The Impact of Musical Background, Choral Conducting Training and Music Teaching Style on the Choral Warm-up Philosophy and Practices of Successful High School Choral Directors

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THE IMPACT OF MUSICAL BACKGROUND, CHORAL CONDUCTING TRAINING AND MUSIC TEACHING STYLE ON THE CHORAL WARM-UP PHILOSOPHY AND PRACTICES OF SUCCESSFUL HIGH SCHOOL CHORAL DIRECTORS

By

Bradley C. Olesen

A DISSERTATION

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Coral Gables, Florida

June 2010
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DIRECTORS

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The Impact of Musical Background, Choral Conducting Training and Music Teaching Style on the Choral Warm-up Philosophy and Practices of Successful High School Choral Directors  
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The purpose of this study was twofold: (a) Examine successful choral director beliefs about warm-ups and their successful practices in conducting warm-ups, and (b) examine the relationship of musical background, choral training and music teaching style of high school choral directors upon these beliefs and practices. Subjects were 365 high school choral directors from 28 states. Data were analyzed using descriptive analysis, correlation analysis, multivariate analysis of variance and multiple regression. Results indicated choral director’s beliefs and practices differ as a function of musical background, demographic characteristics, choral conducting training, and music teaching styles. Specifically, warm-up beliefs were predicted by knowledge of vocal health and variety of warm-ups. Conversely, those who relied on the warm-up time for discipline and focusing attention showed a significant negative relationship with their philosophy.

From multiple regression analysis, doing choral warm-ups accounted for one-third of a director’s overall success, predicted by 10 variables: (a) experience, (b) education, (c) teaching style teacher-directed performance, (d) teaching style deep-student learning, (e) warm-up literature and procedure, (f) planning warm-ups (g) warm-up content, (h) prior choral experience and piano background, (i) a foundation in music, and (j) a developed philosophy of choral warm-ups. However, having a philosophy about warm-ups did not predict successful teaching practices.
For my father
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CHAPTER 1
INTRODUCTION

Choral warm-ups involve a series of instructor-led actions at the beginning of a class, rehearsal or before a performance. Sometimes these actions involve meditation, stretching, breathing, lip-buzzing, vocalizing on ascending and descending scales, or even introducing conceptual ideas of music they are about to rehearse or perform. It is widely believed (Phillips, 2004; Hylton, 1995; Collins, 1999) that warming-up a choir is critical, and often a first step when directors take the podium.

The goal of choral warm-ups is to bring together the individual singing voices in order to create a choral group sound (Smith & Sataloff, 2006). The director should address body alignment, breathing mechanisms, phonation of the vocal chords, and resonance while cultivating healthy singing mechanisms through a variety of warm-up exercises (Ehmann & Haasemann, 1981). The training of singers requires a choral director who understands how to communicate proper vocal health techniques to their choir (Gackle, 1987). These directors should be taught how to plan warm-ups that cultivate healthy singing and aid in developing a choral sound. A problem exists because these directors come from a variety of backgrounds and choral director training. They also have a variety of music teaching styles that influence how they actually conduct. Their background, training, beliefs, practices and their music teaching style should contribute to a director’s warm-up success. What is not understood is which background characteristics, training, music teaching style, or one’s beliefs and practices of choral warm-ups (or what combination of each) can best predict choral success.
Background

Warm-up physiology and psychology

In examining choral warm-up practices, it is important to comprehend the basic premise of a physiological warm-up and its benefits. The time devoted to physical warm-ups typically contains three major components. First, as Young and Behm (2002) describe, it has a relatively low-intensity aerobic workout, like jogging before a run, that is not intense from the start. Research shows this type of exercising increases muscle temperature, which increases the chances for the improvement of neuromuscular function (McArdle, Katch & Katch, 1991; Norris, 1999; Stewart & Sleivert, 1998). Second, Young and Behm state that warm-ups also contain some stretching of the specific muscles involved in the upcoming related activity. This effect can result either through static stretching or dynamic stretching methods. As the terms suggest, static stretching evolves from a non-moving position and involves stretching of groups of muscles that are held for a relatively long time. Dynamic stretching would be the opposite approach. That is, all the stretching would be designed around movement of body parts and muscles without sustained durations and without resistance beyond the weight of one’s body. Finally, the third component of warm-ups involves the “rehearsal of the skill about to be performed” (Young & Behm, 2002, p. 33). McCardle et al. (1991) agree that activation of specific muscle fibers as well as neural pathways utilized for achievement of maximum neuromuscular performance occur during this type of warm-up.

As the term warm-up [emphasis added] suggests, most research involves studying temperature-related mechanisms. In a seminal study involving possible effects of warm-
ups, Bishop (2003b) classifies these effects in two categories: temperature related and non-temperature related (see Table 1).

Table 1

**Possible Effects of Physiological Warm-up***

<table>
<thead>
<tr>
<th>Temperature related</th>
<th>Non-temperature related [sic]</th>
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<tr>
<td>Decreased resistance of muscle and joints</td>
<td>Increased blood flow to muscles</td>
</tr>
<tr>
<td>Greater release of oxygen from haemoglobin and myoglobin</td>
<td>Elevation of baseline oxygen consumption</td>
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<tr>
<td>Speeding of metabolic reactions</td>
<td>Postactivation potentiation</td>
</tr>
<tr>
<td>Increased nerve conduction rate</td>
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<td>Increased thermoregulatory strain</td>
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* as cited in Bishop, 2003b, p. 440.

Accordingly, Noonan, Best, Seaber and Garrett (1993) state, “The biochemical and contractile functional responses of muscle and the effects of temperature have been well studied” (p. 517). Safran, Garrett, Seaber, Glisson and Ribbeck (1988) propelled similar ideas in earlier research. Both studies involved the thermal effects on skeletal muscle behaviors and found that “warming muscles can aid in injury prevention and improvement in athletic performance” (p. 517). Furthermore, it has been shown that an aerobic cardiovascular build-up, or submaximal exercise, intended to increase muscle temperature provide benefits (Young & Behm, 2002).

While warm-up, in general, has shown results in physiological changes, psychological aspects of sport-related warm-ups have also been analyzed. According to Malareki (1954), “Athletes who ‘imagined’ a warm-up had an enhanced physiological performance” (p. 544). Bishop further acknowledged, “Warm-up may also provide valuable time for athletes to mentally prepare for their event” (2003b, p. 445). It has been discovered that a warm-up done for the sole purpose of mental pre-performance ritual...
was a unique characteristic of Olympic athletes (Orlick & Partington, 1987). Finally, a further investigative study suggests that the pre-performance time of warm-up may increase actual performance output due to the time provided to establish mental concentration (Shellock & Prentice, 1985). Thus, physiological and psychological effects of warm-ups for the sake of physical activity have shown positive results, but not without controversy.

The physical act of stretching of muscles has a breadth of research upon the effects for athletes. Bishop (2003b) argues, however, “while warm-up is considered essential for optimum performance by many coaches and athletes, there is surprisingly little scientific evidence supporting its effectiveness” (p. 440). Gerbino, Ward, and Whip assert, “the physiological and performance changes following active warm-up may actually be due to a residual metabolic acidaemia and that warm-up therefore be termed ‘acid-up’” (Gerbino, Ward & Whip, 1996, pp. 99-107). In a study of stretching prior to activity to assist in aiding range of motion in the lower extremity, researchers concluded, “stretching (prior to activity) resulted in a significantly increased range of hip flexion/extension, hip abduction, knee flexion, and ankle dorsiflexion” (Wiktorsson-Möller, Öberg, Ekstrand & Gillquist, 1983, p. 249).

As Bishop (2003b) divided warm-ups into two distinct areas, so, too, the research unfolds two areas of stretching: Static and dynamic. Static stretching, as previously discussed, and thoroughly researched by Alter (1996) and Norris (1999), involves the stretching of each muscle group systematically. Typically, these muscles are stretched, and then held, for a duration of time until the muscle is thoroughly stretched. In a study involving the evaluation of warm-up for improvement in flexibility, it was deduced that
static stretching training program can increase flexibility (Williford, Smith, East & Burry, 1986, p. 316). However, Young and Behm (2003) found that static stretching did not actually prevent injury. Dynamic stretching, in contrast, involves the use of speed movement. Examples include arm circles and walking lunges without holding the end position. The movement is repetitive and utilizes momentum to create the stretch. Prevention of injury, nevertheless, seems to be the most common result of dynamic stretching research (Fradkin, A., Sherman, C., & Finch, C., 2004; Sherman, C. & Finch, C., 2000).

On a psychological level, Mehelen et al. (1993) conducted a study to evaluate the effects of a standardized warm-up as part of health education intervention to attempt to prevent running injuries. In that study, researchers concluded that when participants had literature based on current scholarly research about the physical act of warming-up and stretching, psychological benefits of literature content correlated with the prevention of injuries (Mechelen, Hlobil, Kemper, Voorn & Jongh, 1993).

While researchers continue to debate the physiological and psychological benefits of pre-exercise sports-related stretching and warm-ups, most tend to conclude that benefits of stretching and warm-ups outweigh the possible negative effects. (Anderson, 2005; Bishop, 2003b; Karpovich & Hale, 1956; Herman & Smith, 2008). Controversies within the sports medicine community and the voice medicine community appear to be parallel, as well.

Vocal Pedagogy and Philosophy

Vocal health experts have devoted a lifetime to aiding singers and teachers of singers with research on specific vocal problem-solving activities. Vocal training, like
physical conditioning, has been promoted as the major factor for enhancing the singing voice (Mendes, Rothman, Sapienza, & Brown, 2003). We know from literature that current classical vocal training involves the following: (1) proper posture and body alignment (Verdolini, 1998), (2) breathing exercises to strengthen core muscles (Boone, 1988) (Ringel, Daniloff & Horii, 1987; Sataloff, 1988; Watson & Hixon, 1985), (3) vocal exercises (Verdolini, 1998; Stemple, Lee, Amico & Pickup, 1994), and (4) “articulatory precision exercises” (Mendes et al. 2003, p. 538). Further research confirms the use of articulatory precision exercises (Alderson, 1979). All of these points of vocal training typically are incorporated in a standard warm-up or training procedure when beginning to work with singers on a pedagogical basis. Smith and Sataloff (2006) add:

The purposes of any warm-up period are the same, namely: (1) to adjust the voice from speaking to singing, (2) to align the body and free the breathing mechanism for the act of singing, (3) to create a physical awareness of the vocal mechanism being used correctly, and (4) to stretch gently and exercise the skeletal muscles used in phonation. (pp. 118-119).

Prominent choral directors have stated their own warm-up practices and beliefs. Jordan (2005) offers a thorough warm-up book with philosophical perspectives, teaching procedures, and specific exercises. Seelig (2005) sequences his warm-ups in the following order: (1) body, (2) breath, (3) phonation, (4) resonator, and (5) artistry. Ehmann and Haasemann’s (1981) warm-ups and accompanying video displays daily exercises for choral voice building, with emphasis on musical ideas found in literature and creating a connecting warm-up. Nesheim and Noble (1995) sought to “raise . . . singers’ ability and establish good singing habits as quickly as possible” (p. iv). Robert Shaw warm-up practices and philosophies of warm-ups are well documented. According to Elrod (2003), Shaw “used the warm-up period to focus his choir members’
individual minds on matters of tuning, tone colour [sic], ensemble blend, acoustical conditions, and development of the dynamic palette” (p. 1).

A controversy that arises out of choral warm-ups stems from director philosophies. Intuitively speaking, it would appear that what directors say they are doing with warm-ups is correct. Titze (2000) argues, “Choir singers, like solo singers, need to be taught enough about their instrument to learn how to gauge its condition” (p. 56). Titze believes that a warm-up should be like that of an orchestra warm-up. Each individual musician is playing their instrument to tune it, to warm it up, to get ready for the music about to be performed (Titze, 2001). Byrom (as cited in Titze, 2001), in a reply to Titze, however, argues that “choral warm-up exercises are not intended solely to warm up the individual voice, nor should they be” (p. 57). Byrom adds that the choral warm-up is a period of time to get singers prepared psychologically as well as physiologically. He continues, “It is vital that we also encourage group participation, where one does give up some individuality for the total betterment of the whole” (p. 57).

Other views have been suggested related to the content and purpose of warm-ups as well. Althouse (1995) offers his own advice:

Use your warm-up time to teach good breathing-for-singing techniques. Once the singers’ attention is focused on the work at hand and they are responding to the verbal and non-verbal communication (gestures from the conductor, its time to begin to sing, or rather to _hum_ quietly.) Start with a quiet hum on a single pitch, mid-range tone, from which singing and listening can follow. (p. 8)

Hughley (2008) states, “I am a firm believer in beginning with the falsetto range on a closed vowel, (i) or (u), and singing stepwise descending 5-tone scales, moving downward by half steps. A helpful trick is to allow the hands to float upward as the scale descends. This helps reinforce tall inner space and maintain the center of pitch (p. 6).
Rode (as cited in Hughley, 2008) suggests a “5-4-3-2-1 (in a major scale pattern) on guh [emphasis added] with a ‘shwa’ vowel” (p. 6). This exercise focuses on the resonance in the chest area. Rutkowski (as cited in Hughley, 2008) stresses the importance of warm-ups for young singers: Warm-ups should “encourage the placement of the voice in the upper register, and then move down into lower registers. This warm-up is useful for working on proper breathing techniques, initiation of sound, and vowel placement” (p. 9).

Elrod (2003) adds that Robert Shaw’s approach to warm-ups is more like that suggested by Titze. “Each singer was expected to vocalize independently prior to rehearsal, so that the warm-up time could be used to ‘tune’ the ears and the brain. For Shaw, the warm-up time was utilized to establish the disciplines so crucial to the ensemble’s maturing into a truly expressive musical instrument” (Elrod, 2003, p. 1).

It appears that the warm-up methods of choral directors are rooted in traditions, personal beliefs, and experiences. This research, however, is not geared at disproving one method over the other. There is, however, a need to identify evidence based teaching practices. In meeting this need, we need to understand the principle basis of warm-up philosophies and common practices of choral directors. From this, it may be possible to begin to assess the capabilities of choral director’s success when employing certain practices and philosophies of choral warm-ups.

Success

Choral directors, like the ones previously mentioned, who have achieved a level of success have been evaluated on their rehearsal processes (Yarbrough & Madsen, 1998; Brendell, 1996), their communication practices (Freer, 2008), their rehearsal organizational structures (Cox, 1989), their performance achievement (Davis, 1998), their
ability to teach musical interpretations (Strand, 2003), and motivation (Stamer, 1999). Crochet’s (2006) study involving repertoire selection isolated band director experience, training, instructional level and degree of success. It was important to Crochet to measure success to assist further in the dialog of how best to train undergraduate and graduate music education majors. Choral success isolated in research of choral warm-ups, however, remains limited.

