve myself from actually being part of what was happening. (Interview, May 22, 2011, p. 7)

Later, she realized that she tended to have this “weird out-of-body experience” when she was under a lot of stress or when something important was about to happen (Interview, May 22, 2011, p. 6). As a result, she felt that she missed the experience of being in the moment. Ms. Riggins’s experience of autopilot may be described as a state of being in which she was not consciously aware of her thoughts, actions, and surroundings.
During their preparation for the state music conference, Ms. Riggins began to talk to the students about the idea of autopilot in order to prepare them to be fully present in every moment of their performance. She also explained that, because they had been working on the music from August to January, students made careless mistakes and were not as emotionally expressive as possible because they had sung the music so many times.

I started talking about autopilot a lot and staying present and staying in the moment and staying in the musical moment, so their ears were actually hearing what was happening and they would be able to adjust based on what they were hearing . . . I do think it’s something that they have a hard time with when they’ve been singing a song for a particularly long period of time. Taking a fresh take on it or making it new to them is really difficult. It’s difficult for me too; I get sick of their music. (Interview, May 22, 2011, pp. 7-8)

Ultimately, Ms. Riggins felt that helping students to understand autopilot was important because it would lead to a more musical performance. She stated, “Obviously if you are staying present, you are actually going to put yourself into the music” (Interview, March 27, 2011, p. 29).

Habit, as discussed in the previous section, and autopilot are related in that they both refer to how one carries out or performs an action without being “present” to the full extent possible. According to Ms. Riggins, being on autopilot suggests that she went through the motions of singing at graduation without conscious awareness of what was happening. In essence, autopilot describes the way in which one does something that is mindless and disembodied. Furthermore as she indicated, she had a habit of going on autopilot when in stressful situations. Through reflection, she realized that, by bringing attention to her habit, she
was able to avoid going on autopilot in other situations and wanted to share this knowledge with her students.

Some participants also referred to Ms. Riggins’s idea of autopilot in relation to their use of attention while singing. As mentioned at the beginning of this section, Jeff offered this explanation of autopilot during the first focus group interview. For Jeff, autopilot is an experience of going blank mentally during a performance and relying on the habit of what has been practiced in rehearsal (Interview, March 22, 2011). He further described how directing his attention to parts of himself while singing helped him to be more attentive to his singing. He stated that, by paying attention to your body,

it keeps you aware of what you are doing when you are singing . . . Thinking about what your instrument is doing and what you are physically doing, keeps you aware and not on autopilot. It keeps you present . . . When you actually think about [what you are doing while singing], you can put a lot more emotion and thought into it and create more music. (Interview, May 16, 2011, p. 16).

Jeff’s statement reveals that the use of attention in order to gain conscious awareness while one is singing is important to prevent one from going on autopilot. His understanding is congruent with Ms. Riggins’s description of this experience.

Jenny offered a similar explanation, stating that ensemble members went on autopilot after having sung the same repertoire for the state conference performance for such a long period of time. As a result, she stated that one tends to make the same mistakes over and over again because “you are just not thinking about what you are doing” (Interview, May 23, 2011, p. 7). She added, “You know you can get that note right, but you are just not thinking about it and you sing the wrong note or whatever” (Interview, May 23, 2011, p. 7). Jenny also pointed out that
thinking about her body while performing prevents her from going on autopilot because “if you are aware of your body, you are aware of what you are doing” (Interview, May 23, 2011, p. 7). She clarified, “It’s the mental connection of thinking about what you are doing. It goes back to your voice and your singing” (Interview, May 23, 2011, p. 7).

The following except from the second focus group interview further illustrates the idea of autopilot in relation to singing, according to Alison, Jenny, and Madeline.

Alison: When you look at someone in a performance, you can tell –

Jenny: You can tell!

Alison: When they are not there and they are kind of glazed over and they are kind of running what they know what to do. But when they put on a performance, they have to be present. They have to put on that show and have to be in that state of mind to be able to perform it the best that they can. I do it. When I just go on autopilot, I just do what I know how to do, but doing the [movement lessons] and bringing my mind to the present really keeps me better in tune, singing the right notes, being more energized singing when I am singing and more visually there.

Madeline: Sometimes I consciously go on autopilot. I know that that sounds weird. You know you asked about whether we think about when we do that. You can just tell when you’ve had a long day and you just come to rehearsal and I just know that I am not going to be in to it. Sometimes you just know that you are going on autopilot and so then I can tell and sometimes I will pay attention. I will look at it after rehearsal and think of how I sang and when I am consciously there singing. I can see the difference between when I let myself go on autopilot and when I am actually working and doing and consciously there and singing. (Interview, May 23, 2011, pp. 8-9)
Alison and Jenny agree that it is possible to know when a performer is on autopilot by how they look and perform. Alison suggests that she goes on autopilot when performing and that bringing her attention to her movement during the lesson helps her stay present, which she believes is important as a performer in giving a convincing performance. Madeline also reveals her experience in consciously choosing to go on autopilot during rehearsal. Their descriptions reveal that they are consciously aware of how they use their attention, which elaborates on Ms. Riggins notion of autopilot.

Daniella’s statement summarizes singing without conscious awareness. “A lot of times, I tended to sing without thinking about the sound I was making and how my body was making that sound, just . . . singing to sing, I guess (Interview, March 25, 2011, p. 4).

**Conscious awareness.** As explained at the beginning of this theme, participants explained that they had habits that affected their singing performance. They reported that by directing their attention as they sang, they were able first to become aware of how they sang and then change how they were doing it. This is not surprising, since a central focus of every movement lesson is to direct one’s attention to the quality of movement and to one’s awareness of oneself while moving. Jeff described how he became aware of his habitual singing posture:

> It was just weird because you don’t normally think about your body position . . . you are just kind of like, “Oh, this is my singing stance – I just come here automatically.” But once you bring attention to it, it’s like, “This feels weird!” [It’s] kind of [like] singing off balance. (Interview, March 22, 2011, p. 11)

Jeff’s statement communicates several important ideas. First, he acknowledges the idea of habit regarding his body position (alignment/posture) when he refers to it as his “singing stance.” Second, when singing, he assumes this stance “automatically,” which is not something that he
thinks about; hence, he goes on autopilot. Third, his use of the words “bring attention to it” suggests that he must actively direct his attention in order to become aware of what he is doing. He explains how specific movements bring attention to certain aspects of his singing:

You don’t really think about [breath support, placement, and posture] all of the time and moving specific body parts brings attention to something. So moving the air from your stomach to your chest brings attention to breath support. And plugging your nose and singing brings your attention to where you are placing [the sound] when you are singing. And [other movements bring attention to] where your legs are, where your feet are, where your hands are, where your shoulders are. All of that just brings attention to different things that helps you sing. (Interview, March 22, 2011, p. 8)

During movement lessons, participants reported that they often focused so intently on some aspect of their movement that they forgot to notice their breathing. Several said that being aware of their breathing while moving was very difficult. Once prompted to notice their breathing, the participants were surprised to discover that they in fact were holding their breath without being aware of it. Brittany wrote the following in her journal: “I learned that I hold my breath when doing these experiences and don’t realize it until [Mr. Paparo] says something about it” (Brittany’s journal, February 22, 2011). Madeline commented humorously, “You’d say notice your breathing and I’d say ‘What breathing?’” (Interview, March 25, 2011, p. 16). These examples demonstrate that participants directed their attention locally to the particular movement or task rather than distributing their attention to include their entire self in the action. When asked about how they were breathing as they moved, Madeline and Brittany realized that they were aware only of one aspect of themselves instead of their entire self. By focusing their
attention more globally, they then realized the importance of directing attention to their awareness of themselves.

Some participants also stated that directing their attention prevented them from being on autopilot, as discussed above, because they brought their attention to what they were doing. In addition, Alison realized that there was so much more to singing as a result of knowing how to direct her attention.

I just like how much more I think about [singing] now because I never used to think about it. Again with the ‘autopilot’ thing, it’s amazing how much I didn’t notice before because so many things go into it. I was like, ‘Ahn, I’m just singin’’, but now I am singing and my stance and my shoulders and my breathing and it helps so much that it was amazing to me that I didn’t notice before. (Interview, May 23, 2011, p. 14)

Ultimately, by understanding the importance of the use of attention in singing, participants were able to make changes in their singing. Kathy summed it up: “You can’t just pay attention to your voice and how you sound, you have to pay attention to your body and how it affects your voice and how it makes your voice sound” (Interview, March 25, 2011, p. 15).

**Summary.** According to participants, a “habit” is a tendency to sing in a particular way to which they had become accustomed over time. As a result of becoming consciously aware of how they sang, participants identified habits, most of which were counterproductive to their singing. Participants also described “autopilot” as a state of being in which they withdraw conscious attention from their thoughts, actions and surroundings. They reported that they occasionally went on autopilot during rehearsal or performance, indicating that they were not attentive to their singing performance. By consciously directing their attention to their singing,
participants felt they were able to become aware of habits and to stay present and ultimately, give a more musical performance.

Emerging understanding of embodied singing

“Your body is your instrument.” – Jeff

Participants described embodiment as awareness of their bodies and feelings of being connected to their bodies while singing. As participants became more aware of their bodies through somatic exploration, they began to recognize the body’s impact on their singing. Many reported that they had not previously considered or realized the extent to which the body played a role in their singing. Participants expressed an understanding that the body is the singing instrument, as Jeff stated (Interview, May 16, 2011, p. 14). They used instrument analogies to explain that their bodies affected their sound and drew parallels between learning to play an instrument and learning to sing. Some participants mentioned the mind and the emotions as components of embodiment as they understood it. Participants explained that awareness of the body and mind was crucial for musical and expressive performing. This theme concerns participants’ emerging understanding of embodiment in singing as a result of their experiences in this study.

Many participants reported how awareness of their bodies informed their understanding of embodiment in singing. Brittany, for example, explained,

I feel like embodiment is being really aware of what your body is doing and all of these exercises are about awareness. And you don’t realize that when you are singing, it’s just not about right here (indicating her mouth) . . . I’m singing, I’m singing out my mouth, but it’s also everything. (Interview, March 25, 2011, p. 14)
Brittany’s statement reveals that she had not previously considered how awareness of other parts of herself contributed to her singing. She expressed an expanded understanding of what was involved in singing. Kathy also expressed a view of the importance and connection of body:

I think [it’s] just an overall realization of how important the body is when you are singing. You know it’s not just your vocal chords and your lungs. It’s so much more than that. Who ever knew that the way that my feet were placed on the ground affected the way I was singing? (Interview, May 25, 2011, pp. 4-5)

When asked to describe what was involved in singing, Alison identified her mouth, facial cavities, vocal chords, and lungs, and added, “But my whole body affects the instrument and it all works together” (Interview, May 25, 2011, p. 6). Though she pointed out specific parts that actually created the sound, Alison conveyed a holistic understanding of how her singing instrument is contained within and affects the body.

Participants offered instrument analogies to explain how all the physical components of an instrument affect its sound. Marty explained how every part of a guitar, including the height of the bridge and the placement of the strings, has an effect on the sound (Interview, May 16, 2011). Bubba described how the ranges of the tenors were like trumpets and the baritones were like trombones (Interview, May 16, 2011).

As with learning to play an instrument, Jeff and Madeline expressed that there were certain ways that made playing easier and more successful. They also thought that this was the case for learning to sing. Madeline compared singing to learning to play a trumpet. She explained that a person “could pick up a trumpet and play it, but it’s not really until you know the correct technique and know how it works that you can play it well” (Interview, May 23, 2011, p. 6). She then added, “And it’s the same with your voice. You really have to know
what’s going on in order to understand how to use it right” (Interview, May 23, 2011, p. 6). Madeline’s comments reveal that a singer must understand how to use one’s singing instrument in order to sing well. Jeff similarly stated that a pianist must understand and learn what to do in order to play the piano well. He explained that, in this study, participants were learning to sing by learning to use their bodies through moving because “we have an internal instrument” (Interview, May 16, 2011, p. 11). He added, “So it’s just like taking lessons for your voice” (Interview, May 16, 2011, p. 11). When asked to clarify what he meant by “internal instrument,” he said:

We don’t have a physical instrument that we can hold and adjust. So when you don’t have something you can hold and adjust, it’s like, ‘Okay, what can I do to fix something?’ It’s not like I can reach inside and twist something and suddenly I am sharp. So you have to visualize it and then your body will hopefully take that message and do something with it to produce the certain sound that you are going for. (Interview, May 16, 2011, p. 12)

Jeff’s definition of “internal instrument” is similar to Alison’s idea that the singing instrument is contained within the body. His explanation suggests that singing is a process that begins with a visualization of the sound, which is created or carried out by the body. Learning to sing, therefore, is learning how to coordinate the mind and body that produces singing.