**Music Teaching Style**

Choral warm-ups are only effective as the effectiveness of the teacher presenting the material. Gumm (2003b) argues, “effective teaching has as much to do with the *effectiveness of our principles* as it does with the *effectiveness of our actions*” (p. 14). A high school choral director with a musical background, choral training, a clearly defined philosophy about choral warm-ups, and an understanding of fundamental choral warm-up teaching practices may still have one other dynamic to consider in order to be successful: music teaching style. The self-realization of one’s own music teaching style, according to research (Gumm 1992; 2003) may have a dramatic affect on student motivation and achievement. The evolution of the discovery and effect of teaching style first must be understood from theoretical constructs of motivation and learning achievement.

According to Collins (1999), Kurt Lewin (1890-1947) believed human behavior “had to be goal-oriented to be meaningful” (p. 71). Hunt and Sullivan (1974) noted seven educational environmental components that affect a student’s ability to learn:

1. cultural setting,
2. current school setting,
3. school and classroom characteristics,
4. school or classroom organization,
5. personal characteristics of teachers,
6. student oriented teacher attitudes, and
7. teacher behavior. (p. 27-29).
More recently, research in achievement motivation as it related to the students’ success and failure (Asmus 1986; 1988) showed that success or failure was attributed to task difficulty and effort.

Interest in student motivation and achievement led Gumm (1992) to begin a research program on teaching styles of music educators. In 1993, Gumm created a model and assessment instrument for evaluating choral music teaching styles. Gumm and Essmann-Paulsen (2001) evaluated motivation of instrumental students as it related to music teaching styles. Gumm (2003) studied these effects of choral music teacher experience and background on music teaching style. As a culmination of this program, Gumm (2003) focused his research to assist music teachers in identifying their own music teaching style. According to Gumm, understanding one’s music teaching style through discovery of various music teaching behaviors may “confirm the direction you have been taking in your teaching and then help plan insightful changes in the overall patter of your teaching” (2003, p. 16).

Gumm categorizes the dimensions of teaching into two content areas: (a) teacher guided activities and (b) deeper student learning (Gumm, 2003, p. 104). The impact of music teaching styles of choral directors as they relate to a choral director’s warm-up, however, remains unanswered.

**Statement of the Problem**

Physical and psychological benefits of warm-ups on exercise performance have been well documented. The steady discourse appears to favor the benefits, yet parallel solo-singing benefits of warm-up appear less convincing. Benefits of choral warm-ups have yet to be fully examined. Vocal health and mental preparation emerge as potential philosophical principles of prominent choral directors’ philosophies. Yet other
principles, like influences and enjoyment may add to a developing philosophy of choral director warm-ups. Different styles of teaching may have an impact on how a warm-up improves student achievement. Additionally, a director’s background and training may have a major impact in how they carry out a warm-up procedure. Thus, research is needed to determine what impacts a director’s choral warm-up philosophy and choral warm-up teaching practices has upon the success of their choir.

Descriptive research about warm-up teaching practices and philosophies of successful high school choral directors is vacant. Regarding high school choral directors, no quantitative research details the correlation between teacher training, musical background, music teaching styles, and philosophical beliefs and practices about choral warm-ups. Finally, research is lacking in predicting the overall success of a choral director based on combinations of background variables, teacher education levels, music teaching styles, and high school choral director’s warm-up philosophies and practices.

**Purpose of the Study**

The purpose of this study is to (a) determine relationships of musical background, choral conducting training, and music teaching style upon the attitudes and practices of high school choral directors towards choral warm-ups, and (b) determine the impact of these factors on choral teaching success.

**Research Questions**

1. What are musical background and demographic characteristics, choral conducting training, music teaching style profiles, philosophical beliefs about choral warm-ups, choral warm-up teaching practices, and level of choral success of the high school choral directors in the sample?
2. What are the relationships among musical background and demographic characteristics, choral conducting training, music teaching style profiles, philosophical beliefs about choral warm-ups, and choral warm-up teaching practices?

3. How do teaching styles, warm-up philosophical beliefs, and warm-up teaching practices differ by teaching experience and education?

4. What combination of choral director variables (i.e., musical background, demographic characteristics, choral conducting training, music teaching style profiles) best predicts the choral warm-up philosophical beliefs of successful choral directors and the choral warm-up teaching practices of successful choral directors?

5. After controlling for teaching experience, what combination of choral director measurements (education, musical background, teaching styles, warm-up philosophical beliefs and warm-up teaching practices) best predicts choral director success?

The results of the study will be utilized to assist high school choral directors in making cogent reforms to their students’ vocal health. This research will also assist in teacher preparedness, training, and support to effectively improve choral music education in teacher-training schools.

Definitions

Warm-up. A period of time, typically at the beginning of a rehearsal, devoted to preparing a choral organization for rehearsing music that is to be performed either immediately or within a designated span of rehearsals.
**Music Teaching Style.** “The focus, intention, orientation, or priority underlying the entire pattern of interaction between the teacher, students, and subject matter” (Gumm, 2003, p. 14).

**Vocal Health.** Concurrent habits and procedures specifically focused on the protection and preservation of the voice (Reid, 1983).

**Success.** For the purpose of this research, based on Weiner (1986), as “achievement attributed to (1) effort, (2) ability, (3) level of task difficulty, or (4) luck” (p. 45), and researched developed criteria based on a modified Crochet (2006) study that includes the following motivation and emotional factors: (1) high ratings at adjudicated events, (2) offers a variety of opportunities for students, (3) developed leadership and organizational skills, (4) participates in national, regional and state professional organizations, (5) involved in student success beyond the choir classroom, and (6) invited to perform at state or national conferences.

**Experience.** For the purpose of this research, director’s experience was dichotomously split between those with ten or less years of experience and those with 11 or more years of experience.

**Education.** For the purpose of this research, education was dichotomously split between those hold a bachelor’s degree and those holding advanced degrees beyond the bachelor’s degree. These degrees typically are represented by masters or doctorate degrees.
CHAPTER 2

REVIEW OF LITERATURE

This study focuses on the training and musical background of high school choral directors as it pertains to their warm-up practices of their own choirs. The success of high school directors, their music teaching styles will be integrated into this research. The evidence related to principles of prevailing of vocal health warm-ups involves philosophical understandings of choral director’s use of warm-ups, teaching practices of choral directors, quantitative measurements of success, and music teaching styles.

Preparation for this study engaged in a review of literature from a variety of choral and vocal pedagogical resources, kinesthetic research, sports medicine research, and vocal health research. Specific quantitative studies have addressed the variables of the current study and numerous informative resources have focused on one specific variable. This chapter therefore provides an overview of the literature as it relates to musical background characteristics, demographic characteristics, training and music teaching style. Furthermore, a review of literature will assess the warm-up teaching practices and philosophical beliefs about choral warm-ups and assess research into successful high school choral directors.

Choral Warm-ups

Choral warm-ups typically begin a rehearsal. Phillips asserts, “The term ‘warm-up’ is traditional and covers numerous activities” (2004, p. 254). Philosophically speaking, Phillips believes warm-ups should begin with energizing the body, the breath, the ear, and then the voice (p. 254). Neuen (1988) adds that the sound of a great choir is
one that is energized. He continues, “too often the warm-up begins with vocalizes that are not built on a prepared, physical foundation. The result is often flat and lifeless singing. An energized voice is one that is buoyed by physical energy from the instrument itself” (Neuen, 1988, p. 45). Phillips (2004) suggests that, because singers come to rehearsal with a variety of stress from daily activities, “muscle tension is a hindrance to the vocal process” (pp. 254-255). He adds, “posture development, breathing motion, breath control, breath support, breath-to-voice activation, inner hearing, intonation, humming, staccato articulation, legato articulation, marcato articulation, martellato articulation, vowel uniformity, vocal quality, vocal projection, range extension, consonant clarity, and expression” as areas that should be developed when energizing the warm-up” (pp. 254-274). Phillips makes a compelling argument for energizing a warm-up. Nevertheless, it is not clear what elements of the warm-up are essential.

**Physiological Warm-ups**

The roots of research in vocal warm-ups arose out of overall muscular exercise physiology research. With regard to the athlete, Edelman (2009) reported that warm-ups related to the specific sport being played are essential to prepare the body for exercise and competition. Edelman continues, “Contrary to the deleterious effects of static stretching prior to workout, a dynamic warm-up has been found to produce short-term and long-term performance enhancements in power, agility, strength, muscle endurance, and anaerobic capacity” (p. 2).

De Villiarreal and Gonzalez-Badilo (2007) investigated the optimal warm-up to enhance muscle power and explosiveness. The research focused on acute jumping performance – specifically for volleyball players. This research studied 12 trained male
volleyball players over a four-week period utilizing various squat and explosive force jumping warm-up exercises along with static or general types of stretching and warm-ups. They deduced that “warm-ups that include high-intensity dynamic loading . . . as well as a specific volleyball warm-up protocol can lead to greater acute positive effects on explosive jumping performance. In contrast, . . . general warm-up, low dynamic warm-up, and no active warm-up had no beneficial effect on jumping” (p. 9). Furthermore, the recovery period of the high-intensity dynamic jumping had positive effects and were maintained after long recovery periods. Thus, literature provided necessities of warm-up as performance enhancements in power, agility, strength, endurance, anaerobic stability, muscle power and explosiveness.

Anderson (2005) studied the effect of stretching on muscle soreness and injury risk on 77 army recruits. The authors note, “The results of this review do not support the role of pre-exercise or post-exercise stretching as an intervention addressing post-exercise muscle soreness. In addition, the evidence presented in this review does not support the role of pre-exercise stretching in the reduction of lower extremity injury risk” (p. 220).

One conflicting review deals with the flexibility of warm-up in the study (Williford, East, Smith & Burry, 1986). Williford et al., investigated effects of jogging on the warming-up of joints and then the stretching as a possible increase on joint flexibility. By studying 51 subjects, they found that increases in flexibility can marginally occur as a result of static stretching (p. 316). They were quick, however, to point out, “Warming the muscles prior to stretching by jogging will result in significant increases for all of the joint angles evaluated” (Williford et al., 1986, p. 318).
Warming-up has been observed to have a positive effect on non-muscular tissue. Engström-Laurent and Hallgren (1987), for example, studied 37 participants on the impact of physical activity on the circulating levels of hyaluronic acid in individuals with rheumatoid arthritis. They suggest, based on their findings, that during physical activity, this hyaluronic acid bound by water is “carried into the general circulation, thus reducing morning stiffness in inflamed joint tissue” (p. 1334). To parallel this discussion of non-muscular tissue, we know that vocal folds are made not only of muscle tissue, but of lamina propria, as well. Because the tissue is different, researchers have begun to study differential effects of vocal warm-ups based on tissue type. Elliot, Sundberg and Gramming (1995) studied 9 participants, and found that the effects of warm-ups decreased viscosity in the vocalis muscle as a result of increased temperature. Interestingly, they did not find a consistent effect on the phonation threshold pressure (PTP). They speculated that PTP may depend on variables other than vocalis muscle viscosity. Furthermore, they also found variability in participants’ responses to the warm-up and a pitch-dependent effect. Research on vocal chord warm-ups begin to contradict that of physical stretching.

The choral director faces a large group of singers each week, and, thus each singer comes to the rehearsal with his own vocal issues. Choral warm-ups are used for a variety of reasons, but most authors regard one element of the choral warm-up as a time to prepare a voice for the physical act of singing (Seelig, 2006; Smith & Sataloff, 2003; Callaghan, 2000; Rosen & Sataloff, 1997; Jordan, 2005; Brandvick, 1993; Webb, 1993). Vocal health experts also note that each singer may have issues with their voice from time to time (Titze, 2001; Sataloff, 1988; David, 2008). From the amateur to the
professional, vocal problems are typically evaluated in the following categories: respiration, phonation, resonance, articulation, prosody, and muscular tension (Sataloff, 1998, pp. 268-69). For most, the choral director is their only source for specialized instruction in vocal health (Seelig, 2006). Brodnitz (1988) adds:

   The good director has to be a first-class musician. And he or she has to know enough about the technique, the mechanics, the acoustics, and the psychology of singing to build his or her teaching methods on a firm basis of modern science (p. 142).

Substantial research in voice therapy, nevertheless, wanes because “the amount of available research evidence is directly related to the amount of investment put into it” (Carding, 2000, p. 4).

Over the last 20 years, “scientific and technologic advances have resulted in dramatic improvements in medical care of voice disorders” (Rosen & Sataloff, 1997, p. 19). Shelton adds that voice quality is affected by a variety of elements: the condition of the vocal folds and their freedom of movement, subglottal air pressure, periodicity of the glottal cycle, and adjustments in the vocal tract above the vocal folds (1985, p. 271). In vocal therapy, McFarlane and Lavorato (1983) suggest working to ensure the voice:

   (1) is hygienic – produced without pathologic changes in the larynx;
   (2) has carrying power – is useful in normal speaking situations and demands;
   (3) is esthetic – sounds good and is not distracting;
   (4) fits the patient – with respect to age, sex body size; and
   (5) is flexible – can express the range of emotions and moods of the patient (pp. 36-37).

From the vocal therapist philosophy on the individual singing voice (McFarlane & Lavorato, 1983) to the medical practitioners of Titze, Sataloff and Smith, the community of science has created a strengthened understanding of vocal science
as they relate to vocal warm-ups. This study, however, focuses on the practices and philosophies of choral directors.

**Musical Background/Behavioral Characteristics**

Researchers continue to promote the topic of defining expert teacher behavior. Background was critical in studies as it related to teacher behavior (e.g., Berliner, 1986; Driscoll, 1985) as they focused on teacher behavior across disciplines. Musical background has influence on musicians as Coltan and Estill (1981) demonstrated the effect of musical background on perception of voice quality. Their research on 30 subjects, 15 musicians experienced in listening to voice quality, and 15 considered naïve in rating voice quality, suggests that in addition to being more accurate in terms of pitch discrimination, musicians also may process auditory stimuli, including voices, differently than non-musicians.

Holahan, Saunders, and Goldberg (2000) also studied adults with and without musical training. They found that “adults without musical training performed similarly to children in a pitch discrimination task, whereas adults with musical training showed significantly more accurate and quicker responses” (Holahan, et al., 2000, p. 175). As a result, training, rather than development, has an impact in pitch discrimination accuracy.

Broomhead (2001) created a survey to study the effects of individual expressive performance as it relates to musical background. The survey of 11 high schools and 82 individual students yielded mixed, but notable results. Using multivariate analysis of variance (MANOVA) on grade level, semesters of high school choir, years of private piano, years of private voice, years of private lessons on instruments other than piano, and age first participated in a performing organization, the analysis revealed no
significant relationships between individual and ensemble achievement. Nevertheless, performance and technical performances showed a strong relation. Musical background factors that showed significance from one-way ANOVA included: (a) involvement in outside performing groups, (b) semesters of high school choir, (c) private vocal lessons, and (d) age of first private lessons. While the result questions Broomhead’s assumption that expressive ensembles yield expressive individuals, the variables of involvement in outside performing groups, semesters of high school choir, private vocal lessons and age of first private lessons warrant further investigation in the background of this current study.

Demorest and May (1995) studied factors relating to individual performance in music, specifically sight-reading. In a survey of 414 Texas high school choir members from four high schools, he found that number of years in a school choir was the strongest predictor of individual success. This predictor was immediately followed by years of piano, instrumental and vocal lessons. From the study, additional background variables of prior choral involvement and private instrumental or piano lessons taken during a director’s elementary and secondary education emerge for this study (Demorest and May, 1995). Additionally, from inference, the study of music theory in the piano or voice lessons could garner a further resulting variable.

A similar background variable of musicians, with no weight given to specific choral directors yet, may be the acquisition of absolute pitch. Deutsch (2006), in her continuation of research on absolute pitch, states, “Although absolute pitch is most prevalent among highly accomplished musicians, it is not necessarily associated with superior performance on other musical processing tasks” (p. 11).
From the content of research on background, certain items continue to surface and need further investigation in this particular study. These include: piano studies, singing in choir, a musical theory influence, and potential absolute pitch acquisition as part of a musical foundation throughout their adolescent and college life.

**Music Teaching Style**

Much of the research on teaching styles comes from students’ perceptions of teaching effectiveness (Asmus, 1986). Yarbrough and Madsen, (1998), for example, focused on students’ perceptions of student and teacher behaviors. University music majors, from excerpts of taped choral rehearsals, rated highest the actions of teacher approvals, teacher eye contact and activity changes. Owens (1992) also found most students believed effective rehearsals consisted of variety, direct student involvement, “expressive gestural language and multi-modal instruction” and use of metaphors during instruction.

Gumm, however, has had the most impact recently upon prevailing research on the subject of music teaching style in music education. His studies have evolved into a formative discourse in the self-evaluation of teachers. Gumm (1992) first documented a review of music teaching styles literature. In a study, Gumm (1993) identified 2,000 subjects for standardization and 700 subjects for validation to formulate two nationwide random samples led to developing a model and assessment instrument of choral music teaching styles. While the return rate for the standardization was 26.25% was achieved, 475 returns were completed to create a 3.5:1 subject-to-variable ratio. In the validation sample, 210 usable samples translated into a 4.2:1 subject-to-variable ratio at a return rate of 31.86%. Choral directors were asked to provide information about their own teaching
behaviors. The intent was fourfold: (a) determine measurable dimensions of choral music teaching style, (b) identify the teaching style of groups of choral music directors, (c) determine the validity of the dimensions and groups, and (d) develop a reliable and valid self-report instrument for assessing teaching style.

From Gumm’s (2003a) research, behaviors, dimensions and styles were analyzed. The data in the standardization created a list of Ten Music Teaching Styles Inventory. This inventory was created through factor analysis of 134 teaching behavior survey items. This list identified the following: Student-centered comprehensive Leadership Qualities of Choral Conductors 12 musicianship oriented, teacher-controlled comprehensive musicianship oriented, student/subject matter interaction oriented, task-oriented, music performance oriented, cooperative learning oriented, concept presentation oriented, content oriented and discovery-oriented. Gumm’s recommendations involve assessment of choral music teaching styles on student learning, “relationships of teaching styles with teacher’s philosophical beliefs, personality, learning style, and background, and the interaction of teaching style with student personality and learning style” (1993, p. 20).

Furthermore, Gumm (2003) studied the effects of choral music teacher experience and background on music teaching style. In a survey, 473 secondary choral directors revealed moderate effects of teacher experience and background on music teaching style. The survey also revealed a moderate effect of teacher background and music teaching style on choral music festival participation and ratings. Gumm’s research isolated teacher background components as time and advancement, specialization and gender, and geography and culture.
As a result of his continuous study of music teaching styles, Gumm (2003) created the Music Teaching Styles Inventory. As previously mentioned, his inventory contained 10 items. After further analysis, Gumm established the following 8 items creating the music teaching styles inventory (MTSI). In his book, he provides a working knowledge of the following concepts: (a) assertive teaching, (b) nonverbal motivation, (c) time efficiency, (d) positive learning environment, (e) group dynamics, (f) artistic performance, and (g) student independence. Activities that relate to each concept found in assertive teaching, nonverbal motivation, time efficiency and positive learning environment, according to Gumm, are grouped into a one level of teaching styles – teacher directed instruction. The latter half, including group dynamics, artistic performance and group independence are grouped into a category Gumm calls depth of student learning. Gumm (2003b) states that after about ten years of experience, directors concentrate more on student’s deep learning than with controlling what a student learns. Thus, quantitative studies of music teaching styles as related to choral director warm-ups, specifically related to philosophy and practice, are needed to attempt to measure the successful choral directors utilizing the MTSI.

**Philosophical Beliefs about Choral Warm-ups**

Literature on the philosophical beliefs about choral warm-ups is vast. Prior to the 1970’s choir directors utilized an instrumental approach to warm-ups (Smith & Sataloff, 2006). That is, the reliance upon a unison note sung on one vowel and tuned while being held, was the practice of most conductors, just as band directors used the same idea when beginning a rehearsal with their respective bands.
Durrant (2003), in offering a list of philosophical principles and skills needed for a model choral conductor, believes it to be important the “recognition ... of warming up voices, of knowing and delivering strategies appropriate for the group, and the validity of physical and vocal exercises in relation to physical and vocal preparation for effective singing and rehearsing and vocal health” (p. 101). He adds, “a significant purpose of warm-ups at the beginning of rehearsals is to release tension” (p. 113) and to create a sense of beginning to create an artistic collaboration together. What is needed to be discovered is whether other directors ascribe to this account of using the warm-up for tension releasing and focusing activities.

Prominent conductors have espoused their philosophies of warm-ups. These include Howard Swann, Robert Shaw, Weston Noble, Tim Seelig, Russell Robinson, and Lloyd Pfautsch. Each of these conductors has been influenced by vocal pedagogy expert, Richard Miller.

In the 21st century, one could deduce that our level of scientific knowledge of the voice should transcend to pedagogical training of our teachers. Miller (1998) argues:

We should not fool ourselves, however, into believing that what generally takes place today in vocal studios is based on intimate acquaintance with the current literature of science. Most teachers of singing give a nod of approval to the helpful scientist, and exhibit tolerance and indulgence toward those who want to play with machines, but, deep down in our hearts we “know” that singing and teaching are matters of “instinct” and “artistry,” and that there is no real possibility of improving on what Madame X handed down to Maestro Y, who in turn gave it unadulterated to my teacher (p. 298).

While Miller’s cynicism may resonate with most vocal instructors, choral directors are perhaps equally, if not more, guilty of duplicating teaching techniques from their previous choral directors. The need to do what previous choral directors have done, because of an emotional attachment, perhaps, may or may not be the healthiest way to
carry out a rehearsal, and, more critically, the warm-ups. Examining a response to see whether choral warm-ups are done based on influences of previous directors may be one way to uncover whether the success of the director hinges on previous teachings. Further research could uncover whether the previous director’s influence affects the success based on the choral warm-up philosophies created from the influence of previous and influential directors.

Swan (as cited in Decker & Herford, 1973) offers a philosophical perspective based on experience. He states:

Choral conductors, even more so than teachers of singing, are divided in their opinions concerning vocal technique. Some refuse to employ any means to build voices. Either they consider such procedures to be unimportant, or they are afraid to use an exercise that is related to the singing process. Sometimes choral directors cloak their own ignorance of the singing mechanism by dealing directly with the interpretive elements in a score and, thus, avoid any approach to the vocal problems of the individuals in a chorus. There are also those conductors who insist upon using only the techniques learned from a favorite teacher. These are applied regardless of the nature of the problem or the desired solution. Finally, there are some who, without an orderly plan of procedure, utilize a great number of vocalizes, devices, and methods taken from many sources with the desperate hope that the tone of their chorus somehow will show a marked improvement (p. 8).

Swan addresses the notions of building voices as a result of knowledge of the voice, of knowledge of the literature, and organization of the process of warming-up a choir.

Miller and Swan both urge that teachers use knowledge of vocal health and knowledge of specific warm-ups from a systematic structure to elevate the director’s pedagogical abilities. As Miller (1998) states:

It is the responsibility of the singing teacher in a scientific age to interpret and expand vocal traditions through the means of current analysis so that the viable aspects of tradition can be communicated in a systematic way. The advantage of teaching singing in the era of the voice scientist is that today’s teacher has the means of sorting through what is offered, both historically and currently, at the
vocal pedagogy smorgasbord, and of choosing rationally what is most nutritious, while discarding the garble, of which there is plenty (p. 299).

Pfautsch (as cited in Decker & Herford, 1973), in a summary of the necessity of warm-ups, offers the following 10 points:

1. Warm-ups have a pedagogical potential, although the conductor does not have to make this obvious to the chorus.
2. They are an excellent way to focus the attention of the chorus on the singing process.
3. Since singing makes greater demands on the human vocal mechanism than does speaking, warm-ups are an effect means of preparing the body and that mechanism for meeting these demands.
4. Since there is more extensive use of the breath in singing than in speaking, the muscles involved in breath support need to be activated and exercised before strenuous singing begins.
5. Warm-ups can help the singers relate breath support to tone production. The use of consonants can assist this process.
6. Warm-ups can assist in the development of vowel sounds and good tone production, the results being a collective precision in enunciating and sustaining uniform vowel sounds, and a collective sensitivity toward pitch accuracy. When this process is supervised with care and persistence, much of the common sound experienced in the warm-ups can be carried over into rehearsal and performance of the music.
7. The warm-up procedure should vary for rehearsals although the purpose should remain the same. When the same procedure is employed, it suggests mere routine and thereby encourages apathetic participation and a lack of attention. A variety of procedures will prove stimulating, engaging, and interesting to the singers and will call on the conductor’s imagination and ingenuity.
8. The warm-ups should be consistent with those employed in sound vocal pedagogy. Singing in a chorus may be the only vocal training many of the members will receive, so the conductor can use the warm-ups to share some vocal techniques and disciplines with the singers. Since there will also be a number of singers who have studied voice privately, the warm-ups should be consistent with what the singers have experienced in private vocal study.
9. The amount of time given to warm-ups should be varied. Determining factors are the time of day, the activities of the personnel prior to the rehearsal, and the necessity for conditioning.
10. Whatever is done in the warm-ups must be purposeful and directed to the music at hand, never routine. (pp. 78-79).

Pfautsch’s principles of variability, time of day, technique, tone quality, and attention-focusing create a construct for quantitative studies of the philosophical, as well as teacher
practices of choral director’s warm-ups. A quantification of high school director’s philosophy on the same principles may assist in the validity of this construct as it relates to his own philosophy of warm-ups.

Seelig (2006), from his practice as a conductor asserts, philosophically, “stretching your muscles actually focuses blood flow to them, thereby raising the temperature of the muscles” (p. 68). In referencing not only the body, but, in particular, the voice, he adds, “You cannot begin the day without appropriate warm-ups. Doing so will eventually cause damage to your instrument: hemorrhaging, blisters or even worse, the dreaded nodes” (p.68.). In reference to literature and warm-ups, he writes:

I am a huge proponent of using repertoire to create warm-ups. However, it requires a great deal of work and planning on your part. There are . . . ways to do this. One is for you to sit down in advance of your rehearsal and select portions of the music that you feel might be a challenge, or portions that you think make good warm-ups. . . (p. 71).

Miller and Seelig share a similar vision. As Miller (1998) states, “A main goal of teaching in this and any age should be to do no harm” (p. 299). Humorously, but pointedly true, Seelig (2006) adds, “To my knowledge, no voice teacher or conductor has yet to be sued for malpractice [sic], but I have no doubt that day is coming. Don’t be the one who encourages poor vocal health simply by lack of attention” (p. 81). Concerning the vocal health and philosophical beliefs, each director must be able to know what limitations and expectations one can encounter in the variety of choirs being directed before espousing or maintaining useless or a series of unqualified warm-ups.

Controversy continues to emerge from the literature. For example, Jordan (2005) states, “Contrary to popular thought, the warm-up is not intended to ‘warm up’ the voice. Rather, the objective of the choral warm-up is to establish, reestablish, and reinforce the
basic elements of good singing in every rehearsal” (p. 21). He adds, “the primary role of
the warm-up is to make a transition from speaking voice to singing voice – that is, to
provide a transition from vocalism for speaking to vocalism for singing” (p. 20-21).
Because of confusion about the purpose of warm-ups, quantitative studies of the
philosophical beliefs of choral directors, their roots, their acquisition of the actual
material, and rehearsal purposes would provide evidence of consensus to the overall
context of inquiry of choral warm-up philosophies.

Enthusiasm in directing must also be discussed. Noble (2005), in his account of
the beginning of a rehearsal process, states, “It is at this moment that the conductor has
within his or her grasp a most splendid opportunity. The mind of the student is at its
most open and receptive state. The impressions that enter their minds in the next thirty
minutes will be determining factors in the success of the year that lies ahead” (p. 29).
Noble writes on the necessity of conveying one’s own genuine enthusiasm to the choir at
the moment of first contact, and reiterates, “It must be a genuine enthusiasm on your
part” (p. 30). As a result, one philosophical question still remains. Does a choir director
enjoy teaching warm-ups?

Swan already argued that some directors may not enjoy the process because they
are entirely insecure about what they are doing. Research (Griffen, 2005) would suggest
that if you make the teaching process more like play time, the process may not feel like a
job, and thereby a dreaded event in the work requirement of a conductor. For example,
Griffen (2005), studied an Irish school operated by David Manson in the 18th century.
Manson opposed traditional teaching, but, despite being ridiculed for altering teaching
styles to make classroom learning a more entertaining, his students showed tremendous
achievement. Griffen’s article suggests that people who engage in a more play-like atmosphere, who create a culture where “success and self-esteem take precedence over curriculum delivery discover that the delineation between ‘work’ and ‘play’ becomes less sharply defined” (Griffen, 2005, p. 133). It invites the question of whether a conductor enjoys his work. If a conductor does not enjoy what he is doing, the results could influence the total outcome.