Elaborating on the “internal instrument” explanation, Marty suggested that a singer has to rely only on his internal bodily sensations in order to sing. He explained, “You have to pay a lot more attention to the internal feeling of how everything is set” (Interview, May 16, 2011, p. 12). Jeff added, “Yeah, you have to know what feels like what. What placement feels like, what support feels like” (Interview, May 16, 2011, p. 12). Marty summed up his understanding in this
way, “I would say that we’re gaining a better understanding of our internal instrument through the exploration of our own body and of our own selves. It’s helping us understand it and know how to actually work our true instrument” (Interview, May 16, 2011, p. 13). In short, learning to sing requires “the internal understanding of what you are doing” (Marty, Interview, May 16, 2011, p. 14). (Jeff’s and Marty’s statements suggest that learning to sing involves learning from sensation. This will be discussed further in the next theme, which addresses new perspectives on learning to sing.)

Marty’s and Jeff’s use of the word “internal” can be interpreted as embodied; “understanding” is another word for knowing or thinking in action. Thus, according to them, learning to sing requires embodied knowing. Also, learning through somatic exploration is essentially learning how to use one’s instrument. Marty’s use of the words “our own selves” are of particular interest because he suggests that there is more to singing than just the body. Although he did not elaborate at that moment, later in the focus group interview he raised the idea of using the mind and connecting to emotion while singing, which is discussed below.

While all participants described the importance of body awareness as the basis of embodiment, some participants also included the mind. Jenny, for example, recognized the importance of knowing how the instrument actually works:

I think a lot of [learning to sing] is just understanding what each part does. Not only do you know that your soft palate is working, but how does it work . . . cause I am a very visual person, I guess you could say, so then I can visualize it in my head and then I think about that. I know that the diaphragm is working, but how does it actually work. When you explained the steps of breathing, you think about it a lot more because not just
knowing that it is involved, but knowing how it does it is what helps a lot (Interview, March 25, 2011, p. 14).

Jenny mentioned the soft palate and diaphragm, which are two parts of the body that cannot be seen, felt or controlled directly with conscious attention (see *What Every Singer Needs to Know About the Body*, Malde, Allen & Zeller, 2008). Because she cannot feel or control them, she relied on visualization to know how they are working while singing. Visualization is the mental activity of imaging. By visualizing while singing, she implicates the use of the mind in relation to her body when singing and in so doing implies that the mind is also a component of embodiment in singing.

While Jenny referred to the involvement of the mind implicitly (referring to understanding how the parts work), a few participants explicitly identified the mind in their conception of embodiment in singing. Jeff, Madeline, and Marty described various ways in which the mind also played a role in singing. As mentioned above, Jeff described how he needed to visualize the sound before his body would create the intended result (Interview, May 16, 2011, p. 12). Brittany also expressed the role of the mind in monitoring the amount of effort used while singing:

> Yes, it’s your whole body, but it’s also mentally. I think that you have to be like, ‘No effort.’ You have to tell yourself; you have to be like, ‘No effort.’ Yes, you are moving your body parts but also your mind is triggering it. You somehow have to have this joint effort. (Interview, May 23, 2011, p. 7)

Brittany’s use of the words “joint effort” speaks directly to her idea of embodiment as conceived in the literature. She suggests a reflective process of observing and thinking that happens in the moment while singing. In other words, when she triggers (thinks) a response in her body (the
action), she is also aware (thinks) of her body in order to know if she is using too much effort. In essence, she is describing her own awareness of monitoring herself while singing.

As mentioned above, Marty also suggested that the mind is a part of embodiment. He explained that he pictures himself in a particular situation in order to express the emotion of the piece he is singing (Interview, May 16, 2011, p. 16). His thinking in the process of singing refers to how he engages his mind while singing. “I feel like when you are connected to something on an emotional level you automatically make it more beautiful . . . or whatever the song is asking of you” (Interview, May 16, 2011 p. 16).

Participants specifically explained that awareness of the body and mind was crucial for musical and expressive performing. For Madeline, the body was central to her understanding of embodiment in singing. Madeline understood it as a process of becoming one with the music and expressing it in every part of her body.

I think [embodiment is] like . . . enabling my body or mobilizing my body to move with and work in – side by side with my singing. When I am singing, I make sure that what my body is portraying what I want to be singing. So if I want a free sound, my body needs to be relaxed and free and work with that. And I move naturally actually a lot when I sing and I feel that’s always helped me because I can actually be one – it sounds weird, but be one with what I am singing. And so if I am moving my body with where the notes are moving, then it helps me to sing better. (Interview, March 25, 2011, p. 13) Her statement suggests she, in essence, becomes or embodies the music.

Alison described her understanding of embodiment from the perspective of observing a performer:
I feel when I watch somebody do something or when I do something, I want to see them do it really well. I want to see it through them. So when you watch someone do – I guess the best example I have is like watching someone in a play or in a musical or in a movie, when you see them they can actually put that music or put those feelings into their body. And so that’s what I try to do with my singing – literally make everything feel like my singing. (Interview, March 25, 2011, p. 14)

Alison’s statement that she makes everything feel like her singing, suggests that the music must be fully integrated into her body or embodied. She provided an example describing the Brahms songs,

Even though it wasn’t in English, we had to feel the emotions like anger, and we had to feel the joy and we had to feel the longing and the need of the lover and it’s hard to do that when you are not connected to your body. (Interview, March 25, 2011, p. 14)

Participants also described the importance of connecting to the emotion in order to express the piece in performance. Marty, Finn, and Jeff described a reciprocal relationship between the body and emotions. The body can portray the emotions that you want to express and the carriage of the body can also help you to feel emotions. The following excerpt describes how they think of the body and emotions:

Finn: Body motions can portray an emotion that you can feel.

Jeff: Like body language. You can portray different moods or attitudes or emotions that you want to convey.

Marty: Because if you are kind of slumped over then you are going to kind of sound like you’re slumped over and draw into yourself when you are singing, then it’s going to
sound like that. You are going to portray how you actual feel during the song. And it will express your emotions. (Interview, May 16, 2011, p. 21)

Marty illustrated by explaining how playing an F minor chord on his guitar “wipe[d] away” the expression and turned his face to “almost like a state of sorrow” (Interview, May 16, 2011, p. 22). His description of this experience as a “reaction” suggests that there is an involuntary physical and embodied response to music.

As the boys’ focus group interview developed, participants summarized how they conceived of the singing instrument as a way to describe embodiment. In this excerpt from the end of the conversation, they expressed the interconnectedness of many different aspects that create the singing instrument.

Jeff: Your instrument is you.

Marty: You are your instrument.

Bubba: I don’t think that you can classify one thing as your instrument. It’s everything that comes together.

Jeff: It’s like everything is a part of your instrument and comes together as one.

(Interview, May 16, 2011, p. 23)

**Summary.** As a result of participation in this study, participants described embodiment as awareness of their bodies and feelings of being connected to their bodies while singing. They also mentioned the role of mind and connection to emotions while singing. Participants explained that awareness of the body and mind helped them create a more musical and expressive performance.

**New perspectives on learning to sing**

“It changes your perspective on singing . . . A WHOLE LOT!” – Stefano
Stefano’s comment (Interview, March 22, 2011, p. 13) enthusiastically expresses the extent to which participating in this study changed his perspective on singing. He was not alone. Statements such as, “It made me notice that there is more to singing than what I thought” (Marty, Interview, March 22, 2011, p. 10) and, “I would have never thought to do these exercises to make my sound better” (Kathy, Interview, March 25, 2011, p. 7) indicated that participants gained new perspectives on singing from their experiences as a result of participating in this study. Participants identified the following insights into learning how to sing from this somatic approach: (1) slowing down, (2) reducing effort, (3) sensing differences and learning from sensation, and (4) experiencing uncertainty and frustration and emerging understanding.

Participants also discussed comparisons between traditional classroom learning and a somatic approach to learning.

**Slowing down.** Related to how participants directed their attention was the importance of slowing down to notice what they were doing while singing as well as in other activities. Throughout each lesson, I encouraged participants to move slowly. Bubba stated that slowing down helped him to direct his attention and, as a result, learn something more thoroughly.

I learned to slow down. (*Laughter.*) I am a very fast-paced guy. Do this, do this, do this and it will work. (*He snaps his fingers several times.*) I never really thought to myself, if you break [something] down, you can fully understand every aspect. I just thought if you get it done (*He snaps his finger.*), you’ll learn it better. And so I understood it after you told me to slow down and think about how you are feeling and what do you think when you are feeling this way. (Bubba, Interview, March 22, 2011, p. 16)

Jenny expressed a similar realization that applied to other aspects of her life:
This might be totally unrelated to singing, but [Mr. Paparo would] always say to slow down, and I would realize how fast I would be doing things . . . If someone tells you to do something, you just do it. But you don’t really think about it – you know what I mean? If somebody tells you something, you don’t think about how you are doing it. You are just doing it. I guess that is what I am saying. To slow down made me realize that I don’t really think about the normal things that I do and obviously made me more aware then of what I was doing. (Interview, March 25, 2011, p. 16)

The experience of slowing down made Jenny realize that she did not normally think about the things that she does. By slowing down, participants communicated that they were able to have more conscious awareness of what they were doing, which in turn contributed to their learning.

Reducing effort. Throughout each lesson, I encouraged participants to notice where they were exerting unnecessary effort while performing the movements and to reduce their effort accordingly. Participants reported that this idea was both new to them and resulted in changes in their experiences of moving and singing. Daniella commented, “It was relaxing to let go of the give 150% mentality. I did not know ‘trying too hard’ existed” (Daniella’s journal, Week 1, March 22, 2011). Her statement reveals a belief that working hard mentally was optimal in all situations. By reducing her extraneous effort, she discovered that she could turn more easily and felt more relaxed (Daniella’s journal, Week 1, March 22, 2011). The experience of moving more by reducing effort surprised her because it contradicted her existing belief.

Jenny expressed a similar opinion of the benefit of reducing effort as it applied to her singing:

I know it’s not something that we really focused on but it’s something that really helped me when you said: “And if you have tension anywhere, release it. Try to think of a way
to reduce the tension.” That helps a lot when I am singing, where can I get rid of tension and that helps a lot. (Interview, May 23, 2011, p. 2)

For Jenny, unnecessary effort meant tension. By reducing tension, she felt her singing improved.

**Sensing differences/Learning from sensations.** Participants frequently discussed differences in sensation (such as heaviness or lightness) as a result of the lessons. Kathy’s statement, for example, revealed the importance of learning from sensation. When asked how she knew that something had changed following a movement exploration, she said, “[It’s] not even necessarily in the way things sound or the way I hear things, but in the way that I feel sometimes. Sometimes things just feel better” (Interview, May 23, 2011).

Differences in sensation formed the basis for learning to sing. In the following excerpt, Marty described how he developed a new idea of lower abdominal breathing as a result of the see-saw breathing lesson.

Marty: I thought that when I was supporting my breath, I was doing it right. But I wasn’t. I was putting the pressure in the wrong spot – I was putting it too much up in my abdominals rather than my lower abs.

SAP: And how did you come to that conclusion or understanding?

Marty: When we were lying on the floor and after we stood up, I started realizing that – the feeling of when I was on the floor – where I was putting the pressure. And when I stood up it’s a weird feeling.