**Choral Warm-up Teaching Practices**

From the discussion by Pfautsch (as cited in Decker and Herford, 1973) regarding a relationship between the warm-up and the music presented, Lamb (2009) agrees with Pfautsch on the principal discourse in using the warm-up as a time to relate musical elements to the music about to be sung. Lamb argues that the use of repertoire in warm-up exercises can save rehearsal time; learning the music becomes easier and more enjoyable for both the choir and the director (2009, para. 6). Pfautsch and Lamb have argued effectively in support of purposeful warm-ups, and, in particular, the use of items related to the music about to be rehearsed.

Research about the importance of relating warm-ups to literature is found in a study by Coker (1984). In his comparison study of high school choirs, he found that the warm-up exercises created from music currently being rehearsed facilitated choral learning better than generic warm-up exercises (p. 84).

Through systematic observations of music rehearsals, research related to other attributes of effective music teaching (Caldwell, 1980; Fiocca, 1986, Brand, 1990; Madsen, Standley, Byo, & Cassidy, 1992), observations of successful teachers in non-musical classrooms (Madsen & Stanley, 1991). Observational research intended to
describe teaching effectiveness has been conducted (Cavitt, 1998; Yarbrough & Price, 1989).

Brendell (1996) examined 33 high school choral rehearsals to investigate “the use of rehearsal time during the initial minutes (i.e., the warm-up time)” (p. 6). While focusing on sight-reading procedures, Brendell found that if contest was imminent, more time was devoted to initial minutes of the class for warm-up and sight-reading.

Directors often revisit the available literature for assistance in preparing a choir for rehearsal. Current and popular literature on the practice of choral warm-ups has offered a variety of choral warm-up techniques instilled on their readers (see Table 2). Each author’s philosophy of warm-ups came from both musical experience and practice to create these texts.

Table 2

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</tr>
</thead>
<tbody>
<tr>
<td>Breath</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<tr>
<td>Body</td>
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</tr>
<tr>
<td>Mouth technique</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
<td>*</td>
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</tr>
<tr>
<td>Vocal flexibility</td>
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<td>*</td>
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<td>*</td>
<td>*</td>
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<tr>
<td>Combination of breath and vocal flexibility</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>Music related technique</td>
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<td></td>
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<tr>
<td>Isolated rhythmic exercises</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
<td>*</td>
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<td></td>
</tr>
<tr>
<td>Specific group tuning</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<tr>
<td>Idiomatic warm-ups</td>
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</tr>
</tbody>
</table>

After reviewing each, the following categories emerged as presiding factors: Breathing exercises; whole-body exercises; mouth related techniques of tongue, lip, diction and vowel formation; vocal flexibility and range extension like sirens and arpeggios; combination of breath and flexibility; specific music related techniques like phrasing, dynamics, minor keys, intervals and scales; specific group tuning exercises in unison, two- to four-parts; idiomatic warm-ups related to jazz, pop and church.

The reviewed literature of choral warm-ups provides a basis to further study a director’s own warm-up literature usage. Directors rooted in one method, one book or multiple available resources may provide valuable results. Particular attention was given to the literature in Table 2 that were complete in scope: Ehmann and Haasemann, Jordan, Nesheim and Noble, and Seelig.

**Successful Practices of Choral Directors**

Literature on performance achievement of choruses is vast. Davis’ (1998) research involved “identifying rehearsal behaviors to evaluate performance achievement in relation to performance preparation” (p. 496). Davis investigated director behaviors and the connection between preparation and achievement. Rehearsal activities of beginning and advanced choirs were categorized and analyzed, in general, by achievement, verbal instruction, student performance, teacher conducting, instruction rate, teacher feedback, and positive teaching sequences. The study videotaped 83 rehearsals, four final performances and used beginning and advanced groups from two different high schools. Participants in this study showed a marked decrease in verbal
instruction as their choirs progressed in the rehearsal process. Interestingly, though, Davis noted that the results of this study were limited because only two directors participated.

Cox (1989) studied successful high school choral directors in Ohio on their rehearsal organizational structures. In his study, he identified success based on high school choral directors who participated in Ohio Music Education Association sponsored state-level competitions. The directors had to have achieved a superior rating at a previous district-level adjudicated event in order to move to the state-level competition. He found, primarily, that successful directors use a systematic structure for their rehearsal.

Parker (2009), in her dissertation at the University of Nebraska, sought to understand social identity development of high school choral singers. As she states, “the core phenomenon of social identity development emerged as ‘team,’ with three supportive categories: 1. Everyone is there for a reason, 2. We will all be together, and 3. ‘Musical family’ ” (p. ii). Parker’s research further recommends that a successful director should be mindful of the social dynamics of the choral classroom.

Another area under investigation is the use of time in rehearsals. Goolsby (1996) investigated experienced, novice, and student teachers on the use of time in rehearsals. Sixty high school band rehearsals were studied for use of time based on initial activities, teacher activities, performance activities, and final activities. Preparation, initial teacher talk, and total ensemble warm-up formed the initial time period variable.

Teacher activities revolved around verbal instruction, nonverbal instruction, verbal discipline, and the number of times the teacher stopped. Performance activities
included full ensemble playing, group/sectional playing, individual playing, breathing, humming, clapping, singing, and counting exercises, as well as the number of rehearsal segments, break after warm-up, first selection, second break, second music selection, third break, third music selection, fourth break, and fourth music selection. The closing activities included final teacher talk and dismissal time. Interestingly, the study did not find a significant difference between music instruction/performance and nonteaching activities for the experienced and student teachers. A significant difference, however, was found for performance time of novice teachers versus experienced teachers.

Specifically, Goolsby (1996) found that experienced teachers spent less time getting started, using verbal discipline, and verbal disapproval. The shorter start-up time allowed the experienced teachers to spend more time in warm-up. Furthermore, experienced teachers spent significantly more time rehearsing music and utilizing nonverbal modeling. The experienced teachers also allowed longer breaks or resting periods, played longer segments of music without stopping, and their verbal and nonverbal teaching segments were shorter.

Pence (1999), modeling Goolsby (1996), used 19 choral directors representing three similar experience levels: expert, novice, and student teacher. She categorized director rehearsal language into talk, model, directive, off-task, explain, question, feedback, response to inappropriate behavior, and student talk. Following video-taped rehearsals, Pence analyzed the warm-up and the first rehearsed piece of music. After collecting 17 to 30 minutes of video tape from each rehearsal, the data revealed that the total percentage of teacher talk was similar across teacher experience levels with a mean percentage of 43.4 % for the expert, 37.5% (novice), and 43.3% (student teacher) for a
Mean of 40%. Novice teachers were observed as having the most student talking. Student teachers modeled less but had about the same rate of giving directions as novice and experienced teachers.

Researchers continue to promote the topic of defining expert teacher behavior. These results are then implemented in teacher training programs (Berliner, 1986). The focus of this research examined teacher behavior across disciplines from feedback and delivery of teaching instruction. Likewise, other research defined experts’ common personality traits (Smith, 1995).

Music education research, as well, has identified similar personal and behavioral characteristics. Benner (1972) reported that effective music instructors “tend to accept certain truisms: each rehearsal should be planned; the objectives should be identified, the participants should be aware of the [promptly attainable short and long-range] goals in order to have specific targets; the prevailing attitudes of the participants are affected by how the rehearsal ends as well as by how it begins” (p. 17). In a survey investigating pre-service and experienced music teachers, Teachout (1997) asked each to rank 40 teacher skills and personality traits in order of importance in contributing to success within the first three years of teaching. From this, the top statements included: “Be mature, have self-control. Be able to motivate students. Possess strong leadership skills. Involve students in the learning process. Display confidence. Be organized. Employ a positive approach” (p. 45).

To confirm this line of research, Crochet (2006) studied success, experience, training and instructional level on the repertoire selection of band directors. Her study
involved the creation of a success measure based on previous research. In this study, 21 items were created to evaluate the following:

- Receives consistent superior and/or excellent rating at adjudication band festivals; maintains a balanced band program with groups such as concert, marching, jazz, and chamber ensembles; demonstrates personal leadership skills; demonstrates professional organizational skills; demonstrates professional organizational skills (rehearsal prep, administrative); participates in professional organizations; maintains a positive attitude toward personal student, and program success; inspires students to the point that students themselves share enthusiasm and dedication; mentors students; provides students the opportunity to work with guest conductors, composer and outside instructors; participates in professional activities (adjudicates festivals, attends clinics and workshops; works diligently at meeting the competitive and performance demands of that system (dedicated – hours); encourages a large percentage of students to participate in solos and small ensembles at evaluation festivals; received invitations for ensemble under their direction to perform at a state or national conference; percentage of student participation in instrumental music program compared to school enrollment is 20% for middle/junior high school and 10% for high school (p. 58 – 59).

Participants in the Crochet (2006) study included 212 band directors. Because her research centered on repertoire selection, the influence of successful or less successful directors had interesting results. More successful directors selected music because they heard it performed, perused various music lists, and recalled music that they had once performed in high school and college. Furthermore, Crochet found interaction of success and experience in the process of selecting repertoire. More experienced and successful directors differed from their less experienced and successful counterparts in areas of influence on sources of music and educational content.

Interestingly, the application of choosing choral warm-ups could be applied to the Crochet (2006) band study. Additionally, measuring successful choral directors could be applied with modification of the Crochet (2006) study for choral directors. Thus, success could be considered a variable in this current study.
As a result of this information, data should be analyzed that includes the following: Data of successful directors who relate musical aspects into their warm-ups should be ascertained. Time spent in warm-ups, the director’s organizational ability and their prior influence should be further investigated to establish a mechanism for measuring choral warm-up practices and success. Finally, literature use, socialization and systematic procedures, as well as assessment (Kennan-Takagi, 2000; Freer, 2008; Robinson, 2006) through planning and preparation should also be measured as part of the choral director teaching practices as well as measuring the level of possible success should one do certain procedures. Nevertheless, the research is limited in this particular area as it relates to choral warm-up teaching practices.

Summary

High school choral programs are led by directors who have a varied background. These directors have diverse musical backgrounds, their student populations are diverse, and their own choral training is equally diverse. These teachers also have a variety of musical teaching styles as they relate to the concepts of assertive teaching, nonverbal motivation, time efficiency, positive learning environment, group dynamics, music concept learning, artistic music performance and student independence (Gumm, 2003). Jorgenson (2001) points out, “Not only do theory and practice contain common elements and aspects that affect each other, but because of the ambiguity of theory and practice, specific theories and practices are also being weighed and evaluated” (p. 346). Thus, it is the intent of this research to create variables on both theory and practice. In this case, dependent variables will be crafted from choral warm-up philosophy and choral warm-up
practices, and independent variables upon demographics, background, music teaching styles, and success in the classroom.

A construct of what is success and how do we achieve an acceptable pedagogical practice in teacher training has yet to focus specifically on choral warm-ups quantitatively. Some may argue it is impossible to quantify warm-up philosophy because it is an individual who knows his/her own voice. This author, however, believes that if we cannot attempt to open the floodgates of intellectual prowess of our quantitative abilities, our philosophical beliefs are marred by false pretense. To say what we believe but to fail to test our beliefs is a static and hubristic position. Never to investigate those teachers whose practices are successful invites blindness and monotony. Jorgensen adds, “Whether we are just beginning or further along the road as teachers, facing the reality of teaching is important in determining what we are to do in the future. (2008, pg. 254).” Data derived from an analysis of existing choral directors’ music teaching style, background, teacher training, and evaluating what teachers say and do, should provide a more relevant and useful guide for future generations of choral directors and choral director pedagogy.
CHAPTER 3

METHOD

This study was meant to examine the impact of musical background, choral conducting training and music teaching style on the choral warm-up philosophy and practices of successful high school choral directors. The outcome will be utilized to aide in teacher preparation, training, and support. Specifically, this research aimed to determine, first, what background and training characteristics were prominent among high school choral directors. Successful directors were isolated and evaluated. The research examined certain relationships of the directors’ practices and beliefs about warm-ups. From prior research, education and experience impacts a teacher’s success (Gumm, 2003b). Nevertheless, this study aimed to explore education and experience effects upon teaching styles, beliefs and practices. Finally, this research explored high school choral directors to see if a director’s success can be predicted by choral warm-up beliefs, choral warm-up practices, musical background, coral conducting training, and music teaching styles.

Specifically,

1. What are musical background and demographic characteristics, choral conducting training, music teaching style profiles, philosophical beliefs about choral warm-ups, choral warm-up teaching practices, and level of choral success of the high school choral directors in the sample?

2. What are the relationships among musical background and demographic characteristics, choral conducting training, music teaching style profiles,
philosophical beliefs about choral warm-ups, and choral warm-up teaching practices?

3. How do teaching styles, warm-up philosophical beliefs, and warm-up teaching practices differ by teaching experience and education?

4. What combination of choral director variables (i.e., musical background, demographic characteristics, choral conducting training, music teaching style profiles) best predict the choral warm-up philosophical beliefs of successful choral directors and the choral warm-up teaching practices of successful choral directors?

5. After controlling for teaching experience, what combination of choral director measurements (education, musical background, teaching styles, warm-up philosophical beliefs and warm-up teaching practices) best predict choral director success?

**Participants**

High school choral directors from around the country (N=365) completed the survey. The Texas Music Educator’s Association (TMEA) listing of 984 high school choral directors was purchased for $125.00. All TMEA participants were recruited by Email. Furthermore, high school choral directors’ names were acquired from databases of state American Choral Directors Association (ACDA) members and 250 prospective participants were randomly selected from databases of state ACDA members. Institutional Review Board (IRB) approval of this protocol on February 24, 2010, and the data collection process took place online for seven days. Participants included high school choral directors from rural, suburban, and urban environments from 28 states.
representing all regions of the United States. All participants were E-mailed to inquire about their willingness to participate in the study. Participants signed the IRB approved informed consent form before participating (Appendix A).

Participants were required to complete a consent form at the beginning of the survey guaranteeing their anonymity. Electronic data were stored in password-protected files and in the principal investigator’s office computer at the University of Miami. Data were, and still remain, only accessible by the researcher and the principal investigator. Participants were not identified during this analysis. Furthermore, no participants were identified in the final publication of results.

**Measures of Dependent and Independent Variables**

*Choral warm-up philosophy.* As a dependent variable, Choral Warm-up Philosophy identifies what a director believes about the warm-up process to be important. Specifically, the philosophy of choral warm-ups, if a director has one, may be a leading indicator of the vocal health and overall success of their ensemble. Thus, the CWPH was created, based on previous research, to measure the belief structure of a director as it relates to choral warm-ups.