SAP: So it wasn’t something that you were accustomed to or it created an experience that you were not accustomed to?

Marty: Yeah. (Interview, May 16, 2011, p. 5)
The sensation of pressure that Marty experienced while on the floor then transferred to when he was standing, which resulted in lower abdominal breathing. From that, he concluded that prior to that he was breathing incorrectly.

As the conversation continued, Finn also described how he applied what he had learned in the lesson on the floor to his standing posture while singing.

Finn: I felt like [the candle holder lesson] helped me to know where I should put my shoulders, to put them in a position that I want them to stay in, and I kind of transitioned that into how I was singing. So if I wanted my shoulders to be more down, I just focused on the movements we were doing and how my shoulders move, so I could have them stationary and not have them to slowly rise or tense up.

SAP: And did you notice any effect or relationship to your singing?
Finn: I think it helped me to use more of my breath. Because when I was tightening and tensing my shoulders up, I was limiting the amount of air that I could take in because it is decreasing the amount of space that my ribs can move. So keeping them in the right spot has allowed me to expand my rib cage more for a lot more air, so I can sing for longer phrases. (Interview, May 16, 2011, p. 6)

In both examples, Marty and Finn learned something new through noticing differences in sensation that occurred as a result of the movement explorations.

As discussed in the previous theme, Jeff suggested the importance of knowing what placement and support “feels like” (Interview, May 16, 2011, p. 12). His bodily sensations formed the basis of his understanding of these concepts related to singing. Similarly, Jenny’s habit of restricting the movement of her jaw was related to her habit of listening to herself when she sang. After the tongue and jaw exploration, she noticed that she could open her jaw more
easily. As a result, she could rely on the new sensation of ease in her jaw and still sing in tune. By not trying to listen to herself, she was able to trust the sensation of what it was like to sing in tune. Jeff and Jenny also described specific examples of learning from sensation to sing.

Experiencing uncertainty and frustration/emerging understanding. Experiencing uncertainty emerged as a part of participants’ insight into somatic learning. Participants explained that, at times during movement explorations they did not observe differences in their singing. Jenny and Kathy expressed this concern during the first focus group interview:

Jenny: I actually have trouble seeing the difference, if we are lying on the floor doing [a lesson], a lot of times I don’t feel a difference when we sing afterwards . . . I don’t know if I am supposed to. Maybe I am more relaxed but that’s probably because I am just lying on the ground. (All laugh.) But I personally don’t see that much of a difference after that.

Kathy: I feel the same way. When we are lying down, it’s harder to see the difference, but when we are sitting down and doing something, I notice, but I am not sure why.

(Interview, March 25, 2011, p. 6)

During the final focus group interview, Bubba expressed a similar experience:

There were times that I bet that something did change but I didn’t feel it. And if I didn’t feel it, then how do I know? . . . So I guess everything I thought would be feeling different but I just found that it was just all . . . I guess I would be feeling everything.

(Interview, May 15, 2011, p. 8)

Jenny, Kathy, and Bubba’s comments suggest they would feel differences and observe changes in their singing. Bubba’s question, “If I didn’t feel it, then how do I know?” reveals a deep understanding of a fundamental premise of somatic practices, the ability to learn through bodily
experience. In essence, he is asking how he can learn, if he is unable to notice differences in how he feels.

Participants reported that they did not always understand the lesson. In reference to the “Basic Flexion” lesson on the floor, Kathy stated:

I thought it was weird we did the foot tapping and then how we lifted our head . . . . I was more aware of how [the movement of the foot] went up through my knee and up through my pelvis and how it moved the rest of my body after. I thought it was weird. Why would lifting my head and paying attention to my spine affect how I was aware of what my foot tapping did to the rest of my body? (Interview, March 25, 2011, p. 18)

However, when asked about the connection between her spine and her foot, Kathy shared the following story,

You know, I remember that – random story – that kind of relates to this. I’m a swimmer and this is kind of gross – sorry – but I had warts on the bottom of my foot – (dryly) I’m a swimmer and I just got them. They got really bad and I started walking on my foot sideways that that in turn gave me really bad back problems. And so obviously your spine affects your foot and that’s probably where the relation comes in. (Interview, March 25, 2011, p. 18)

Though Kathy may not have been clear about the relationship of the foot and the spine during the movement lesson, her experience of having had back problems because of the warts on her foot revealed that she indeed had some understanding of the relationship between the spine and the foot.
Participants did not always understand at first how movement explorations and Awareness Through Movement lessons related to singing. In the following excerpt from the first focus group interview participants voice their concerns:

Jenny: A lot of the floor stuff, for example, I was like, ‘How did that relate to singing?’ And I don’t know if part of it is that it’s not a clear answer or what, but I found it hard to relate to singing sometimes. Obviously, when we [move our] jaw and then sing, it makes sense, but when we are working with our legs on the floor, it’s kind of like ‘Wait, what did that have to do with singing?’ And I don’t know if you’d be able to tell us that or what but . . .

Alison: Or at least how it affected our singing. If you say ‘oh, that tone was brighter’ or something like that or ‘oh, that was a little flat that time’ . . .

Jenny: Because then we would know how to use it. If something made us sound better, then I would try to use it the next time I sing. (Interview, March 25, 2011, p. 20-21)

Not being able to understanding the lesson or its relation to singing led to feelings of frustration and confusion:

SAP: Jenny, how did it make you feel not knowing?

Jenny: Well, I had to think about it a lot more, but sometimes I just couldn’t figure it out. I honestly don’t know what the pelvis stuff – I never made a connection – because it didn’t affect my singing afterwards. So then I would be like, ‘Did it do something for other people? Or is it just me who didn’t realize a difference? Or did it really sound different and I am just not thinking about it? So it made me think about it, and I would get a little bit – I don’t know if frustrated is the word, but I would get a little confused – I
guess is the better word – and just not seeing how it relates. (Interview, March 25, 2011, p. 21).

As the conversation continued, some participants suggested that receiving feedback about how their sound changed was helpful.

Brittany: Yeah, I think it is good that Jenny said that because when you ask us to sing after we do the exercise, that so I know, ‘Oh, yay, that was really good because of this’ or ‘You sound really good because you’re doing this’ or something like that.

Madeline: Like the one that we did with the teeth and the tongue and you said and the look on your face just told us all that it sounded so much better after we did it. (Response from someone: Yeah!). Then I knew in my head that if I wanted to be in tune and after that like when we are singing in choir when we’re not doing activities, I would think about how I could get this more in tune, I would move my tongue and it would sound much better, so now I’ve incorporated that to make it sound more in tune. (Interview, March 25, 2011, p. 21)

Ms. Riggins shared a similar experience of being frustrated by not initially understanding the purpose of certain movement explorations:

The only thing that I think is frustrating sometime for me is that lots of times I want to know why we are doing things and maybe this is just my personality and I know there are some kids like this in the group . . . We’ll do things and I’ll think: “Why did we do that?” And I am trying to figure it out for myself . . . and partly, because I’ve been taking classes for so long and I feel like I’ve been in school forever, I want you to tell me the answer and that’s totally not what this is about. (Interview, March 27, 2011, p. 17)
Her comment reiterated her students’ concern and acknowledges that this type of learning is different than traditional schooling.

Ms. Riggins also experienced uncertainty in a few lessons when she was not able to perform the movements of the lesson. She recalled her experience during the “Sinking the spine between the shoulder blades” lesson,

That day when we were trying to [lift the arm while lying on the front], I was like, “I can’t do this at all.” I was like “What’s wrong with me?” I wanted to look around and be like – because Brittany was next to me that day and I wanted to be like, “Brittany, can you do this? . . . Brittany, can you lift your arm?” You know? And I was like, “Oh my gosh, I am so weak.” And I have been working out this year – I was like, “I can’t be weak because I lift like crazy.” But it had nothing to do with that at all. (Interview, March 27, 2011, p. 17).

Ms. Riggins also shared that the see-saw breathing lesson was challenging, in part because she frequently demonstrates breathing into the abdomen for her students (Interview, March 27, 2011). These lessons also may have been challenging in part due to her habitually rounded shoulders. Experiencing uncertainty and resultant frustration during the lessons, however, is often an inherent part of learning a somatic practice, because the process encourages participants to try different possibilities, many of which reveal habits of which they have been unaware previously and challenge their current understanding.

Despite participants’ concerns during the first group interview, their views changed considerably over the course of the project. During the final interview, these participants expressed a new understanding of somatic learning, which had emerged as a result of more experience. Furthermore, as discussed in the first theme, they all described how somatic practice
had positively affected certain aspects of their singing performance. During the final focus
group interview, Jenny conveyed her new perspective:

   It’s easier to understand what’s really happening. When you are doing something with
   your arm and you know that you are looking for some way that it helps you, it’s so much
easier to realize what’s happening. (Interview, May 23, 2011, p. 11)

Similarly, Kathy expressed her developing understanding as well as what she felt she learned
from being a part of this project.

   So at the beginning of the semester, I wasn’t really um . . . I think all of us were not sure
   how this was going to connect to our singing. Obviously it’s going to. But slowly more
and more, I am starting to be able to figure out how the things we do are affecting our
performance and the way we are singing . . . I guess doing this study has taught me not
only to figure out how my body connects to the way I sing, but figuring out what works
for me and paying more attention. (Interview, May 23, 2011, p. 12)

Their comments conveyed a greater understanding of the process and confidence in their abilities
to face uncertainty. In essence, what emerged from their experiences was a developing sense of
independence, which may be an important and compelling reason to do somatic practice in the
first place.

   Comparison to traditional classroom learning. As the conversation during the girls’
final interview developed, they mentioned several differences between learning from a somatic
approach and a traditional classroom approach. A few of the girls commented that, early on in
the study, they experienced feelings of anxiety regarding whether they were doing the lessons
correctly. As they became more familiar with the process, they realized that their concern was
self-imposed and unnecessary. Madeline explained,
One of the things you said every day, there is not a right or wrong answer. You are not looking for a certain standard. It didn’t have to come out perfect. When we did it, we could do it to our own satisfaction or could do it until we were satisfied and notice for ourselves and not be like, ‘I have to have this see-saw breathing down by Tuesday, so I can show it to him that I know it.’ We had more freedom and relaxation . . . (trailing off).

(Interview, May 23, 2011, p. 20)

Madeline seems to suggest that, because students could explore as they wanted without an external standard of right or wrong, she felt there was more freedom and it was a more relaxing environment in which to learn.

Alison pointed out how learning in this way was different too because it seemed to allow for individual differences in experiences, which was not the case when it came to testing in schools.

Instead like in school where you have a test for every single type of person and it’s the same test for every type of person though every person is different, in this . . . every person is different and you say some things will work for some people and some things won’t work for some people and it’s okay that not everybody feels this because some people don’t have to. (Interview, May 23, 2011, pp. 20-21)

Kathy suggested that giving students reassurances about not needing to be right created a more supportive environment.

There was a lot less pressure to – I feel like sometimes in school you can get embarrassed if you get bad grades because you are not as good and not as strong in a certain subject as other people. And here there was none of that. There was no pressure. You didn’t have
to feel embarrassed if you could not do something the way we were supposed to.

(Interview, May 23, 2011, p. 21)

**Summary.** Participants indicated that they gained new perspectives on singing from their experiences as a result of participating in this study. They recognized that, in learning to sing from a somatic approach, it was important to direct their attention to notice, slow down, reduce effort, sense differences, and experience uncertainty before a new understanding emerged. Participants also discussed differences between traditional classroom learning and learning from the somatic approach in this study.

**New perspectives on choral music teaching**

“It’s like going green for voices.” – Ms. Riggins

Ms. Riggins’s lighthearted and witty statement (Interview, May 22, 2011, p. 14) reflects her view of a somatic approach as an “organic” and “natural” way of learning to sing (Interview, May 22, 2011, p. 14). This theme presents her observations of her own teaching over the course of the project and reveals how participation in this study impacted her thinking about her work in the choral classroom. There are noticeable parallels to the observations of the students in previous themes. She recognized certain strategies that were useful for teaching her students to sing. Ms. Riggins specifically identified the importance of: (1) recognizing “habits” and “autopilot,” (2) directing students’ attention, (3) reducing effort, and (4) an embodied perspective of choral teaching.

**Recognizing “habits” and “autopilot”**.

Ms. Riggins recognized the importance of identifying “habits” and “autopilot” in herself and her students. Regarding her own habits (as discussed in the second theme), Ms. Riggins became aware that she used a “default setting” when she sang (Interview, May 22, 2011, p. 3)
and often went on autopilot when leading warm ups (Interview, April 12, 2011, p. 24). She explained, “I don’t always use my best voice when I am modeling things, especially during warm up. I don’t always use my best singing because I have been singing for six hours – or whatever – before that” (Interview, May 22, 2011, p. 3). Throughout the study, I noticed that, when Ms. Riggins sang, she did so to demonstrate a phrase or more often to sing with the tenors or basses to review their pitches and often sang in their range (Field notes, March 17, 2011). In regards to her overall singing, she realized that teaching and singing in choirs was “very hard on [her] voice” because she sang second alto, which tended to be very low, and pushed a lot (Interview, May 22, 2011). As a result of this study, Ms. Riggins became more aware of how she used her voice while teaching and realized that she could sing more easily.

Referring to the idea of autopilot (as discussed in the second theme), Ms. Riggins also realized that she went on autopilot during warm ups because, by the time she has Chamber Singers at the end of each day, it is her fourth time leading warm ups. She also described herself as being like a “task master” in warm ups, meaning that she had a definite routine that students were supposed to do (Interview, March 27, 2011, p. 4). She explained,

I think that I am so set in what I am doing and I feel so proud that I have a routine – ha, ha – you know, because I haven’t been teaching that long. When I have a routine, I am like, “Yeah, routine.” Really honestly, if you hadn’t come in and done this, I would be doing these warm ups for the next twenty years the way that I am doing them because that’s what I was taught and that’s the routine that I am used to doing. (Interview, April 12, 2011, p. 12)

Though her warm up routine was something that she was proud of at her stage of teacher development, she had not considered why she was doing what she was doing. By definition, a
routine is a habit. Doing the same warm up routine four times a day understandably can make one more likely to go on autopilot.

Ms. Riggins also identified habits and autopilot in her students, which, in turn, informed her teaching. She commented that students’ “default setting,” or habit, was to sing with full voice all the time, especially during warm up (Interview, May 22, 2011, p. 3). She gave the following example:

When we are doing sirens [in warm ups] and I have to stop them a lot of times – I don’t know [if] you’ve seen me do this before but I’ll do like (*siren down in a light voice*) and then they’ll do (*siren with heavier voice*) and they’re all screaming and then I’m like, “Wait, was that what I was doing?” (Interview, March 27, 2011, p. 19)

Her students’ tendency to sing “full voice,” which was very apparent, created lots of tension and sometimes intonation problems (Field notes, March 17, 2011). Upon further reflection, Ms. Riggins explained that her students had mistakenly learned this habit of singing full voice in warm ups and described it as “a flaw in [her] teaching” (Interview, March 27, 2011, p. 19).

Ms. Riggins expressed that her students were on autopilot as well, describing that they were “out of focus right from the beginning of rehearsal” (Interview, March 27, 2011, p. 29). She offered the following about her students during warm ups:

They are not observing anything about themselves or thinking through anything that they are doing because they are not being required to . . . when I stopped to ask them things about warm ups, they are kind of this very weird . . . they just woke up kind of thing . . . this weird foggy . . . “So which vowel was out of tune?” And they give me a blank look like, “Oh, they were supposed to be in tune?” We’ll do (*she sings: Sol-Fa-Mi-Re-Do on the syllables “Mah, meh, mee, moh, moo”). “Which one do you think could be more
unified?” Nothing, I get nothing. They stare at me because they’ve been sleeping during that time. (Interview, March 27, 2011, p. 29)

Ms. Riggins’s frustration was clear. The students were not able to answer her question because they were not noticing the vowel sounds as they were singing. She acknowledged that, in the students’ defense, she had not “required” them to notice until she asked the question (Interview, March 27, 2011).

**Directing students’ attention.** Ms. Riggins recognized the importance of directing students’ attention as an important strategy that she learned from the somatic explorations. She noticed that I gave students open-ended prompts in between each repetition of the vocalise in order to observe what they are doing. “You’ll say things like, ‘Okay, now focus on your breathing.’ and you don’t say, ‘Is everybody breathing low?’ because that’s something that I do” (Interview, March 27, 2011, p. 21). Ms. Riggins commented that the intent of her question was to communicate to the students that they were not breathing low whereas the intent of my prompt was to have students focus on their breathing. “‘Okay, where is your tongue?’ and then they think about that . . . but there are no answers, they just go about their business and think about it themselves and they just keep going [with the vocalise]” (Interview, March 27, 2011, p. 21). Ms. Riggins accurately understood my intention and the purpose of the prompts. Without observing what one is doing while warming up, warm ups become “an arbitrary thing that happens at the beginning of the rehearsals” for students (Ms. Riggins, Interview, March 27, 2011, p. 22).

Related to directing attention, Ms. Riggins also noted the importance of observing what one is doing before changing it. She transferred what she had learned in the movement explorations to her teaching.
It’s just so interesting the noticing things that I’ve never incorporating into my teaching: Notice what you are doing before you change anything . . . all I’ve ever learned to teach or learned when I am singing was just change, you know . . . just change . . . so it’s just a completely different style of teaching them to notice . . . I don’t think that any of them are really thinking at all a lot of times when we are doing things – they think on “autopilot”.

(Interview, March 27, 2011, p. 28)

When Ms. Riggins led warm ups on Tuesday, April 12, she was able to engage students by having them notice how they were singing, so that they could develop their own awareness of their actions, which prevented them from going on autopilot. She was able to stay present and react in the moment to how the students were singing. Directing students’ attention during the warm up demonstrated her ability to implement what she had learned as a result of participating in this study.

Reducing effort. Reducing effort was another strategy that Ms. Riggins learned from the somatic explorations, which she felt was important. To illustrate, she explained how singing with full voice tended to cause students to use more effort than they need to in order to sing, which results in poor tuning.

I guess a lot of the tuning issues that come up have to do with, you know, once again control, but like muscling things, especially my tenors and my beginners, that’s true too, everything is muscle, everything is clench and when they are doing these warm ups, they are still warming up their voice, but they are doing in a much more natural way that is close to their actual voice than to their . . . to the voice that they think they are supposed to be using for singing. (Interview, March 27, 2011, p. 19-20)
Ms. Riggins believes that in choir, students use their voices in a way that they think they should which results in using more “muscle,” meaning exerting more effort, which results in tension and strained singing. By doing the movement explorations in conjunction with warm ups, the students are able to use their “actual voice,” which Ms. Riggins described as one that was more natural sounding and not manufactured, overly mature or unnecessarily weighted. Because her students frequently sang with too much effort, they often drove the pitch up and ran out of breath before the ends of the phrases. During one rehearsal prior to district festival, I mentioned to the students that they were working really hard to sing one of the Brahms movements (Field notes, May 3, 2011). I encouraged them to reduce the effort and to find places in themselves where they could work less in order to be more effective. After several reminders, Ms. Riggins and I noticed a difference in their singing performance. Ms. Riggins explained:

I think that the number one thing that helped was that you kept saying, ‘Reduce the effort. Reduce the effort. Reduce the effort.’ And that’s all you had to say to help them realize that they were putting in too much effort. It was the same thing with making them breathe while they were doing the exercises. Once you say it, they realize, ‘Oh, I am singing really hard right now.’ Ha! And so you were saying, ‘How can you reduce the effort?’ And you say it during exercises too when you are dealing with their body stuff. But when they were singing and hearing reduce the effort, then all of a sudden they were understanding that they didn’t need to give that much. Anyway, I found myself saying that to them a lot lately too. (Interview, May 22, 2011, p. 9)

Her comment highlights the importance of reducing effort, which she noted in the movement lessons and then saw its application to teaching in rehearsal.
Embodied perspective of choral teaching. Ms. Riggins made several observations about
the differences between her traditional approach to choral teaching and the somatic approach in
this study. In our first interview, Ms. Riggins said that she was initially surprised by the somatic
explorations I led during warm up because they were different than her normal warm up routine,
and yet, also effectively prepared the students to sing (Interview, March 27, 2011). She
explained that she had a specific set of warm up exercises that began with students’ low voices
and then gradually transitioned to their higher voices. She normally included about six or seven
different vocalises in each rehearsal. I observed Ms. Riggins move quickly in between each
vocalise and did not give students much time to notice their sound or how they were producing
the sound. As previously mentioned, students used gestural movements on some vocalises to
remind themselves of musical and technical aspects (such as articulation and intonation on a
descending line). Ms. Riggins noted that my explorations typically involved no more than one or
two vocalises (Interview, March 27, 2011). She also observed that in addition to leading
students in particular movement sequences, I also frequently gave students prompts to notice
how they were singing and how the specific movement sequences affected their singing. She
commented, “It’s so strange to me because I’ve spent all of this time learning warm ups and
learning like 50 things that they are supposed to be doing before they sing. And then it’s like
‘Oh, this works too!’” (Interview, March 27, 2011, p. 19). Jeff conveyed his opinion of the
effectiveness of explorations during warm ups: “It’s like a different, new way to warm up. We
warm up our voices, but warming up your body helps warm up your voice a lot actually”
(Interview, March 22, 2011, p. 15).

Ms. Riggins also identified the difference in focus between her warm ups and the
movement explorations. She commented, “In traditional warm ups, you are focused on sound
and in these warm ups, you are focused on . . . movement, I guess . . . You stop focus[ing] necessarily on how well you’re singing . . .” (Interview, March 27, 2011, p. 22). Indeed, during the movement explorations, I directed the students to notice their movement rather than how they were singing. While this may seem counterintuitive at first, Ms. Riggins later pointed out, “There is something about the warm ups and the physicality that just made it more natural to sing and less tense and less difficult or less strained than before (Interview, May 22, 2011, pp. 24-25).

As mentioned in the first theme, her first journal entry also speaks to her change experiencing ease in her singing that she described as “a loss of control” that made her sound freer and less forced (Ms. Riggins’s journal, Week 1, February 22, 2011).

In the last interview, Ms. Riggins explained that, when students are moving, they are not thinking about how they ought to sound, but instead sing in a way that is less forced and more natural. Another way of describing this is that students were focusing on the process of singing (how to sing) rather than the product of how they sound.

Then when their mind is taken off what they think they are supposed to be doing . . . I mean taken off and thinking about physicality instead of thinking about this voice, all of a sudden they are singing in tune and their diction is better. All these things you are trying to fix turn in to things they can actually do . . . And then their natural voice just happens because they are all great musicians. None of them have bad voices. It’s not that when they are thinking about something else, when they are thinking about breathing or when they are thinking about their pelvis or the ball of their foot, it’s not like they turn into second grade singers. (Interview, May 22, 2011, p. 15-16)

By having students “take [their minds] off what they think they are supposed to be doing,” Ms. Riggins’s is referring to their habit of singing with too much “muscle,” which often resulted in
poor tuning. By directing students’ attention to the movement of their bodies during somatic explorations as they sing, they, in essence, were freed from habitual way of singing that inhibited and limited their singing. In other words, Ms. Riggins is describing one of the important ideas of a somatic approach; it is the shift of attention from the sound to noticing how one is creating the sound that creates the difference. Through noticing the quality of the movement, one is able to let go of the focus on the sound. This represents a fundamental shift from focusing on the product (the sound) to focusing on the process (how the sound is created).

Ms. Riggins also made a general observation about the difference between her traditional approach to choral teaching and the somatic approach in this study.