*Choral warm-up teaching practices.* The dependent variable, choral warm-up teaching practices, has a critical function in this research. In order to understand the processes of a choral director’s warm-up procedures, the content of their warm-ups, the literature used to assist, the time spent, the planning and organization prior to the delivery of the warm-up, and the seeking of new knowledge of warm-ups based on other self-identifying successful choirs, the CWTP surveys was created. The CWTP operationally served as an instrument to measure choral warm-up teaching practices.
Background, training, music teaching style, success. Background, including demographics and teaching situation, choral conducting training, music teaching style, as defined by Gumm (2003a; 2003b) and success, as defined by Crochet (2006) was used as independent variables in this study. Additionally, composite variable Choral Warm-up Philosophy (CWPH) was measured as an independent variable to answer research questions four and five. Similarly, composite variable Choral Warm-up Teaching Practice (CWTP) was measured as an independent variable to answer research questions four and five. To answer question five, the variables Background and Training, Music Teaching Styles, Choral Warm-up Philosophies and Choral Warm-up Teaching Practices were used to predict the potential success of high school choral directors.

The Choral Background and Training of choral directors (CBT) was operationally defined by previous research (e.g., Crochet, 2006; Daniels, 1986; Emmons & Chase, 2006; Gumm 2003a). Music Teaching Style was operationally defined by Gumm (2003b), and measured the music teaching styles of choral directors. Success of music teachers was operationally defined by Crochet (2006). As a result of modifying Crochet’s measure, the CDS measured the success level of choral directors.

As a result of previous research and operationally defining the variables, three researcher-designed surveys, the Choral Background and Training instrument (CBT), the Choral Warm-up Philosophy instrument (CWPH) and the Choral Warm-up Teacher Practices instrument (CWTP) were implemented to gather data for this study. Additionally, Choral Director Success (CDS) and Gumm’s (2005) Music Teaching Style Inventory (MTSI) was utilized.
The Choral Background and Training instrument (CBT) gathered demographic, background and training information (see Appendix B). The CBT consisted of 13 demographic and classroom items based on previous research (Crochet, 2006; Demorest & May, 1995, 1996). One item each is devoted to the participant’s state, age bracket, sex, race, voice category, highest degree earned, teaching certification, teaching level, classroom size, current grade levels being taught, and number of years teaching. The CBT also consists of 13 background and training items based on previous research (e.g., Crochet, 2006; Demorest & May, 1995, Broomhead, 2001). Three items address piano training or background in other instrument training. One item inquires about the participant’s acquisition of absolute pitch. Four items examine participation in other non-school related choral organizations. Four items examine the musical foundation based on prior education levels. One item addresses a music theory foundation background. Table 3 reveals the item distribution and basis of previous research citations found in the CBT.

Table 3

*Item distribution for the Choral Background and Training Instrument (CBT)*

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity</th>
<th>Citation</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Pitch</td>
<td>1</td>
<td>Coltan &amp; Estill (1981), Deutsch (2006)</td>
<td>4</td>
</tr>
<tr>
<td>Music Foundation</td>
<td>5</td>
<td>Demorest &amp; May (1995)</td>
<td>5, 10-13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Holahan, Saunders &amp; Goldberg, (2000)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The CWPH measured the choral warm-up philosophies of high school choral directors. The CWPH consisted of 12 items (Appendix C). Table 4 provides a breakdown of the content, quantity, citations and item numbers found in the Choral
Warm-up Philosophy instrument. Based on previous research, one item evaluates enjoyment of teaching warm-ups. Two items examine the focus of attention as a basis for warm-ups. Two items address the vocal-health aspect of choral-warm ups. Four items inquire about predisposition for certain college or a conductor’s methods. Two items examine the influence upon hearing other choirs. One item inquires about the relationship of warm-ups to a choir’s success. One item addresses the specific relationship of time spent in warm-ups to a choir’s success.

Table 4

*Choral Warm-up Philosophy Instrument Item Distribution (CWPH)*

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity</th>
<th>Citation</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoy/Focus</td>
<td>2</td>
<td>Griffen (2001), Noble (2005)</td>
<td>1-2</td>
</tr>
<tr>
<td>Vocal Health</td>
<td>2</td>
<td>Smith &amp; Sataloff (2006), Swan (1973)</td>
<td>3-4</td>
</tr>
<tr>
<td>Success/Time</td>
<td>2</td>
<td>Seelig (2006), Jordan (2005)</td>
<td>5-6</td>
</tr>
<tr>
<td>Method</td>
<td>3</td>
<td>Miller (1998)</td>
<td>7-8, 11</td>
</tr>
<tr>
<td>Influence</td>
<td>2</td>
<td>Miller (1998), Jordan (2005)</td>
<td>9-10</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additionally, a single comment box (CWPH item 12) allows the participant to express their philosophy of choral warm-ups.

In the initial pilot, two separate surveys, This Is What I Do and the Choral Warm-Up Teaching Practices instruments were administered. Based on previous research (Coker, 1984; Brendell, 1996; Goolsby, 1996; Demorest & May, 1995; Pence, 1999), both instruments examined, more specifically, the actions of choral directors as they relate to choral warm-ups. After reducing the number of questions based on reliability in the pilot, the two instruments were combined into one instrument. For the purpose of
this study, the reformed Choral Warm-up Teaching Practices instrument consisted of 26 items (Appendix D) and made inquiries to what it is that choral directors do in their warm-up period. Specifically, five items examine the use of specific warm-up literature. Seven items examine organization and procedure of the warm-up period. Seven items examine planning and preparation for conducting the warm-ups. Seven items examine specific content of warm-ups. Table 5 provides a breakdown of the content, the quantity of items, the citations and item numbers.

Table 5

*Choral Warm-Up Teaching Practice Instrument (CWTP)*

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity</th>
<th>Citation</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature</td>
<td>5</td>
<td>Pfautsch (1973), Davis (1998), Crochet (2006), Lamb (2009),</td>
<td>1-5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brendell (1996), Goolsby (1996), Parker (2009),</td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td>7</td>
<td>Benner (1972), Coker (1984), Pence (1999), Pfautsch (1973)</td>
<td>6-11, 24</td>
</tr>
<tr>
<td>Content</td>
<td>7</td>
<td></td>
<td>14-18, 25-26</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gumm's (2003b) Music Teaching Style Inventory (MTSI) examines dimensions of teaching styles in the following dimensions represented by eight items per dimension (Appendix E), consisting of 56 items plus one practice item. Table 6 shows the distribution, quantity of items and the item numbers found in the MTSI. These dimensions include: (a) assertive teaching, (b) nonverbal motivation, (c) time efficiency, (d) positive learning environment, (e) group dynamics, (f) music concept learning, (g) artistic music performance, and (h) student independence.
Table 6

*Music Teaching Style Inventory (MTSI) Item Distribution*

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Quantity</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assertive Teaching(^a)</td>
<td>7</td>
<td>2, 10, 18, 26, 34, 42, 50</td>
</tr>
<tr>
<td>B. Nonverbal Motivation(^a)</td>
<td>7</td>
<td>3, 11, 19, 27, 35, 43, 51</td>
</tr>
<tr>
<td>C. Time Efficiency(^a)</td>
<td>7</td>
<td>4, 12, 20, 28, 36, 44, 52</td>
</tr>
<tr>
<td>D. Positive Learning Environment(^a)</td>
<td>7</td>
<td>5, 13, 21, 29, 37, 45, 53</td>
</tr>
<tr>
<td>E. Group Dynamics(^b)</td>
<td>7</td>
<td>6, 14, 22, 30, 38, 46, 54</td>
</tr>
<tr>
<td>F. Music Concept Learning(^b)</td>
<td>7</td>
<td>7, 15, 23, 31, 39, 47, 55</td>
</tr>
<tr>
<td>G. Artistic Performance(^b)</td>
<td>7</td>
<td>8, 16, 24, 32, 40, 48, 56</td>
</tr>
<tr>
<td>H. Student Independence(^b)</td>
<td>7</td>
<td>9, 17, 25, 33, 41, 49, 57</td>
</tr>
<tr>
<td>(Practice Question)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

\(^a\)Teacher Directed Performance
\(^b\)Deep-Student Learning

Total 57


The Choral Director Success Questionnaire (CDS) measured the dependent variable Success of high school choral directors. The CDS questionnaire was modified based on the Band Director Survey by Crochet (2006). The CDS contains 15 items (Appendix F). Table 7 provides the content, quantity and item numbers. Specifically, two items examine the ratings of the program at adjudicated events. Three items examine the courses offered. One item examines personal leadership skills. One item examines professional organizational skills. Three items examine the participation in professional organizations. Two items examine attitude. One item examines inspirational influence. One item examines mentorship. One item examines guest instructor opportunities for students. Two items examine director professional activities. Five items examine ability to handle the job. Two items examine participation of students in solo and ensemble
contests. One item addresses invitation to perform at a state, regional, or national conference. Two items examine the quantity of students.

Table 7

*Choral Director Success Questionnaire Item Distribution*

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity of Items</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>State/National/Regional Concert Invitation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Superior Ratings</td>
<td>2</td>
<td>2, 3</td>
</tr>
<tr>
<td>Balanced Choir Program</td>
<td>2</td>
<td>4, 5</td>
</tr>
<tr>
<td>Personal Leadership Skills</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Organizational Skills</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Professional Organizations</td>
<td>3</td>
<td>8, 9, 10</td>
</tr>
<tr>
<td>Positive Attitude</td>
<td>2</td>
<td>11, 13</td>
</tr>
<tr>
<td>Inspires students</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Mentors students</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Guest Conductors/Composers</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Professional Activities</td>
<td>2</td>
<td>10, 12</td>
</tr>
<tr>
<td>Dedicated/Hours</td>
<td>5</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>Solo/Small Ensemble Student Participation</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note.* *as created by Crochet (2006) and modified for this study as choral. **see Appendix B, item 11 for quantity of students enrolled in program.

**Procedures**

*Pilot Study.* The CDM, CWPH, CWTP, TIWID, MTSI and CDS instruments were compiled and piloted to measure the validity and interjudge reliability of each survey item, including the following variables: (a) background, (b) training, (c) teaching styles, (d) choral warm-up philosophies, (e) choral warm-up teaching practices, and (f) levels of success for high school choral directors. Forty surveys were submitted during
an honor choir event held at the University of Miami. Nineteen surveys were completed and returned. This was a return rate of 47.5%.

Participants answered a variety of surveys compiled into one complete survey. Demographic information was gathered, based on the questions found in Crochet (2006) and a researcher-based survey, about their state location, years of teaching experience, educational background and training, instructional level and class load, as well as school choral program size. Furthermore, an in-depth 29-item Choral Background and Training (CBT) survey was created to reflect the participant’s musical background and training. Using yes/no responses, the CBT pilot revealed an initial Cronbach’s-\( \alpha \) interjudge reliability score of 0.87, but an item analysis revealed that 13 items should be considered. After elimination of items below the Pearson-\( r \) score of 0.50, an interjudge reliability of 0.88 was discovered. The 13-item CBT was used in the complete study.

Participants were asked about their philosophy of warm-ups utilizing a research driven choral warm-up philosophy survey (CWPH). Each criterion was based on previous research, and survey items were created in order to determine the philosophical beliefs of each participant based on a four-point rating scale (Asmus, 1999). Initially, the piloted CWPH contained 16 items. An item analysis, after an initial review of data for reliability, revealed a Cronbach’s-\( \alpha \) of 0.72. After elimination of seven items below a Pearson-\( r \) correlation of 0.40, recalculation led to the formation of a new composite yielding a Cronbach’s-\( \alpha \) of 0.80. Thus, the survey for the complete study contained eight items of philosophy, as well as the request for open-ended comments regarding the participant’s philosophy about warm-ups.
Participants were asked about what they actually do in the classroom, as it pertains to warm-ups, utilizing a research driven choral warm-up teacher practices (CWTP) survey. Each criterion was based on previous research, and Likert-scale survey items were crafted in order to determine choral warm-up teaching practices of choral directors based on a four-point rating scale (Asmus, 1999). Initially, the piloted CWTP survey contained 14 items. An item analysis yielded a Cronbach’s-α of 0.64. After elimination of six items below the reliability of 0.40, a new composite was created. After correlations were re-calculated, the CWTP had an interjudge reliability Cronbach’s-α score of 0.80. Thus, items below the threshold were removed and the complete survey contains 8 items related to choral warm-up teaching practices.

In a related questionnaire, participants in the pilot were asked about their warm-up routines. The instrument, originally labeled ‘This-is-What-I-Do’ (TIWID), contained 31 items and was created based on previous research using a four-point rating scale. Initial review of reliability discovered a Cronbach’s-α of 0.82. It was discovered, however, that 14 items in the survey fell well below a 0.50 threshold of reliability. As a result, the survey was reduced to 17 items, and these remaining items will be placed in the complete survey. Operationally, the CWTP and the TIWID surveys were combined to create the dependent variable Choral Warm-up Teaching Practices. When the two were combined following the deletion of ineffective items, the Cronbach’s-α was 0.89. Thus, they were presented for further exploration within the study as dependent variable Choral Warm-Up Teaching Practices.

Participants were asked about their music teaching style utilizing Gumm’s (2003b) Music Teaching Style Inventory (MTSI). Permission for use was granted and an
item analysis yielded a Cronbach’s-\textit{alpha} reliability score of 0.79 from the initial piloted Music Teaching Style Inventory. No items were removed, per the permission and request of Gumm (see Appendix J).

Using Crochet’s (2006) Band Director Questionnaire survey (BDQ), a modified Crochet for choral directors was created (CDS), and success was measured based on previous research. The initial 21-item BDQ survey was designed for band directors in middle school, junior high school, or high school. After elimination of redundancy for previous demographic questions in CBT, and altering the survey to reflect the word ‘choral’ in place of ‘band’, a 15-item survey resulted. After review of the data collected, the initial piloted survey had a Cronbach’s-\textit{alpha} of 0.78 for the CDS reliability. No items were removed and the 15-item survey was used in the main study.

\textbf{Main Study}

The survey was created and distributed online through the Internet host Survey Monkey. Survey Monkey provided templates that this researcher customized and utilized Secure Socket Layer data encryption to protect survey data during transmission. Items were entered into the survey system to allow for Likert-scale, free responses and multiple-choice. Each recipient had a seven-day window to complete the survey. Follow-up Emails were sent as reminders to those who had not completed the survey on day four of the seven day survey duration.

For data analysis, the following procedures were used to begin to answer each research question:

\textit{Question 1.} A descriptive analysis producing frequency distributions were used answer question one.
Question 2. Correlation analyses were run to answer question two. Cohen (1992) provides a reiteration of the necessity for observation of power. Statistical significance was observed at $p < 0.05$. The Pearson Correlation ($r$), the most commonly used correlation technique, measured the association between Background and Training, Music Teaching Styles, Success, Choral Warm-up Philosophies, and Choral Warm-up Teaching Practice variables without distinction between the independent and dependent variables (Kepple & Wickens, 2004).