I keep coming back to this dichotomy between this traditional choral classroom and what’s been going on in my classroom since you’ve been here. We talk about your body in a traditional choral classroom, but you talk about it in very regimented specific ways, like ‘Roll your shoulders back and drop them’ and ‘Put your head into the center’ and ‘Stand with your feet shoulder-width apart with one slightly in front of the other. And none of it’s very natural, so you all look like weird little soldiers up there. (SAP: Laughter) But seriously, then you get a kid who’s posture is a certain way and they look extremely tense because their body doesn’t actually do that naturally and so I think that doing these exercises give them an idea of their own body and what their own body needs to do in order to have the freest tone or in order to reduce the effort or the amount of pressure or muscle that they are using while they are singing. I don’t think that all of them think they are using ‘muscle’ when they are singing. It’s this idea of making them aware – this acute awareness of their own body. Because although we say that not
everybody looks at everything the same, we don’t really teach that way. (Interview, May 22, 2011, p. 26)

Ms. Riggins identified one of the fundamental differences with a somatic approach, whose purpose is to develop the awareness of the individual singers rather than to prescribe specific directives or solutions to problems. The distinctions help clarify what it means to teach from a somatic perspective that embraces the notion of embodiment.

During my last interview with Ms. Riggins, I shared several of the comments anonymously with her regarding students’ explanations of embodiment in singing. Echoing Jeff, Marty, and Bubba’s understanding of how everything is connected in singing, she offered her own perspective on embodiment and its relation to choral music teaching.

But the whole thing is that it’s not a body. It’s not a mind. It’s not a vocal chord. It’s you specifically. Every singer is bringing something different to the table and the fact that you can get 28 of them together plus a crazy conductor to make music in some kind of unified fashion – that’s magic. What else is there to say? How do you get 28 people to figure out their own bodies and their own minds to work toward a common goal?

(Interview, May 22, 2011, pp. 27-28)

Ms. Riggins’s statement reflects how her increasing knowledge of embodiment influenced her perspective on teaching in a choral ensemble. She felt that somatic exploration facilitated the process of teaching her students how to use themselves (body and mind) toward the common goal – that of making beautiful choral music.

**Summary.** Ms. Riggins identified specific strategies that were useful in teaching from a somatic perspective. First, she recognized the importance of identifying habits and autopilot in her self as well as in her students, which, in turn, informed her teaching. She noticed that she
used a “default” voice when demonstrating vocally for the students. She also realized that she went on autopilot when leading warm ups. Second, Ms. Riggins noted how directing students’ attention to their body movement keeps their focus off the sound they are creating and allows them to develop their self-awareness. Third, Ms. Riggins commented how useful it was to encourage her students to use less effort when they sang. Finally, she described an embodied perspective of choral teaching, which acknowledges the entire person, as a way to help students use their bodies and minds to achieve a goal of making music.

In this chapter, I discussed the five major themes that emerged from the data of this study. In the final chapter of this dissertation, I present a summary, discussion of the finding, implications for practice, and suggestions for future research.
Chapter Six
Conclusions and Implications

Summary

With the intent of improving teaching and learning in choral music education, the purpose of this study was to investigate how instruction in the Feldenkrais Method (a somatic practice) facilitated participants’ understanding of embodiment in singing and affected their singing performance. The following research questions (adapted from Freiler, 2007) guided this investigation of embodiment in a choral classroom:

1. How do participants describe their singing performance as a result of participating in experiences of a somatic practice?
2. How do participants describe embodiment in singing as a result of participating in a somatic practice?
3. How do participants describe teaching and learning in this choral setting as a result of increasing their knowledge about embodiment and participating in a somatic practice?

This study followed a qualitative design using case study and action research, based on the methodology of Freiler’s 2007 study. The participants included five male and six female high school choral singers and their choral music teacher from a suburban school in a Midwestern state. As the participant-researcher, I facilitated movement explorations based on the Feldenkrais Method as a part of regular rehearsal instruction. These activities were intended to elicit a greater experience and understanding of embodiment in relation to singing.

Data collection for this study included participant journals, focus group interviews with the high school students, individual interviews with the choral music teacher, and researcher
field notes and reflective journal. I coded by hand and analyzed the data for emergent themes using the constant comparative method of data analysis (Glaser & Strauss, 1967) and testing the veracity of the findings (Patton, 2002) with evidence from field notes (Creswell, 2007; Stake 1995). Prolonged interaction with participants, data triangulation from multiple sources, member checks, and peer review established the trustworthiness of this study (Creswell, 2007).

Five major themes with sub-themes emerged: (1) Perceived effects of somatic practice on singing, (2) Singing with conscious awareness, (3) Emerging understanding of embodied singing, (4) New perspectives on learning to sing, (5) New perspectives on choral music teaching. The first finding indicates that participation in somatic explorations based on the Feldenkrais Method resulted in positive changes in participants’ singing performance. Though lessons affected each participant differently, there were some common experiences, including improvements in: (1) relaxation/reduction of tension, (2) alignment/posture/balance, (3) breathing, (4) resonance and blend, (5) articulation, and (6) range/register. In general, participants described a general sense of relaxation and reduction of tension while singing. Participants also reported improved alignment, posture, and balance, which allowed for easier singing. Some experienced fuller expansion of the rib cage and abdomen in their breathing as well as better breath support. Participants also reported they developed more balanced resonance that was more unified with the rest of the choir. Some participants described an improved ability to articulate their words while singing. Finally, some participants experience increased range and improved coordination of vocal registers. Ms. Riggins also reported improvements in the ensemble’s intonation, resonance, articulation, and breathing as a result of participating in this study.
The second finding revealed that participants gained a greater understanding of their use of conscious awareness as a result of becoming aware of “habits” and “autopilot.” Participants explained that a habit is a tendency to sing in a particular way to which they had become accustomed over time. As a result of becoming consciously aware of their habits, they realized that certain habits were counterproductive to their singing. They reported that conscious awareness was necessary in order to create a new, more productive habit for singing, and that going on autopilot during rehearsal or performance was not advantageous to their singing. By consciously directing their attention to their singing, however, participants felt they were able to stay present in the moment and ultimately, give a more musical performance.

The third finding revealed that participants began to develop an understanding of embodiment as awareness of and connection to their bodies while singing. They used instrument analogies to explain that their bodies affected their sound and drew parallels between learning to play an instrument and learning to sing. Some participants also included the mind and the emotions in their understanding of embodiment. Participants explained that awareness of the body and mind was crucial for musical and expressive performing.

The fourth finding indicated that participants developed new perspectives on learning how to sing as a result of their participation in this study. They gained insights about learning to sing from a somatic approach and discussed the importance of directing their attention, slowing down, reducing effort, sensing differences, and experiencing uncertainty and frustration before a new understanding emerged. Participants also recognized that a somatic approach to learning allowed for individual differences in a supportive environment that was different from traditional classroom learning.
The fifth and final finding revealed that Ms. Riggins developed a new understanding of her own teaching as well as new perspectives of teaching in the choral classroom. She recognized the value of identifying habits and autopilot in her self as well as in her students, which, in turn, informed her teaching. She also noted how directing students’ attention to their body movement kept their focus off the sound they are creating and allows them to develop their self-awareness. She commented on the usefulness of encouraging her students to use less effort when they sang. Finally, in contrast to traditional choral teaching, she described an embodied perspective of choral teaching as an approach to helping students to use their entire self, body and mind, to achieve a goal of making music.

Discussion and Conclusions

The concept of embodiment enlarges traditional notions of teaching and learning in schools and lends itself to a more holistic view of knowledge and understanding (Bresler, 2004; Matthews, 1998; Ross, 2000). This dissertation begins to address what Davidson (2007) described as a lack of “thick descriptions of school life that explore the relationship between theories of embodied knowledge and the enacted curricula” (p. 197). Specifically within music education, this study also begins to address an absence of the body both in philosophical discourse and in empirical research (Bowman, 2000; Bowman & Powell, 2007; Walker, 2000). This investigation of embodiment in singing in a choral setting adds to the understanding of music as an embodied activity and supports a philosophical basis for including body-based instruction in music education (Juntunen, 2004; Woodard, 2009). In this section, I discuss the conclusions of this research study. Due to the scarcity of research regarding embodiment in singing, I rely primarily on the theoretical framework presented in Chapter One to interpret the findings and include related research in the discussion, where appropriate.
The participants developed an understanding of embodied singing. Merleau-Ponty’s phenomenological philosophy of perception, which formed the theoretical framework for this study, sheds light on participants’ notions of embodiment in singing. For Merleau-Ponty (1962), embodiment is the pre-reflective, lived experience through the body from the individual’s first-person perspective. Participants’ descriptions of an “internal instrument” and “body as instrument” conveyed an understanding of the body as the locus of singing and are compatible with what Merleau-Ponty refers to as the “lived body.” Over the course of the project, participants developed awareness of themselves through sensation of their bodies. They described subjective experiences of their bodies, such as feelings of relaxation and reduction of tension, fuller breathing, and ease of articulation. Statements such as, “I was more balanced” (Madeline, Interview, May 23, 2011, p. 4) and, “I could actually take in more breath” (Finn, Interview, March 22, 2011, p. 6) illustrated the first-person perspective. The perception of their bodies as they sang exemplifies what Merleau-Ponty meant by the statement: “The world is not what I think, but what I live through” (xvi-xvii). In other words, perception through the body was the way that participants experienced and understood their singing; thus, it is embodied singing.

Though participants referred to their bodies as subjects (in the first-person), they also discussed their bodies as objects (in the third-person) when clarifying the role of the mind in their understanding of embodiment. Brittany, for example, described a “joint effort” between mind and body (Interview, May 23, 2011, p. 7). She stated that her mind triggers her bodily movement and, at the same time, she also senses the amount of effort in her body that she uses to sing in order to monitor her action. On one hand, her explanation indicates both a dualistic view, in which there is a separation between mind and body; on the other hand, it suggests an
interdependent connection between mind and body. As Merleau-Ponty (1962) points out, however, the body can never be regarded as an object, simply because it is impossible to disengage oneself from it. Instead, he maintained that objectification of the body occurs only through reflective thinking, but not in the actual lived experience. Through Merleau-Ponty’s lens, Brittany first experienced the connection of thought as a part of action and, only subsequently upon reflection, was able to describe separation of mind and body.

Merleau-Ponty’s view of the interconnectedness of perception and action also explains participants’ notion of embodied singing. Madeline, for example, said that she moves her body to the music to help her feel and express the music. This results in her becoming one with the music. For Merleau-Ponty, one perceives and acts simultaneously. As she sang, she sensed herself, which also put her in touch with the music. Alison suggested that her goal when singing was to “make everything [in her body] feel like [her] singing” (Interview, March 25, 2011, p. 14). In other words, she was embodying the music, both as a means to express the music and to connect with the music itself.

The participants’ notions of embodiment in singing also correspond to existing conceptions of musical embodiment by Bowman (2000), O’Neill (2002), and Stubley (1998). Brittany, Jenny, Jeff, Madeline, and Marty described the interactions of the mind and body in the act of singing. Though their specific examples differed, on the whole, their understandings resonate with Bowman’s (2000) description of music that brings together knowing, being, and doing in a unique way. O’Neill (2002) echoes Bowman’s assertion in her definition of embodiment, which includes the body as prerequisite for and necessary component of subjectivity, emotion, language, thought, and social interaction. Marty and Alison discuss emotion from the perspective of a performer as an integral part of performance. That action of
musical performance also reveals information about a student’s subjective experience and internal state is further evidence of a unification of mind and body. Finally, Stubley’s (1998) notion of embodiment in music sheds light on Madeline’s description of becoming “one” with the music (Interview, March 22, 2011, p. 13). For Stubley, musical embodiment occurs when one’s total sense of being results from deep immersion in body movements while making music. Madeline stated that she moves, so that her body reflects the music. Moving to the music helps her feel the music and embody the music that she is singing.