Question 3. To determine whether teaching styles, training and background, and warm-up teaching beliefs and practices differ by experience and training, multivariate analysis of variance (MANOVA) was used. Assumptions for the MANOVAs included the assumption of independence, normality, and linearity (Kepple & Wickens, 2004). The assumption for independence was met through the study design. Univariate normality was assessed through examination of histograms, and box plots to determine whether the dependent variables were found to be normally distributed.

The assumption of linearity for the MANOVA assumed linear relationships between all pairs of dependent variables, all pairs of covariates, and all dependent covariate pairs. As Asmus and Radocy (1992) state regarding the capacity of MANOVAs, they “provide the researcher with a wealth of information about not only the effects of interest also but the relationships between the dependent and independent variables” (p. 126). The following is a breakdown of the analysis based on Kepple and Wickens (2004). Multivariate normality and linearity were assessed by examining scatter plots. Homoscedasticity tested that the observed covariance of the dependent variables were equal across all groups. Levene’s test was used to test whether the error variance of
the dependent variables was equal across all groups. Since equal variances were assumed, Wilks’ Lambda was used as the MANOVA test statistic in this analysis.

Box’s test was used to determine whether there were any significant interactions between covariates and independent variables. When violations of assumption of homogeneity occurred or if the dichotomous splits were unbalanced, Pillai’s trace was used because Pillai’s was supposed to be robust to these problems (Kepple & Wickens, 2004).

As a function of this analysis, the success of less experienced and more experienced choral directors will be compared to the teaching styles, training and background and warm-up teaching practices. Because experience may be important to the individual success (Gumm, 2003a), this research seeks to find out what variables within warm-up practices and beliefs, as well as a directors background and teacher training, may aide in measuring overall success.

*Questions 4 and 5.* To determine the best predictor variables, simultaneous multiple regression analyses was used to answer question four and five. Initially, four assumptions of the dependent variables must be met. As previously outlined in *Question 3.*, these include linearity, normality, equal variance and independence. In one regression, the predictors musical background, demographic characteristics, choral conducting training and music teaching style were analyzed upon the philosophical beliefs of choral directors as they relate to warm-ups. In the similar statistical format, regression was utilized to attempt to predict the success of choral director’s warm-up teaching practices by examining musical background, demographic characteristics, choral conducting training, and music teaching styles.
CHAPTER 4

RESULTS AND CONCLUSIONS

Results

The purpose of this study is to identify variables that related to choral warm-ups and choral success from successful high school choral directors. Three hundred sixty three high school choral directors from around the country answered the Choral Background and Training instrument, the Choral Warm-Up Philosophy instrument, the Choral Warm-up Teaching Practices instrument, Gumm’s (2003) Music Teaching Styles Inventory, and the modified Crochet (2006) instrument, Choral Director Success. Collectively, these instruments created the Olesen Choral Director Survey (2010). The results of the survey address the following research questions.

Research Questions

1. What are musical background and demographic characteristics, choral conducting training, music teaching style profiles, philosophical beliefs about choral warm-ups, choral warm-up teaching practices, and level of choral success of the high school choral directors in the sample?

2. What are the relationships among musical background and demographic characteristics, choral conducting training, music teaching style profiles, philosophical beliefs about choral warm-ups, and choral warm-up teaching practices?

3. How do teaching styles, warm-up philosophical beliefs, and warm-up teaching practices differ by teaching experience and education?
4. What combination of choral director variables (i.e., musical background, demographic characteristics, choral conducting training, music teaching style profiles) best predicts the choral warm-up philosophical beliefs of successful choral directors and the choral warm-up teaching practices of successful choral directors?

5. After controlling for teaching experience, what combination of choral director measurements (education, musical background, teaching styles, warm-up philosophical beliefs and warm-up teaching practices) best predict choral director success?

Descriptive Analysis

The first research question sought to collect a descriptive analysis of high school choral teachers using the choral background training instrument (CBT), the modified Crochet (2006) study for choral director success (CDS) instrument, Gumm’s (2003) Music Teaching Style Inventory (MTSI), the Choral Warm-Up Philosophy instrument (CWPH) and the Choral Warm-Up Teaching Practices instrument (CWTP).

The CBT instrument first reported the demographic descriptive analysis of the participants. The median age reported was 44.7 years old. A larger number of mezzo-sopranos and tenors completed the survey (23.6% and 20.4%, respectively). Most participants (85.1%) reported teaching in either lower or middle class public schools (see Table 8 for a descriptive analysis of participants’ demographics and background).
Table 8

**Descriptive Analysis of Participants (N=365)**

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Classification</th>
<th>N</th>
<th>Participants (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Female</td>
<td>206</td>
<td>58.0</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>149</td>
<td>42.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>20-29</td>
<td>59</td>
<td>16.2</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>81</td>
<td>22.7</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>82</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>106</td>
<td>29.8</td>
</tr>
<tr>
<td></td>
<td>60+</td>
<td>28</td>
<td>7.9</td>
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<tr>
<td><strong>Region of Country</strong></td>
<td>Northeast</td>
<td>22</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>284</td>
<td>80.9</td>
</tr>
<tr>
<td></td>
<td>Midwest</td>
<td>28</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>17</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>African-American</td>
<td>17</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>2</td>
<td>0.6</td>
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<tr>
<td></td>
<td>Caucasian</td>
<td>323</td>
<td>91.0</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>17</td>
<td>4.8</td>
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<tr>
<td></td>
<td>Other</td>
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<td>1.1</td>
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<tr>
<td><strong>Voice Part</strong></td>
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<tr>
<td></td>
<td>Mezzo-Soprano</td>
<td>83</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Alto</td>
<td>40</td>
<td>11.4</td>
</tr>
<tr>
<td></td>
<td>Tenor</td>
<td>72</td>
<td>20.4</td>
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<tr>
<td></td>
<td>Baritone</td>
<td>64</td>
<td>18.2</td>
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<td></td>
<td>Bass</td>
<td>12</td>
<td>3.4</td>
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<td><strong>Degree</strong></td>
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<td>149</td>
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<td></td>
<td>Master</td>
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<td></td>
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<td><strong>Certification</strong></td>
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<td></td>
<td>6-12</td>
<td>46</td>
<td>13.1</td>
</tr>
<tr>
<td></td>
<td>Other</td>
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<td>1.7</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>10</td>
<td>2.8</td>
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<tr>
<td><strong>Teacher Classification</strong></td>
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</tr>
<tr>
<td></td>
<td>≥ 11 Years Experience</td>
<td>226</td>
<td>63.5</td>
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<td>Suburban</td>
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<td>51.4</td>
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<td></td>
<td>Rural</td>
<td>83</td>
<td>23.3</td>
</tr>
<tr>
<td><strong>Socio-Economics of School</strong></td>
<td>Lower-Class Public</td>
<td>115</td>
<td>32.3</td>
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<tr>
<td></td>
<td>Lower-Class Private</td>
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<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Middle-Class Public</td>
<td>188</td>
<td>52.8</td>
</tr>
<tr>
<td></td>
<td>Middle-Class Private</td>
<td>13</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>Upper-Class Public</td>
<td>34</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>Upper-Class Private</td>
<td>6</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Table 9 provides descriptive statistics and computed reliability coefficients of the various instruments used in this study. Cronbach’s alpha (α) reliability coefficients were obtained for the BDT and subtests, CDS, CWPH and subtests, CWTP and subtests, the MTSI individual tests and composite tests of Teacher-Directed Performance and Deep-Student Learning. All reliability coefficients fell within acceptable ranges, with coefficients varying from .703 (Nonverbal Motivation) to .92 (CDT – Piano).

Table 9

Descriptive Analysis and Reliability of Tests and Subtests

<table>
<thead>
<tr>
<th>Test or Subtest</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Skew</th>
<th>α*</th>
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<tbody>
<tr>
<td>Background</td>
<td>331</td>
<td>2.97</td>
<td>1.02</td>
<td>-1.16</td>
<td>0.84</td>
</tr>
<tr>
<td>Piano</td>
<td>356</td>
<td>2.18</td>
<td>1.23</td>
<td>-1.05</td>
<td>0.93</td>
</tr>
<tr>
<td>Foundation</td>
<td>349</td>
<td>4.07</td>
<td>1.43</td>
<td>-1.46</td>
<td>0.80</td>
</tr>
<tr>
<td>Sing</td>
<td>343</td>
<td>2.65</td>
<td>1.46</td>
<td>-0.82</td>
<td>0.81</td>
</tr>
<tr>
<td>Success</td>
<td>334</td>
<td>3.42</td>
<td>1.26</td>
<td>-0.28</td>
<td>0.86</td>
</tr>
<tr>
<td>Assertive Teaching&lt;sup&gt;a&lt;/sup&gt;</td>
<td>320</td>
<td>3.84</td>
<td>0.53</td>
<td>-0.32</td>
<td>0.76</td>
</tr>
<tr>
<td>Nonverbal Motivation&lt;sup&gt;a&lt;/sup&gt;</td>
<td>324</td>
<td>3.89</td>
<td>0.46</td>
<td>0.10</td>
<td>0.70</td>
</tr>
<tr>
<td>Time Efficiency&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>4.18</td>
<td>0.50</td>
<td>-1.10</td>
<td>0.80</td>
</tr>
<tr>
<td>Positive Learning Environment&lt;sup&gt;a&lt;/sup&gt;</td>
<td>323</td>
<td>4.23</td>
<td>0.46</td>
<td>-1.26</td>
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</tr>
<tr>
<td>Group Dynamics&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>3.16</td>
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<td>-0.19</td>
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<tr>
<td>Music Concept Learning&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>3.61</td>
<td>0.50</td>
<td>-0.50</td>
<td>0.76</td>
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<tr>
<td>Artistic Performance&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>3.59</td>
<td>0.56</td>
<td>-0.53</td>
<td>0.79</td>
</tr>
<tr>
<td>Student Independence&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>3.48</td>
<td>0.57</td>
<td>0.05</td>
<td>0.85</td>
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<tr>
<td>Teacher-Directed Performance&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>0.36</td>
<td>-0.03</td>
<td>0.79</td>
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<tr>
<td>Deep-Student Learning&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>0.45</td>
<td>-0.01</td>
<td>0.87</td>
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<tr>
<td>Choral Warm-up Philosophy (CWPH)</td>
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<td>0.91</td>
<td>0.02</td>
<td>0.79</td>
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<td>Focus</td>
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<td>1.73</td>
<td>0.61</td>
<td>0.40</td>
<td>0.81</td>
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<td>Vocal Health</td>
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<td>6.83</td>
<td>1.18</td>
<td>-1.06</td>
<td>0.83</td>
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<tr>
<td>Method</td>
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<td>1.43</td>
<td>-0.38</td>
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<tr>
<td>Success/Time</td>
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<td>8.17</td>
<td>1.58</td>
<td>-0.66</td>
<td>0.80</td>
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<tr>
<td>Influence</td>
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<td>0.81</td>
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<tr>
<td>Choral Warm-up Teaching Practices (CWTP)</td>
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<td>Literature Use</td>
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<td>0.81</td>
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<td>Procedure</td>
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<td>24.82</td>
<td>3.41</td>
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<td>0.52</td>
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<td>Planning/Preparation</td>
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<td>-0.40</td>
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</tr>
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<td>Content</td>
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<td>25.68</td>
<td>4.86</td>
<td>-1.08</td>
<td>0.81</td>
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</tbody>
</table>

Note. * = Cronbach’s α reliability coefficients. <sup>a</sup>Individual subtest of the Music Teaching Style Inventory (MTSI). <sup>b</sup>Composite grouping variable for MTSI Assertive Teaching, Nonverbal Motivation, Time Efficiency and Positive Learning Environment. <sup>c</sup>Composite grouping variable for MTSI Group Dynamics, Music Concept Learning, Artistic Performance and Student Independence.
CWTP-Procedure was recorded as the only scale that fell below .70 alpha reliability ($\alpha = .52$), potentially due to poorly worded questions. Severe skewness was found in the composite variable Background, and the individual subtest variables Piano, Foundation, Time Efficiency, Positive Learning Environment, Vocal Health and Content, suggesting that most participants had an overall positive (yes, agree, strongly agree) response to the items.

A comparison of experience and education levels, for the purpose of this research, was obtained. The performance-task oriented results and the deeper-learning oriented results are reported based on years of teaching experience. Results show a definite difference in mean scores of teachers with less experience favor the Teacher-Directed Performance variables. Mean scores of teachers with 11 years or more of experience show a stronger favorability to the Deep Student Learning variables. The composite variables Teacher-Directed Performance and Deep Student Learning represent the average of each individual measure below the respective composite variable (see Table 10).

<table>
<thead>
<tr>
<th>Table 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distribution of Means of MTSI results across levels of teaching</strong></td>
</tr>
<tr>
<td><strong>Style</strong></td>
</tr>
<tr>
<td>Teacher-Directed Performance</td>
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<tr>
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<tr>
<td>Assertive Teaching</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Nonverbal Motivation</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Time Efficiency</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Positive Learning Environment</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(continued)
Table 10 (continued)

*Distribution of Means of MTSI Results Across Levels of Teaching*

<table>
<thead>
<tr>
<th>Style</th>
<th>Experience</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep-Student Learning</td>
<td>10 or less</td>
<td>103</td>
<td>3.45</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>179</td>
<td>3.50</td>
<td>0.44</td>
</tr>
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<td>Group Dynamics</td>
<td>10 or less</td>
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<td>3.06</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>208</td>
<td>3.22</td>
<td>0.56</td>
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<tr>
<td>Music Concept Learning</td>
<td>10 or less</td>
<td>118</td>
<td>3.57</td>
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</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>207</td>
<td>3.63</td>
<td>0.48</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>10 or less</td>
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<td>3.59</td>
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<td></td>
<td>11 or more</td>
<td>205</td>
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<td>0.54</td>
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<td>Student Independence</td>
<td>10 or less</td>
<td>117</td>
<td>3.46</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>201</td>
<td>3.50</td>
<td>0.58</td>
</tr>
</tbody>
</table>

Choral warm-up philosophies of $N = 248$ participants were subjected to content analyses typical of those used for gathering data (Guba & Lincoln, 1981). Specifically, the participants were asked to respond to the request for their own philosophical idea about choral warm-ups. Each response was coded and placed into a category and then reviewed to ensure that each was internally consistent and externally distinct. Responses were then subjected to standard descriptive analyses. The quantity of responses was 1723 items. These items were categorized into three areas: action, body and mind, and content. For inner-judge reliability, a graduate student at the University of Miami confirmed the coding of variables into categories with no exceptions.

Three examples below illustrate how the statements were analyzed and coded.

The first demonstrates direct word choice:

*Warm-ups are to acquire healthy vocal production, vowel placement and introduce harmonic and rhythmic elements from the music currently being rehearsed.*

Word choice *healthy* translated as health, *vocal* translated as voice, *harmonic* translated as harmony. The second example demonstrates an indirect word association.
Anything to get the kids going for the rehearsal is what I consider a warm-up.

The content of this suggests preparation and procedure. Finally, the third example demonstrates a similar, yet technical, indirect word association.

I use a lot of glissandos, exercises to get their voices forward, light, and floaty, and solfege warmups.

The term “glissandos” suggests that this director uses a combination of notes in an upward and/or downward pattern. This is a type of technique or vocalise. Solfege warmups translated directly as solfege, although it is unclear what type of function solfege actually has in this anecdote. Results show a comparison among participant responses to the various instruments used in this study. For example, the CWPH has subtests which directly relate to the content. Focus had the highest number of participant responses (58%), Health (28%), Success (25%), while only 2% used terms like Method and Influence. The subtests of the CWTP provide more word association relationships. Results of the comparisons to the CWTP Subtests are as follows: Literature (10%), Procedure (1%), Planning (1%) and Content (27%). Success had a 25% response rate.

Table 11 provides a descriptive content analysis of the text, and provides percentages of responses from the participants.

Table 11

*Content Analysis of High-School Choral Director Warm-Up Philosophy*

<table>
<thead>
<tr>
<th>Action</th>
<th>Qty (%)</th>
<th>Body (28%)</th>
<th>Qty (%)</th>
<th>Content (27%)</th>
<th>Qty (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>58</td>
<td>Voice</td>
<td>33</td>
<td>Music</td>
<td>22</td>
</tr>
<tr>
<td>Sing</td>
<td>52</td>
<td>Breath</td>
<td>31</td>
<td>Technique</td>
<td>21</td>
</tr>
<tr>
<td>Success</td>
<td>25</td>
<td>Health</td>
<td>24</td>
<td>Tone</td>
<td>15</td>
</tr>
</tbody>
</table>

(continued)
Table 11 (continued)

Content Analysis of High-School Choral Warm-Up Philosophy*

<table>
<thead>
<tr>
<th>Action (48%)</th>
<th>Qty (%)</th>
<th>Body (28%)</th>
<th>Qty (%)</th>
<th>Content (27%)</th>
<th>Qty (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>14</td>
<td>Body</td>
<td>10</td>
<td>Vowel</td>
<td>15</td>
</tr>
<tr>
<td>Prepare</td>
<td>8</td>
<td>Physical</td>
<td>7</td>
<td>Literature</td>
<td>10</td>
</tr>
<tr>
<td>Blend</td>
<td>7</td>
<td>Mental</td>
<td>7</td>
<td>Relate to music</td>
<td>8</td>
</tr>
<tr>
<td>Tune</td>
<td>5</td>
<td>Stretch</td>
<td>4</td>
<td>Rhythm</td>
<td>3</td>
</tr>
<tr>
<td>Daily</td>
<td>3</td>
<td>Relax</td>
<td>4</td>
<td>Pitch</td>
<td>2</td>
</tr>
<tr>
<td>Improve</td>
<td>3</td>
<td>Control</td>
<td>2</td>
<td>Method</td>
<td>2</td>
</tr>
<tr>
<td>Influence</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Based on \(N = 248\) participant responses

Relationship of Independent Variables and Dependent Variables

In order to address research question two regarding relationships among background, training, music teaching styles and success about choral warm-ups and choral warm-up teaching practices, Pearson product-moment correlations were obtained for the composite instruments and related subtests. Composite measures were created using z-score transformation of identified questions within each subtest.

The correlation analysis shows that no significant correlation exists between choral warm-up philosophies and the background instrument measuring the background of choral directors. Correlations do exist, however, between the teaching practices instrument and the background instrument, accounting for 7.8% shared variance and suggesting modest practical significance (Cohen, 1977). Success correlations with both the philosophy and the teaching practices instruments suggest a stronger result. While the Teacher Directed Performance composite, attributed to assertive teaching, nonverbal motivation, time efficiency and learning environment, show lower correlations, the Deep-
Student Learning composite, comprised of group dynamics, music concept learning, artistic performance and student independence, showed higher levels of significance with the CWPH (6.7% shared variance) and the CWTP (12.3% shared variance) suggesting practical significance. Table 12 shows choral warm-up teaching practices and choral warm-up teaching philosophy correlations with each of the composite instrument tests and subtests.

Table 12

Pearson Product-Moment Correlations Among Warm-Up Philosophies and Warm-up Teaching Practices

<table>
<thead>
<tr>
<th>Test</th>
<th>CWPH</th>
<th>CWTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choral Background and Training (CBT)</td>
<td>.03</td>
<td>.14*</td>
</tr>
<tr>
<td>Piano</td>
<td>.06</td>
<td>.12</td>
</tr>
<tr>
<td>Foundation</td>
<td>.02</td>
<td>.13*</td>
</tr>
<tr>
<td>Sing</td>
<td>.03</td>
<td>.07</td>
</tr>
<tr>
<td>Piano x Sing</td>
<td>.08</td>
<td>.11*</td>
</tr>
<tr>
<td>Choral Director Success (CDS)</td>
<td>.14*</td>
<td>.28**</td>
</tr>
<tr>
<td>Assertive Teaching</td>
<td>.08</td>
<td>.02</td>
</tr>
<tr>
<td>Nonverbal Motivation</td>
<td>.16**</td>
<td>.28*</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td>.06</td>
<td>.22**</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>.07</td>
<td>.16**</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>.13**</td>
<td>.21**</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td>.15**</td>
<td>.24**</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>.19**</td>
<td>.35**</td>
</tr>
<tr>
<td>Student Independence</td>
<td>.22**</td>
<td>.25**</td>
</tr>
<tr>
<td>Teacher Directed Performance</td>
<td>.16**</td>
<td>.24**</td>
</tr>
<tr>
<td>Deep-Student Learning</td>
<td>.26**</td>
<td>.35**</td>
</tr>
</tbody>
</table>


$p < .05$ **$p < .01$. 
Pearson product-moment correlations between the four subtests of CWTP, background variables and success yielded similar results for CWTP-Procedure and CWTP-Planning, with only 4% variance to 8.4% shared variance with success suggesting modest practical significance. (Borg & Gall, 1989). This reading suggests that successful directors are more likely to score higher on the CWTP when scoring high on Procedure and Planning. Content showed a small significance in Background composite and specifically with piano background. This suggests that directors who have a piano background have a strong relationship to the content of their actual lessons (see Table 13).

Table 13

*Pearson Product-Moment Correlations among individual tests of Warm-Up Teaching Practices on Success and Background*

<table>
<thead>
<tr>
<th>Tests and Subtests</th>
<th>Literature</th>
<th>Procedure</th>
<th>Planning</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>.09</td>
<td>.08</td>
<td>.07</td>
<td>.16*</td>
</tr>
<tr>
<td>Piano</td>
<td>.65</td>
<td>.01</td>
<td>.02</td>
<td>.14*</td>
</tr>
<tr>
<td>Foundation</td>
<td>.08</td>
<td>.04</td>
<td>.08</td>
<td>.10</td>
</tr>
<tr>
<td>Sing</td>
<td>.07</td>
<td>.14*</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>Piano X Sing</td>
<td>.08</td>
<td>.09</td>
<td>.05</td>
<td>.09</td>
</tr>
<tr>
<td>Success</td>
<td>.16**</td>
<td>.20**</td>
<td>.29**</td>
<td>.11</td>
</tr>
</tbody>
</table>

*Note. *p < .05  **p < .01.*

Table 14 shows the Pearson product-moment correlations of the subtests of the CWTP and the MTSI. Significance is consistently reported in Planning and Content, with only assertive teaching yielding a non significant return for both Planning and Content. Shared variance ranged from 4.8% (Learning environment) to 17.6% (Deep-
Student Learning). The Deep-Student Learning composite yielded the strongest correlation with CWTP on both Planning and Content.

Table 14

_Pearson Product-Moment Correlations among Individual Tests of Warm-up_

_Teaching Practices on Music Teaching Styles_

<table>
<thead>
<tr>
<th>Tests and Subtests</th>
<th>Literature</th>
<th>Procedure</th>
<th>Planning</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertive</td>
<td>-.13*</td>
<td>.08</td>
<td>.09</td>
<td>-.12</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>.02</td>
<td>.13*</td>
<td>.37**</td>
<td>.17**</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td>-.03</td>
<td>.15**</td>
<td>.27**</td>
<td>.16**</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>-.04</td>
<td>-.12</td>
<td>.22**</td>
<td>.10</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>.11*</td>
<td>.08</td>
<td>.26**</td>
<td>.09</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td>.04</td>
<td>.10</td>
<td>.34**</td>
<td>.13*</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>.07</td>
<td>.1</td>
<td>.41**</td>
<td>.24**</td>
</tr>
<tr>
<td>Student Independence</td>
<td>.05</td>
<td>.02</td>
<td>.33**</td>
<td>.20**</td>
</tr>
<tr>
<td>Teacher Directed&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.07</td>
<td>.16**</td>
<td>.34**</td>
<td>.16**</td>
</tr>
<tr>
<td>Deep-Student Learning&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.09</td>
<td>.06</td>
<td>.42**</td>
<td>.24**</td>
</tr>
</tbody>
</table>

*Note. <sup>a</sup>Composite variables from MTSI for Assertive Teaching, Nonverbal Motivation, Time Efficiency Learning Environment. <sup>b</sup>Composite variables from MTSI for Group Dynamics, Music Concept Learning, Artistic Performance and Student Independence.  
*p < .05  **p < .01.*

Philosophies of choral warm-ups obtained marginal correlations to Background and Success when studying the various subtests of CWPH. Results from the subtest Focus, where each item showed a negative correlation. As success increases, scores on the focus subtest would decrease (see Table 15).

Similar results were found with the CWPH among the MTSI variables. A consistent negative correlation exists with the subtest Focus, suggesting that as philosophy scores increase, scores on the MTSI will decrease. Influence had no significant correlation with the MTSI instrument (see Table 16 for results).
Table 15

*Pearson Product-Moment Correlations Among Individual Tests of Success and Background on Warm-up Teaching Philosophies*

<table>
<thead>
<tr>
<th>Tests</th>
<th>Focus</th>
<th>Health</th>
<th>Success/Time</th>
<th>Method</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>-.17**</td>
<td>.17**</td>
<td>.08</td>
<td>.07</td>
<td>-.02</td>
</tr>
<tr>
<td>Background</td>
<td>-.13*</td>
<td>.09</td>
<td>.11*</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td>Piano</td>
<td>-.10*</td>
<td>-.03</td>
<td>.07</td>
<td>.01</td>
<td>.11**</td>
</tr>
<tr>
<td>Foundation</td>
<td>-.08</td>
<td>-.04</td>
<td>.10*</td>
<td>.04</td>
<td>.03*</td>
</tr>
<tr>
<td>Sing</td>
<td>-.12*</td>
<td>.09</td>
<td>.11*</td>
<td>.01</td>
<td>-.07</td>
</tr>
<tr>
<td>Piano X Sing</td>
<td>-.13*</td>
<td>.04</td>
<td>.08</td>
<td>.03</td>
<td>.01</td>
</tr>
</tbody>
</table>

*Note. *p < .05  **p < .01.*

Table 16

*Pearson Product-Moment Correlation among Tests of MTSI on Warm-up Teaching Philosophies*

<table>
<thead>
<tr>
<th>MTSI SubTests</th>
<th>CWPH Subtests</th>
<th>Focus</th>
<th>Health</th>
<th>Success/Time</th>
<th>Method</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertive</td>
<td></td>
<td>-.16**</td>
<td>.05</td>
<td>.02</td>
<td>-.03</td>
<td>.00</td>
</tr>
<tr>
<td>Nonverbal</td>
<td></td>
<td>-.21**</td>
<td>.13*</td>
<td>.06</td>
<td>-.05</td>
<td>.06</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td></td>
<td>-.14**</td>
<td>.15**</td>
<td>.07</td>
<td>.08</td>
<td>-.08</td>
</tr>
<tr>
<td>Learning Environment</td>
<td></td>
<td>-.12**</td>
<td>.09</td>
<td>.10</td>
<td>.08</td>
<td>-.08</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td></td>
<td>-.18**</td>
<td>.05</td>
<td>.13*</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td></td>
<td>-.17**</td>
<td>.20**</td>
<td>.13*</td>
<td>-.08</td>
<td>-.03</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td></td>
<td>-.22**</td>
<td>.14*</td>
<td>.15**</td>
<td>-.03</td>
<td>.01</td>
</tr>
<tr>
<td>Student Independence</td>
<td></td>
<td>-.25**</td>
<td>.14*</td>
<td>.13**</td>
<td>-.14*</td>
<td>.06</td>
</tr>
<tr>
<td>Teacher Directed Performance&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td>-.25**</td>
<td>.15**</td>
<td>.10</td>
<td>-.04</td>
<td>-.01</td>
</tr>
<tr>
<td>Deep-Student Learning&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td>-.30**</td>
<td>.21**</td>
<td>.18**</td>
<td>-.17**</td>
<td>.08</td>
</tr>
</tbody>
</table>

*Note. *Composite variables from MTSI for Assertive Teaching, Nonverbal Motivation, Time Efficiency Learning Environment.  **Composite variables from MTSI for Group Dynamics, Music Concept Learning, Artistic Performance and Student Independence.  *p < .05  **p < .01.*
Analysis of Variance upon Music Teaching Styles, Practices and Beliefs

When answering research question three (whether teaching styles, beliefs and practices differ by experience and education), three two-way multivariate analyses of variance (MANOVA) were conducted. Each of the three MANOVAs utilized the independent variables years of teaching experience (represented by a dichotomy of 10 years or less vs. 11 years or more) and education (represented by a dichotomy of undergraduate degree vs. graduate degree). The assumption of homogeneity of covariance matrices was assessed with Box’s test, and the assumption of homogeneity of variance was assessed with Levene’s test. Though both tests were found to be significant at different points in the analyses, MANOVA is robust against these violations if the groups are approximately equal or if the larger group is no larger than approximately 1.5 times the size of the smaller group (Cohen, 1977). Any violations of these assumptions are presented with the findings of the MANOVA. The findings are presented by dependent variable: teaching styles, warm-up philosophical beliefs, and finally warm-up teaching practices.

Teaching Styles

The first MANOVA tested the effects of experience, education, and experience X education interaction on the linear combination of the eight teaching styles. Levene’s test indicated a violation of the homogeneity of variance assumption for the teaching style Positive Learning Environment. There was a significant main effect for experience, Wilk’s $\Lambda = .93, F(8, 236) = 2.07, p = .04, \eta^2 = .07$, Power = .83. On the linear combination of the eight teaching styles, there was neither a significant main effect for education, Wilk’s $\Lambda = .98, F(8, 236) = .59, p = .79, \eta^2 = .02$, Power = .27, nor a
significant interaction effect for experience X education, Wilk’s $\Lambda = 1.00$, $F(8, 236) = .10$, $p = .999$, $\eta^2 = .003$, Power = .08. Follow-up ANOVAs showed a significant difference in Group Dynamics scores by experience and revealed that those choral directors with 11 or more years of experience scored significantly higher on Group Dynamics than those with 10 or fewer years of experience (see results Table 17, 18, 19, 20 and 21).