**Conscious awareness of the body is the foundation for learning how to sing.** Participants reported that conscious awareness of their bodies helped them first to identify their singing habits and, then, begin to change unproductive habits. This finding is consistent with Merleau-Ponty’s (1962) and Shusterman’s (2010) philosophies, which address the relation of conscious awareness to habits and learning. According to Merleau-Ponty, a habit is an understanding of how to do something, which he describes as “the motor grasping of a motor significance” (1962, p. 143). Merleau-Ponty maintained that one learns through the acquisition of a habit, which Juntunen (2004) describes as “mindful skilfulness [*sic*]” (p. 40). Participants understood their singing habits through conscious awareness of their bodies. Jeff, for example, suggested the importance of knowing what placement and support “feels like” (Interview, May 16, 2011, p. 12). His bodily sensations formed the basis of his understanding – or “motor significance,” in the words of Merleau-Ponty – of these concepts related to singing. Habits are the way the body learns and subsequently interacts with the world (Merleau-Ponty, 1962). Marty’s description of singing with a new sensation of lower abdominal breathing is another example. He explained this experience as “the internal understanding of what you are doing,” which helped him to know that his habit of breathing was unproductive (May 16, 2011, p. 14).
Similarly, Jenny’s awareness of the ease in her jaw helped her to understand that she could sing in tune without clenching her jaw by relying on the feeling. These examples illustrate Merleau-Ponty’s notion of how one learns through the body.

Bubba’s question, “If I didn’t feel it, then how do I know?” speaks directly to sensation as the basis for knowing (Interview, May 16, 2001, p. 8). His comment conveys the importance of learning through bodily experience. Jenny and Kathy explained that there were occasions, particularly toward the beginning of the project, when they did not feel any differences. As a result, they did not understand the purpose of the lesson or its relation to their singing. These examples are further evidence of the importance of conscious awareness of the body as the foundation of learning to sing without which it would be impossible to learn.

Shusterman (2008) also embraces Merleau-Ponty’s recognition of the bodily basis for habits. He maintains that, without conscious awareness through reflection, one can acquire a bad habit just as easily as a good habit. Therefore, conscious awareness is necessary in order to learn a new, more beneficial habit. Shusterman’s (2008) somaesthetic levels of consciousness help explain participants’ experiences and emerging understanding of embodiment in learning to sing. Their experiences fall into the upper three levels: primary consciousness, somaesthetic perception, and somaesthetic reflection. In general, participants described that they became more aware of their bodies while singing. Their increased awareness indicates a shift from primary consciousness, which is singing without explicit awareness, to somaesthetic perception, which is singing with explicit body awareness. Marty’s awareness of the movement of his lower abdomen while breathing is an example of a change in his consciousness through attention to the body. In other words, he had not felt or consciously recognized the movement of the lower abdomen as a part of his breathing. After the somatic exploration, however, he realized how that
particular sensation was different than his habitual breathing, which subsequently informed the understanding of his singing.

Participants’ reports of reduced tension and increased ease in their singing provide other examples of a shift from primary consciousness to somaesthetic perception. For example, after the see-saw breathing exploration, Madeline felt like she had more room inside her body and could hold much more breath (Interview, March 22, 2011). It was easier for Bubba to sing in his higher range and that his overall range increased after the equalizing the nostrils lesson. Ms. Riggins felt like her jaw and tongue moved more easily to create more connection in her singing. In each of these examples, participants described the quality of their movement and internal sensation of their lived experience, which is at the heart of Shusterman’s Somaesthetics.

Participants also described a shift in consciousness from somaesthetic perception to somaesthetic reflection, when they focused on their own self-awareness. Participants’ identification of habits demonstrates their reflection on somatic perception from which they derived meaning. Kathy noticed that she took short and fast breaths before singing instead of taking time to take a quality breath (Interview, March 25, 2011). Her ability to recognize her habit and derive meaning from it is an example of her somaesthetic reflection.

Participants’ use of directed attention versus going on “autopilot” during rehearsal and performances also illustrates their ability to monitor their own self-awareness. Madeline explained that she noticed differences between letting herself go on autopilot and when she is “consciously there and singing” during rehearsal (Interview, May 23, 2011, p. 9). Ms. Riggins expressed concern about her students going on autopilot because they were more likely to make mistakes, such as performing incorrect notes and rhythms and singing with poor intonation (Interview, May 23, 2011). She believed that being fully present allowed for a more musical
performance. Given that conscious awareness is required for “right” self-use, as Shusterman suggests, Ms. Riggins’s belief is understandable. With conscious awareness of themselves, her students would be more likely to be able to effectively execute the music and in her words, “put more of [them]selves into the music” (Interview, March 27, 2011).

Through *somaesthetic perception and reflection*, participants began to understand how to embody their singing. Alison, for example, stated that, prior to the exploration of the lips, teeth, jaw and tongue, she did not know what the articulators had to do with singing. The exploration resulted in her ability to use the articulators more efficiently, which she noticed in the improved ease and clarity of her diction when singing (Journal, Week 3, March 10, 2011).

**Somatic explorations based on the Feldenkrais Method enhanced participants’ development of their singing.** Grounded philosophically in the notion of embodiment, the Feldenkrais Method provides a means to cultivate body awareness. The Feldenkrais Method is a process in which individuals engage in directing their attention to their bodily sensation while moving for the purpose of developing self-awareness. During a Feldenkrais lesson, the learner is the subject of his/her own experience, which allows for individual differences. In this study, the somatic exploration gave participants an opportunity to experience themselves in movement, which explains why participants had different experiences during lessons. Within each exploration, the participants were encouraged to explore moving in a variety of ways, some of which were non-habitual. The process of teaching participants to sing through a somatic approach, such as the Feldenkrais Method, is congruent with what Bowman describes as the process of “developing, refining, and enabling the deployment of corporeal schemata, schemata which students assimilate and subsequently use to guides or govern action in the instructor’s absence” (2004, p. 45).
As a result of participating in somatic explorations, participants experienced new possibilities for using their bodies that led to improvements in their singing performance. In addition to individual improvements, Ms. Riggins, student participants and I noticed improvements in the ensemble as a whole during explorations. Participants also identified specific strategies of this somatic approach that supported their understanding of how to sing. They also gained insights into the learning process, identifying similar strategies, such as learning from sensation and slowing down. This finding suggests further evidence that this somatic approach can enhance the development of one’s singing.

Somatic explorations based on the Feldenkrais Method provided an alternative means of vocal instruction in a choral setting and were incorporated successfully both as a part of warm up and in conjunction with rehearsing repertoire. The intervention of this study consisted of the implementation of somatic education in the choral rehearsal. As previously mentioned, I drew on my previous experiences of teaching somatic explorations to high school students as a public school choral music educator. The specific interventions of this study supported Ms. Riggins’s goals for the Chamber Singers and helped to improve their singing performance and clarify their understanding of how to sing (Interviews, March 27, 2011 and May 22, 2011). The incorporation of somatic explorations during warm up was appropriate and effective as a warm up (Field notes, April 12, 2011), which is time that most choral directors provide vocal instruction. The use of somatic explorations while rehearsing repertoire also provided participants an opportunity to change unproductive habits, by expanding their conscious awareness of how they were singing in the context of each piece. As Ms. Riggins indicated, somatic explorations and principles of somatic education can be easily incorporated
into her choral rehearsal without taking a lot of time (Field notes, April 12, 2011; Interview, May 22, 2011).

The concept of embodiment provided a beneficial perspective for teaching and learning in the choral classroom. Embodiment offered Ms. Riggins and student participants a new viewpoint for considering what it means to teach and learn in a choral setting. The concept of embodiment was helpful because it allowed the participants to experience and understand their bodies in a way that related directly to their singing. Experiences of embodiment facilitated improved performance and ultimately, resulted in students’ understanding that helped in the service of their music performance. Embodiment was also of value when it came to Ms. Riggins’s teaching, a finding that also has been reported in previous research in teacher education (Chan, 2002; Latta & Buck, 2000; Freiler, 2007). Ms. Riggins viewed this experience as an opportunity to reflect and make changes in her teaching (Interview, May 22, 2011). As discussed in the findings, she reconsidered her warm up routine and identified new strategies to improve her teaching. It helped her to understand that her students had habits and gave her strategies to help them develop more efficient ways of singing.

Implications for Music Education

In this section, I present implications for practice in music education. Though the findings of this study are specific to the participants and are not widely generalizable, one may be able to transfer findings to similar teaching settings, where appropriate. The implications offered here, therefore, are intended to guide those who are interested in embracing an embodied perspective of music teaching and learning in choral music education.

The perspective of embodiment, which provides a philosophical basis for understanding singing as an embodied action, should be included as part of a comprehensive choral music
education. The findings of this study together with the theoretical framework discussed in Chapter One provide choral music educators with an embodied perspective on teaching and learning in a choral setting. Through the lens of embodiment based on the work of Merleau-Ponty, choral music teachers should view their students as embodied singers who are capable of experiencing and understanding the interconnection of mind and body that emerges in the act of singing. Teaching in a choral classroom, therefore, should facilitate students’ experiences and understanding of embodied singing. Accordingly, learning in a choral classroom should include opportunities for students to embody the music that they are singing.

Choral methods courses should include both philosophical discussions of embodiment as well as somatic instruction to help future choral educators understand the nature of embodied singing and its implications for the classroom. Future choral educators should have the opportunity first to experience somatic practice in order to understand this type of learning its potential benefits for learning how to sing. Then they should learn how to apply their knowledge and implement a somatic approach in the choral rehearsal that would cultivate singing skills and enhance performance. Also, given the potential of the concept of embodiment to inform singing instruction, the notion of embodied singing may be of value to anyone who teaches singers. In addition to choral educators, this may include collegiate voice professors, private voice teachers, and elementary general music teachers.

Choral music educators should incorporate attention to the body as a part of instruction. As the findings of this study indicate, conscious awareness of the body is an important component of learning to sing. Because the body is the singing instrument, singers need to develop awareness and sensitivity in order to make sensory distinctions that are required for skillful singing. Because this process develops over time, choral music educators should
incorporate attention to the body as a part of regular instruction. Asking students to notice different parts of their bodies and to reduce effort as they sing is one strategy that can be implemented easily both as a part of warm up and while rehearsing repertoire.

Another strategy is to incorporate a somatic practice that compliments vocal instruction, such as the Feldenkrais Method. As Bresler (2004) suggests, somatic practices provide invaluable knowledge about the somatic domain that has remained outside mainstream education. As the findings of this study indicate, somatic explorations based on the Feldenkrais Method are an effective means to facilitate improved self-awareness and experiences of embodied singing. According to Jeff, the somatic explorations are “just like taking lessons for your voice” (Interview, May 16, 2011, p. 11). In short, because the body is the singing instrument, choral music educators wishing to maximize instruction should consider the utilization of this particular somatic practice.

**Suggestions for Future Research**

The current study addressed questions that were philosophical and pedagogical in nature. This section presents suggestions for future research along these two lines of inquiry.

As mentioned previously in chapter three, there were limitations of this study that could be addressed in future research. First, though certain constraints on the number and length of somatic explorations were expected, there were additional scheduling conflicts that were unexpected (e.g., days off of school and choreography rehearsals). Second, collection of data regarding participants’ experiences was somewhat limited due to the fact that participants did not complete journal entries throughout the project. Third, the project was completed over the course of 14 weeks, which is a relatively short amount of time given that singing ability and adolescent vocal development takes years. Future studies should include a longer period of
engagement and observation, as well as consistent data collection throughout the entire project. Also, a longitudinal study may help shed light on how embodiment develops over time, such as over the course of an entire year or even four years of high school.

The present study examined embodiment through the eyes of high school students and their choral music teacher. Another recommendation for future research would be to conduct a similar study with high school choral singers and their conductors from other schools. This would help to determine if there are some universal characteristics of embodiment and the experiences of high school singers. Another suggestion is to investigate the significance that high school students attribute to experiences of musical embodiment. In other words, how does embodiment impact high school students’ musical experiences and the meaning that they derive from these experiences? Does an understanding and awareness of embodiment contribute positively to students’ involvement of music? If so, how might music educators strive to provide such experiences as a part of regular music instruction?

Future research might examine embodiment in singing among different populations, such as college vocal majors and professional soloists, for example. Study of participants of various ages, with a range of abilities, from amateur to professional, might give a richer understanding of the phenomenon of embodiment in singing. Also, similar research questions would be appropriate to explore with instrumentalists in an effort to note possible similarities and differences among performers as well as to generate a more holistic understanding of embodiment in music performance in general. Last, future research might also examine embodiment among conductors, specifically exploring the effect of somatic instruction on conducting gesture and how somatic instruction might facilitate embodied conducting performance.
In continuing the philosophical investigation of embodiment in music, the development of a theory of musical embodiment warrants further examination. This discussion may find further grounding in phenomenological, existential, and pragmatic philosophies and build on the work of Stubley (1998), Alerby and Ferm (2005), and Bowman (2000), for example and address questions such as: What is the nature of music as embodied experience? What is the nature of the singing instrument? Furthermore, because the topic of embodiment has been studied in discipline other than music, an interdisciplinary approach may be of value in exploring these questions further; the work of Varela et al. (1991) and Lakoff and Johnson (1999) may be particularly helpful because they lend themselves well to explaining embodiment in music.

In addition to the philosophical questions, future research could continue to explore the incorporation of somatic approaches to improve singing performance. As the results of this study indicate, participants perceived that participating in somatic explorations helped improve their singing in a variety of ways. Their perceptions were in the form of self-reported data and were not verified independently. Though it was not the intent of this research to evaluate participants’ singing performance, future research could investigate the effect of somatic instruction on singing from a quantitative paradigm. An experimental design using pre- and post-test measures of certain dimensions of singing, such as posture, breathing, and range, might provide useful data to evaluate changes in performance and corroborate self-reported descriptions of improved singing.

As the results of this study indicate, somatic pedagogy might be helpful to choral music educators in teaching students how to sing as well as in reflecting on their own teaching practice. Future research could identify similarities and differences in singing instruction between traditional choral pedagogy and somatic-based pedagogy in a choral setting. For example, an
investigation may examine the conductors’ use of language, the structure of the rehearsal, specific rehearsal techniques and time spent to develop somatic awareness and singing performance. Research could also investigate how the use of somatic approaches would be most effectively used in singing instruction and as a means for educating future music educators.

**Final thoughts**

This study represents a new approach to teaching and learning in the high school choral classroom. By introducing the theoretical and practice-oriented perspective of embodiment through somatic exploration, participants were encouraged to reconsider the role of the body in understanding the complex interrelation of mind and body in the context of singing in a choral ensemble. The integration of a somatic approach represents a fundamental shift in how choral music educators can teach and how their students can learn. Somatic exploration as a part of instruction allows the development of singing that is embodied, expressed more holistically and is inclusive of mind and body. From this perspective, choral music teaching, in essence, is the facilitation of musical embodiment. In conclusion, this study contributes to the understanding of musical embodiment, presents pedagogical insight for new possibilities in choral music education and paves the way for future research on embodiment in music that may benefit the larger music education profession.

**Embodying Singing in the Choral Classroom**

“Ah-ah-ah-ah-ah-ah-aaaaah,” sing the students, ascending and descending a five-note scale pattern in major.

“Notice the expansion in your chest and rib cage as you inhale,” says Ms. R as she plays a major chord a half step higher. The students sing the same pattern again.
“What happens in your chest and rib cage as you exhale and begin to sing?” asks Ms. R and then plays another chord. The students continue to vocalize.

“Now pause for a moment,” she says. “Let’s try an exploration. Place your right hand on the left side of your rib cage and put the other arm up over your head. Inhale into the left side of your rib cage and feel the expansion under your right hand. Exhale and slowly bend to the right a little bit. Stay there and inhale expanding the left side of your rib cage. Exhale and once again slowly bend to the right. Stay there and inhale one more time. Exhale as you slowly bend to the right. And leave that and slowly come back to standing with both arms at your sides.”

After exploring the relationship of the breath and the rib cage according to Ms. R’s instructions, the students return to an upright standing position. Ms. R asks them to notice their breathing once again.

“How many people feel a difference between one side of the rib cage compared to the other?” Many of the students nod affirmatively and a few raise their hands.

“How many people feel a difference in the right side of the rib cage?” she continues. A few students raise their hands.

“How many people feel a difference in the left side of the rib cage?” Many more students raise their hands.

“How many people aren’t sure?” A few students raise their hands.

Ms. R knows that not all students are going to experience the exploration in the same way. Asking them about their experience helps guide their developing awareness of themselves and gives valuable feedback about their understanding.
“Remember, there is no right or wrong answer,” she continues. “It’s what you feel. It’s what you experience. And if you are not sure, that’s okay too. Now let’s do the same thing on the other side.”

Ms. R leads them in the same exploration, but reverses right for left and left for right in the instructions. When they finish and return to the upright standing position, she asks, “How many people feel a difference in their breathing now compared to the beginning of the exploration?” More students nod and raise their hands than the first time.

She plays a major chord on the piano and asks the students to sing the vocalise again, noticing any differences. After a few patterns, Ms. R stops and asks, “Observations? What do you notice in your singing after the exploration? Take a few moments to chat with a person sitting near you about your experience and then we’ll report back to the group.”

The room quickly fills with the noise of students’ conversations. After a few minutes, Ms. R calls for their attention and the room eventually falls silent.

“Jesse, start us off,” says Ms. R.

“I felt my ribs . . . like under my arms . . . lift as I inhaled and lower as I exhaled,” remarked Jesse. “I haven’t really felt that before. I didn’t know that my ribs there could move like that.”

Ms. R called on Samantha next. “So the first time, I felt that the left side of my rib cage and chest was expanding more than the right side. It was weeeird! But then after we did the other side, it evened out and I felt like I had much more room to breathe overall,” she volunteered.

“My breath definitely lasted longer the last time,” said Samuel. “And I didn’t have to think about it so much. It just kind of did it on its own.”
Ms. R nods and smiles. “Great observations!” comments Ms. R enthusiastically.

“Thank you for sharing. So, if this exploration was useful to you, then, by all means, use it when you are practicing on your own or during rehearsal. We will continue to explore breathing. In the meantime, would you please take out ‘I Am in Need of Music’?”

Later in the rehearsal, while rehearsing “I Am in Need of Music,” text by Elizabeth Bishop and music by David L. Brunner, Ms. R notices that the students’ performance lacks consistent resonance, legato line, and clarity of the text, “There is a magic made by melody: a spell of rest, and quiet breath, and cool Heart, that sinks through fading colors deep to the subaqueous stillness of the sea.” The singers do not seem to be able to articulate the syllabic setting of the text without losing their resonant tone and making the phrases sound choppy. Ms. R decides that an exploration of the articulators would be a logical strategy to help them improve their performance and understanding.

“Would you gently place your teeth and lips together and sing this section once again?” says Ms. R. The students sing with their teeth and lips together, as if they have pieces of imaginary tape over their mouths. As one might expect, the sound is muffled and the words are unrecognizable. “Hmmm, hmm, hmm, hmm, hmmm . . . .”

Ms. R calls out over the singing, “As you sing, notice what you do with your tongue. Is your tongue moving? How can your tongue help shape the words?” As the students continue singing, Ms. R begins to hear a clearer distinction between each syllable of the words.

“Notice what you do with the back of your throat and the soft palate. Is there some movement in the back of your throat as you shape the words?” Ms. R hears a shifting of the resonance as the students explore the movement of their soft palates.
When they finish singing, she says, “This time, sing the phrase with your lips together and notice what you do with your jaw, your tongue, and your soft palate to shape the words.”

As the students begin, they look like they are chewing bubble gum while trying to sing at the same time. With their mouths closed, however, they are exhaling more steadily out of their noses than when they first sang the section, which results in a more consistent and resonance tone. Though the words are still muffled, it is apparent that they are creating distinct changes from syllable to syllable inside their mouths.

When they finish singing, she says, “This time, sing the phrase with your teeth together and notice what you do with your lips, your tongue, and your soft palate to shape the words.”

The students sing as though their jaws have been wired shut and make exaggerated movements of their lips to form the labial consonants, such as “m”, “p”, and “b”. Despite the fact that their jaws are closed, they are articulated the consonants much more clearly.

“Alright, leave all that alone. And sing it one last time using all of your articulators.” The students sing again, this time with improved awareness of the coordination of their lips, jaws, teeth, tongues, and soft palates. There are some smiles and a few looks of surprise on the students’ faces.

“Did you hear any difference in the sound?” asks Ms. R. Most of the students raise their hands. Some nod their heads. “What did you hear?” Ms. R calls on Genevieve.

“There was so much more sound!” she exclaimed.

“We sounded really energized and . . . resonant,” says Kira.

Chris raises his hand and Ms. R calls on him.
“I didn’t hear so much of a difference, but it was easier to sing. I felt exactly what my tongue and lips had to do in order to make the words and I didn’t feel like I had to work as hard to get the words out,” commented Chris.

“Yeah,” continues Ryan, “our diction was way better.”

“Absolutely. The diction was much better,” says Ms. R with a nod and a smile. “Did anyone notice anything else?”

“I felt like I had more breath to sing the phrases,” says Tyrone. Several students nod in agreement. Ms. R calls on one of them.

“Hailey, what did you notice?”

“Gosh, there were so many things: the breath, the resonance, the articulation . . . all of it improved. I agree with Chris. I was using less effort and just singing . . . much more efficiently. I liked the feeling of it!” says Hailey excitedly.

“I heard much more consistent resonance in your sound. There was a smoothness and connection in the musical line, which wasn’t there before. And as we already mentioned, I could really understand the words this time. Did you also notice how much softer and more sensitively you sang this section than ever before? Nice work, everyone!”

After class, Ms. R takes a moment to reflect. When first introduced to this somatic approach, she was skeptical. Yet, after incorporating the movement explorations in warm up and rehearsing repertoire little by little, she now realizes its benefits. Today’s rehearsal is evidence of that. The students were actively engaged in their own learning. They experienced changes in self-awareness that resulted in improvements in their singing and helped them to embody the music. Since incorporating this somatic approach into her regular instruction, Ms. R. has observed improvements in the group’s singing abilities as a whole as well as individual
progress in ways that she had not anticipated. Over time, the students have developed a repertoire of movement explorations and have become more confident in their ability to communicate what they are experiencing internally as they sing. Ms. R knows that there is room for continued improvement, but she is content to guide the students through a process that allows them make their own discoveries. For Ms. R., teaching from a somatic perspective has been very rewarding. She nods and smiles, once again.
Appendices
Dear Parent/Guardian,

My name is Stephen Paparo, and I am a Ph.D. candidate in music education at Michigan State University. For my dissertation, I am studying how high school choral students’ experience and understanding of embodiment informs their musicianship. The term embodiment refers to the integration of mind and body and acknowledges the role of the body in the learning process. The title of the study is “Embodying Musicianship in the Choral Classroom: A Somatic Approach to Teaching and Learning.” I am pleased to invite your child, as a member of Dillon High School Chamber Singers, to participate. Participation may be beneficial to your child as it offers an opportunity to reflect on his/her learning in the choral classroom.

As part of this research, your child will be asked to participate in movement and sound explorations based on the Feldenkrais Method® of Somatic Education, which facilitates body awareness and improved use of the body. These activities will occur during regular class time as a part of Chamber Singers. Your child also will be asked to document his/her experiences in a weekly journal. In addition, your child may be selected to participate in two focus group interviews with 5-8 students (ages 15 and older) from the choir. I will invite 2 or 3 students from the focus groups for additional follow-up interviews. Interviews will last approximately 45 minutes.

Participation in this study is strictly voluntary. A potential risk is that your child might be nervous to participate in movement explorations and to share about some of his/her experiences, but hopefully this risk will be very small. In the event that your child does not wish to participate during explorations, he/she may observe. During interviews, your child may refuse to answer any question. He/she may withdraw from the study at any time without penalty. Your child’s privacy will be protected to the maximum extent allowable by law. All interviews will be recorded on a digital voice recorder and will be strictly confidential. Audio recordings and any identifying information will be stored under secure conditions. In transcriptions of the interviews, your child will be identified by a pseudonym. The results of this study, including audio recordings, may be presented or published, but no identifying information will be shared.

If you have any questions about this study, please contact the primary investigator, Dr. Cynthia Taggart at 517-432-9678 or taggartc@msu.edu. If you have any questions about your child’s role and rights as a research participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you wish, the Michigan State University Human Research Protection Programs by phone: 517-355-2180, fax: 517-432-4503, e-mail: irb@msu.edu, or mail: 207 Olds Hall, MSU, East Lansing, MI 48824.

Thank you for considering allowing your child to participate in this study. Please sign, date and return the attached form if your child is willing to participate and if you support his/her participation.

Sincerely,
Stephen A. Paparo
I voluntarily agree for my child (please print) ____________________________ to participate in this study.

_________________________  __________________________  ______
parent/guardian signature  parent/guardian printed name  date
Dear Student,

My name is Stephen Paparo, and I am a Ph.D. candidate in music education at Michigan State University. For my dissertation, I am studying how high school choral students’ experience and understanding of embodiment informs their musicianship. The term embodiment refers to the integration of mind and body and acknowledges the role of the body in the learning process. The title of the study is “Embodying Musicianship in the Choral Classroom: A Somatic Approach to Teaching and Learning.” I am pleased to invite you, as a member of Dillon High School Chamber Singers, to participate. Participation may be beneficial to you as it offers an opportunity to reflect on your learning in the choral classroom.

As part of this research, you will be asked to participate in movement and sound explorations based on the Feldenkrais Method® of Somatic Education, which facilitates body awareness and improved use of the body. These activities will occur during regular class time as a part of Chamber Singers. You also will be asked to document his/her experiences in a weekly journal. In addition, you may be selected to participate in two focus group interviews with 5-8 students (ages 15 and older) from the choir. I will invite 2 or 3 students from the focus groups for additional follow-up interviews. Interviews will last approximately 45 minutes.

Participation in this study is strictly voluntary. A potential risk is that you might be nervous to participate in movement explorations and to share about some of your experiences, but hopefully this risk will be very small. In the event that you do not wish to participate during explorations, you may observe. During interviews, you may refuse to answer any question. You may withdraw from the study at any time without penalty. Your privacy will be protected to the maximum extent allowable by law. All interviews will be recorded on a digital voice recorder and will be strictly confidential. Audio recordings and any identifying information will be stored under secure conditions. In transcriptions of the interviews, you will be identified by a pseudonym. The results of this study, including audio recordings, may be presented or published, but no identifying information will be shared.

If you have any questions about this study, please contact the primary investigator, Dr. Cynthia Taggart at 517-432-9678 or taggartc@msu.edu. If you have any questions about your role and rights as a research participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you wish, the Michigan State University Human Research Protection Programs by phone: 517-355-2180, fax: 517-432-4503, e-mail: irb@msu.edu, or mail: 207 Olds Hall, MSU, East Lansing, MI 48824.

Thank you for considering participating in this study. Please sign and date the attached form if you are willing to participate.

Sincerely,

Stephen A. Paparo
I (please print) __________________________ voluntarily agree to participate in this study.

_________________________  _____
student signature          date
Dear Teacher,

As you know, I am a Ph.D. candidate in music education at Michigan State University. For my dissertation, I am studying how your experience and understanding of embodiment informs your musicianship as well as that of your students. The term embodiment refers to the integration of mind and body and acknowledges the role of the body in the learning process. The title of the study is “Embodying Musicianship in the Choral Classroom: A Somatic Approach to Teaching and Learning.” I am pleased to invite you to participate. Participation may be beneficial to you as it offers an opportunity to reflect on your teaching in the choral classroom.

As part of this research, you will be asked to participate in movement and sound explorations based on the Feldenkrais Method® of Somatic Education, which facilitates body awareness and improved use of the body. I will lead these activities as a part of regular class instruction as a part of Chamber Singers. You also will be asked to document your experiences in a weekly journal and to participate in several interview and informal conversations throughout the study.

Participation in this study is strictly voluntary. A potential risk is that you might be nervous to participate in movement explorations and to share about some of your experiences, but hopefully this risk will be very small. In the event that you do not wish to participate during explorations, you may observe. During interviews, you may refuse to answer any question. You may withdraw from the study at any time without penalty. Your privacy will be protected to the maximum extent allowable by law. All interviews will be recorded on a digital voice recorder and will be strictly confidential. Audio recordings and any identifying information will be stored under secure conditions. In transcriptions of the interviews, you will be identified by a pseudonym. The results of this study, including audio recordings, may be presented or published, but no identifying information will be shared.

If you have any questions about this study, please contact the primary investigator, Dr. Cynthia Taggart at 517-432-9678 or taggarte@msu.edu. If you have any questions about your role and rights as a research participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you wish, the Michigan State University Human Research Protection Programs by phone: 517-355-2180, fax: 517-432-4503, e-mail: irb@msu.edu, or mail: 207 Olds Hall, MSU, East Lansing, MI 48824.

Thank you for considering participating in this study. Please sign and date the attached form and return it to me if you are willing to participate.

Sincerely,

Stephen A. Paparo
“Embodying Musicianship in the Choral Classroom: A Somatic Approach to Teaching and Learning”

Teacher Consent Form

I (please print) __________________________ voluntarily agree to participate in this study.

______________________________

teacher signature          date
APPENDIX D
Interview Script & Questions

Focus Group Round One

Thank you for your participation in today’s interview. As I mentioned at the beginning of our time together, there are no right or wrong answers to the questions that I am about to ask. I am interested in your personal experience and your thoughts, reactions, and feelings about your experience.

There are a few interview rules: (1) please speak loudly and clearly; (2) please speak when no one else is speaking in order to ensure that the speaker is recorded; (3) please use “I” when you talk about your experiences. While there may be some commonality between your experiences and those of your fellow singers, I am looking to understand differences among your experiences. Please feel free to share even if your experience is different than others. The more detailed description you can provide, the richer the results of this study will be. Are there any questions before we begin?

Focus group interview questions:

(1) To begin, please reflect on your experiences of the movement explorations. To refresh your memory, I briefly will review the lessons.
   - Week 1 – Awareness Through Movement lesson: Crossing knees and twisting the back and pelvis
   - Week 2 – Awareness Through Movement lesson: Pelvic clock
   - Week 3 – Awareness Through Movement lesson: Equalizing the Nostrils
   - Week 4 – Awareness Through Movement lesson: Sinking the spine between the shoulder blades
   - Week 5 – Awareness Through Movement lesson: Differentiating of Parts and Functions in Breathing

Describe your experience(s) of the movement exploration(s). What sticks out in your mind about these experiences?

(2) Did these experiences affect your singing and if so, how? Describe your experience.

(3) Did these experiences relate to your understanding of how to sing, and if so, how? What specifically did you find to be helpful, if anything? What specifically did you find to be least helpful, if anything?

(4) How would you describe your understanding of embodiment as a singer?

(5) Do you have any questions or suggestions for me?
Focus Group Round Two

Thank you for your participation in today’s interview. As I mentioned during our last interview, there are no right or wrong answers to the questions that I am about to ask. I am interested in your personal experience and your thoughts, reactions, feelings, etc. about your experience.

Like last time, please remember to speak loudly and clearly; use “I” when you talk about your experiences; refrain from talking over anyone else to ensure that the speaker is heard on the recording. As I mentioned in the first interview, while there may be some commonality between your experiences and those of your classmates, I am looking to understand differences among your experiences. Please feel free to share even if your experience is different than others. The more detailed description you can provide, the richer the results of this study will be. Are there any questions before we begin?

Focus group interview questions:

(1) Please reflect on your experiences of the movement explorations. To refresh your memory, I briefly will review the lessons.
   - Week 6 – Awareness Through Movement lesson: Basic Flexion
   - Week 8 – Awareness Through Movement lesson: Shoulder/Hip Circles on the Side
   - Week 10 – Awareness Through Movement lesson: Improving Balance
   - Week 10 – Awareness Through Movement lesson: Chanukia, the candle holder
   - Week 12 – Awareness Through Movement lesson: Rhythmic Tapping

Please describe an experience(s) of the movement exploration(s). What sticks out in your mind about the particular experience?

(2) You also did movement explorations in combination with singing in warm-ups and with repertoire, led both by Ms. Riggins and me. We explored the breath cycle and parts of breathing, tilting crossed legs/arching and rounding the pelvis, and articulators (teeth, tongue, lips). Describe one or more of these experiences. What sticks out in your mind about the experiences?

(3) Did these experiences affect your singing and if so, how?

(4) How did these experiences relate to your understanding of how to sing? Did any of these experiences confirm your ideas about singing and if so, how? Did any of these experiences challenge your ideas about singing and if so, how?

(5) How would you describe to another person what we have been doing?

(6) How would you describe to the same person what embodiment as a singer means?

(7) Do you have any questions or comments for me?
APPENDIX E
Sample Journal Prompts

Week 1
(due Tuesday, 2/22)

Please provide the following information:

NAME: ______________________________________  Age: _____  Grade: _____

How many years have you been a member of this choral ensemble? _____

Tell me something about yourself that will help me get to know you better (i.e., music interests, hobbies, sports, clubs, etc.)

Please complete the following sentences:

(1) I listen to or pay attention to my body when/by . . .

(2) I feel most connected to my body when . . .

(3) I feel most disconnected from my body when . . .

(4) I learn through in my body when/by . . .

(5) When singing, I am aware of my body when/by . . .
Please answer the following questions using complete sentences. Write as much as is necessary to answer the question fully; some answers may be longer than others.

(6) This week’s movement lessons explored turning and twisting. Describe your experience of these explorations. How did you feel in your body? What were you sensing in your body and where were you feeling it?

(7) What was your reaction to the experience? What struck you the most either positively or negatively?

(8) Did these experiences affect your singing, and if so, how?

(9) Do you have any questions or comments?

Thank you!
Week 2
(due Thursday, 3/3)

NAME: _______________________________________

Please answer the following questions using complete sentences. Write as much as is necessary to answer the question fully; some answers may be longer than others.

(1) Thursday’s movement lesson explored moving while singing. Describe your experience of consciously moving parts of yourself while singing. How did it feel to sing when you moved “more” than usual? How did it feel to sing when you moved “less” than usual? What were you sensing in your body and where were you feeling it?

(2) What was your reaction to the experience? What struck you the most either positively or negatively?

(3) Did these experiences affect your singing, and if so, how?

CONTINUED ON BACK ➔
(4) Friday’s movement lesson explored movements of the pelvis, spine, and head. Describe your experience of this exploration. How did you feel in your body? What were you sensing in your body and where were you feeling it?

(5) What was your reaction to the experience? What struck you the most either positively or negatively?

(6) Did these experiences affect your singing, and if so, how?

(7) Do you have any questions or comments?

Thank you!
APPENDIX F
Final Participant Questionnaire

Please complete the following questionnaire and return to me by **Tuesday, May 3rd**.

Real Name: __________________________

Pseudonym: __________________________

Age: ______

Grade in School: ______

Years in Chamber Singers: ______

When did you begin singing in choir? ______________________________

How many years have you sung in choir? ______

Other instruments you play: ____________________________________

Do you participate in other school music ensembles? If so, what groups, and for how many years? ______________________________________________________________________

Name three interests or hobbies/sports/extracurricular activities in which you participate:

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

What I am like: (Describe your personality)

_____________________________________________________________________

_____________________________________________________________________

What I notice about myself when I sing: (Describe awareness of your body when singing: what do you pay attention or notice to? Example: I notice how I expand more in my abdomen than in my chest when I inhale . . .) Continue on back if needed!
APPENDIX G
Feldenkrais Method Resource List


References
REFERENCES


Wis, R. (1993). Gesture and body movement as physical metaphor to facilitate learning and to enhance musical experience in the choral rehearsal. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 9327319)