Table 17

Effects of Experience and Education on Eight Teaching Styles

<table>
<thead>
<tr>
<th>Source</th>
<th>Teaching Style</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>Assertive</td>
<td>1</td>
<td>1.61</td>
<td>0.21</td>
<td>0.01</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>Nonverbal</td>
<td>1</td>
<td>0.00</td>
<td>0.95</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Time Efficiency</td>
<td>1</td>
<td>1.57</td>
<td>0.21</td>
<td>0.01</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>Learning Environment</td>
<td>1</td>
<td>0.88</td>
<td>0.35</td>
<td>0.00</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>Group Dynamics</td>
<td>1</td>
<td>4.36</td>
<td>0.04</td>
<td>0.02</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>Music Concept Learning</td>
<td>1</td>
<td>0.18</td>
<td>0.67</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Artistic Performance</td>
<td>1</td>
<td>1.32</td>
<td>0.25</td>
<td>0.01</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Student Independence</td>
<td>1</td>
<td>0.07</td>
<td>0.80</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>Education</td>
<td>Assertive</td>
<td>1</td>
<td>0.05</td>
<td>0.83</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Nonverbal</td>
<td>1</td>
<td>1.45</td>
<td>0.23</td>
<td>0.01</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>Time Efficiency</td>
<td>1</td>
<td>1.46</td>
<td>0.23</td>
<td>0.01</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Learning Environment</td>
<td>1</td>
<td>0.76</td>
<td>0.38</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>Group Dynamics</td>
<td>1</td>
<td>1.07</td>
<td>0.30</td>
<td>0.00</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Music Concept Learning</td>
<td>1</td>
<td>0.90</td>
<td>0.34</td>
<td>0.00</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>Artistic Performance</td>
<td>1</td>
<td>3.26</td>
<td>0.07</td>
<td>0.01</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>Student Independence</td>
<td>1</td>
<td>2.64</td>
<td>0.11</td>
<td>0.01</td>
<td>0.37</td>
</tr>
<tr>
<td>Exp. X Edu.</td>
<td>Assertive</td>
<td>1</td>
<td>0.01</td>
<td>0.91</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Nonverbal</td>
<td>1</td>
<td>0.14</td>
<td>0.70</td>
<td>0.00</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Time Efficiency</td>
<td>1</td>
<td>0.02</td>
<td>0.90</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Learning Environment</td>
<td>1</td>
<td>0.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Group Dynamics</td>
<td>1</td>
<td>0.05</td>
<td>0.82</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>Music Concept Learning</td>
<td>1</td>
<td>0.22</td>
<td>0.64</td>
<td>0.00</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
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<td>0.01</td>
<td>0.91</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Student Independence</td>
<td>1</td>
<td>0.19</td>
<td>0.66</td>
<td>0.00</td>
<td>0.07</td>
</tr>
</tbody>
</table>

(continued)
Table 17 (continued)

**Effects of Experience and Education on Eight Teaching Styles**

<table>
<thead>
<tr>
<th>Source</th>
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<th>df</th>
<th>F</th>
<th>p</th>
<th>$\eta^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error</td>
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<td>243</td>
<td>(0.29)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonverbal</td>
<td>243</td>
<td>(0.21)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time Efficiency</td>
<td>243</td>
<td>(0.20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learning Environment</td>
<td>243</td>
<td>(0.17)</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>Group Dynamics</td>
<td>243</td>
<td>(0.30)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Music Concept Learning</td>
<td>243</td>
<td>(0.23)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artistic Performance</td>
<td>243</td>
<td>(0.29)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Independence</td>
<td>243</td>
<td>(0.32)</td>
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</tbody>
</table>

*Note.* Number in parentheses represents mean square error.

Table 18

**Means and Standard Errors for Teacher-Directed Performance Measures by Experience X Education Interaction**

<table>
<thead>
<tr>
<th>Style</th>
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<th>M</th>
<th>SE</th>
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</thead>
<tbody>
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<td>Assertive</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.80</td>
<td>0.08</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.81</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.91</td>
<td>0.06</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.87</td>
<td>0.07</td>
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<td></td>
<td>Graduate</td>
<td>3.97</td>
<td>0.07</td>
</tr>
<tr>
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<td>11 or more</td>
<td>Undergraduate</td>
<td>3.90</td>
<td>0.06</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.95</td>
<td>0.05</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>4.16</td>
<td>0.06</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>4.22</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>4.22</td>
<td>0.06</td>
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<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>4.30</td>
<td>0.05</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>4.21</td>
<td>0.06</td>
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<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>4.25</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
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Table 19

**Means and Standard Errors for Deep Student Learning Measures by Experience X**

*Education Interaction*

<table>
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<th>Experience</th>
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<th>M</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Dynamics</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.04</td>
<td>0.08</td>
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<tr>
<td></td>
<td></td>
<td>Graduate</td>
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<td>0.08</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>3.21</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>3.27</td>
<td>0.06</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.59</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>3.68</td>
<td>0.07</td>
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<td>11 or more</td>
<td>Undergraduate</td>
<td>3.64</td>
<td>0.06</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.67</td>
<td>0.05</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.60</td>
<td>0.08</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.73</td>
<td>0.08</td>
</tr>
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<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>3.52</td>
<td>0.07</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>3.64</td>
<td>0.06</td>
</tr>
<tr>
<td>Student Independence</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>3.42</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>3.58</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>3.47</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
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<td>0.06</td>
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</table>

Table 20

**Means and Standard Deviations for Teacher-Directed Performance Measures by**

*Experience and Education*

<table>
<thead>
<tr>
<th>Style</th>
<th>Effect</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertive</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>3.80</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.90</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.84</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>3.87</td>
<td>0.56</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>3.91</td>
<td>0.45</td>
</tr>
<tr>
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<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.93</td>
<td>0.46</td>
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<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.88</td>
<td>0.44</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
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<td>0.47</td>
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</tbody>
</table>

(continued)
Table 20 (continued)

**Means and Standard Deviations for Teacher-Directed Performance Measures by Experience and Education**

<table>
<thead>
<tr>
<th>Style</th>
<th>Effect</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Environment</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>4.23</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>4.29</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>4.23</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>4.29</td>
<td>0.44</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>4.19</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>4.27</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>4.19</td>
<td>0.44</td>
</tr>
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<td></td>
<td>Graduate</td>
<td>142</td>
<td>4.28</td>
<td>0.46</td>
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</table>

Table 21

**Means and Standard Deviations for Deep Student Learning Measures by Experience and Education**

<table>
<thead>
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<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
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<td>Experience</td>
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<td>94</td>
<td>3.08</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.24</td>
<td>0.55</td>
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<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.13</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>3.22</td>
<td>0.56</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>3.63</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.66</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.62</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>3.67</td>
<td>0.51</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>3.66</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.60</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.56</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>3.67</td>
<td>0.56</td>
</tr>
<tr>
<td>Student Independence</td>
<td>Experience</td>
<td>10 or less</td>
<td>94</td>
<td>3.49</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>153</td>
<td>3.53</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>105</td>
<td>3.45</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>142</td>
<td>3.57</td>
<td>0.60</td>
</tr>
</tbody>
</table>
Warm-Up Philosophical Beliefs

The second MANOVA tested the effects of experience, education, and experience X education interaction on the linear combination of the five warm-up philosophical beliefs. A significant Box’s test indicated a violation in the assumption of homogeneity of covariance matrices, therefore values associated with Pillai’s Trace were used. Levene’s test was significant for the variables focus and method. There was a significant main effect for education on the linear combination of the five warm-up philosophical beliefs, Pillai’s Trace = .05, $F(5, 332) = 3.26$, $p < .01$, $\eta^2 = .05$, Power = .89. There was neither a significant main effect for experience, Wilk’s $\Lambda = .98$, $F(4, 280) = 1.14$, $p = .34$, $\eta^2 = .02$, Power = .36, nor a significant interaction effect for experience X education, Wilk’s $\Lambda = .99$, $F(8, 236) = .57$, $p = .69$, $\eta^2 = .01$, Power = .19. Follow-up ANOVAs showed a significant difference in warm-up philosophical belief composite method scores by education and revealed that those choral directors with graduate degrees scored significantly higher on the warm-up philosophical belief method than those with only undergraduate degrees. The results are presented in Tables 22, 23 and 24.

Table 22

Means and Standard Errors for Warm-Up Philosophical Beliefs by Experience X

Education Interaction

<table>
<thead>
<tr>
<th>Style</th>
<th>Experience</th>
<th>Education</th>
<th>$M$</th>
<th>$SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>1.85</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>1.64</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>1.86</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>1.62</td>
<td>0.05</td>
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</tbody>
</table>

(continued)
Table 22 (continued)

Means and Standard Errors for Warm-Up Philosophical Beliefs by Experience X Education Interaction

<table>
<thead>
<tr>
<th>Style</th>
<th>Experience</th>
<th>Education</th>
<th>M</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocal Health</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>6.71</td>
<td>0.14</td>
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<td></td>
<td></td>
<td>Graduate</td>
<td>7.17</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>6.66</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>6.87</td>
<td>0.10</td>
</tr>
<tr>
<td>Success Time</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>6.10</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>6.47</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>6.03</td>
<td>0.16</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>6.31</td>
<td>0.12</td>
</tr>
<tr>
<td>Method</td>
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<td>Undergraduate</td>
<td>7.66</td>
<td>0.19</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>8.25</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>8.57</td>
<td>0.18</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>8.18</td>
<td>0.13</td>
</tr>
<tr>
<td>Influence</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>5.53</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>5.42</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>5.22</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>5.06</td>
<td>0.12</td>
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</tbody>
</table>

Table 23

Means and Standard Deviations for Warm-Up Philosophical Beliefs by Experience and Education

<table>
<thead>
<tr>
<th>Belief</th>
<th>Effect</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Experience</td>
<td>10 or less</td>
<td>121</td>
<td>1.76</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>219</td>
<td>1.70</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
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<td>1.85</td>
<td>0.61</td>
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<td></td>
<td>Graduate</td>
<td>196</td>
<td>1.63</td>
<td>0.62</td>
</tr>
<tr>
<td>Vocal Health</td>
<td>Experience</td>
<td>10 or less</td>
<td>121</td>
<td>6.91</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>219</td>
<td>6.80</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>Undergraduate</td>
<td>144</td>
<td>6.68</td>
<td>1.17</td>
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<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>196</td>
<td>6.95</td>
<td>1.16</td>
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</tbody>
</table>

(continued)
Table 23 (continued)

Means and Standard Deviations for Warm-Up Philosophical Beliefs by Experience and Education

<table>
<thead>
<tr>
<th>Belief</th>
<th>Effect</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success / Time</td>
<td>Experience</td>
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<td>121</td>
<td>6.26</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>219</td>
<td>6.21</td>
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<tr>
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<td>10 or less</td>
<td>121</td>
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</tr>
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</tr>
<tr>
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<td>1.49</td>
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</tbody>
</table>

Table 24

Effects of Experience and Education on Five Warm-up Philosophical Beliefs

<table>
<thead>
<tr>
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<th>df</th>
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<th>p</th>
<th>η²</th>
<th>p</th>
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<td>0.05</td>
</tr>
<tr>
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<td>1.63</td>
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<td>0.01</td>
<td>0.25</td>
</tr>
<tr>
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<td>0.47</td>
<td>0.00</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>Method</td>
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<td>0.02</td>
<td>0.02</td>
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<td></td>
<td>Influence</td>
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<td>0.01</td>
<td>0.49</td>
</tr>
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<td>Focus</td>
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<td>0.03</td>
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<td>6.37</td>
<td>0.01</td>
<td>0.02</td>
<td>0.71</td>
</tr>
<tr>
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<td>Success / Time</td>
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<td>3.84</td>
<td>0.05</td>
<td>0.01</td>
<td>0.50</td>
</tr>
<tr>
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<td>Method</td>
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<td>0.60</td>
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(continued)
Table 24 (continued)

Effects of Experience and Education on Five Warm-up Philosophical Beliefs

<table>
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<th>(\eta^2)</th>
<th>P</th>
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</thead>
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<td>Focus</td>
<td>1</td>
<td>0.02</td>
<td>0.88</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Vocal Health</td>
<td>1</td>
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<td>0.36</td>
<td>0.00</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>Success / Time</td>
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<td>0.07</td>
<td>0.79</td>
<td>0.00</td>
<td>0.06</td>
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<td>7.17</td>
<td>0.01</td>
<td>0.02</td>
<td>0.76</td>
</tr>
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<td>Influence</td>
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<td>0.02</td>
<td>0.88</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
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<td>Focus</td>
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<td>(0.38)</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Vocal Health</td>
<td>336</td>
<td>(1.35)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Success / Time</td>
<td>336</td>
<td>(2.05)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Method</td>
<td>336</td>
<td>(2.47)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Influence</td>
<td>336</td>
<td>(2.22)</td>
<td></td>
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</tr>
</tbody>
</table>

*Note.* Number in parentheses represents mean square error.

**Warm-Up Teaching Practices**

The third and final *MANOVA* testing research questions 3 tested the effects of experience, education, and experience X education interaction on the linear combination of the four warm-up teaching practices. All assumptions were met. There was a significant main effect for education on the linear combination of the four warm-up teaching practices, Wilk’s \(\Lambda = .96, F(4, 280) = 3.00, p = .02, \eta^2 = .04, \text{Power} = .80\).

Follow-up *ANOVA*s showed a significant difference in procedure, planning, and content scores by education and revealed that those choral directors with graduate degrees scored significantly higher on procedure, planning, and content than those choral directors with only undergraduate degrees. The results are presented in Tables 25, 26 and 27.
Table 25

*Means and Standard Errors for Warm-Up Teaching Practices by Experience X*

*Education Interaction*

<table>
<thead>
<tr>
<th>Style</th>
<th>Experience</th>
<th>Education</th>
<th>M</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Use</td>
<td>10 or less</td>
<td>Undergraduate</td>
<td>9.76</td>
<td>0.53</td>
</tr>
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<td></td>
<td>Graduate</td>
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<td>0.63</td>
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<td>11 or more</td>
<td>Undergraduate</td>
<td>10.89</td>
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<td>Graduate</td>
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<td>0.37</td>
</tr>
<tr>
<td>Procedure</td>
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<td>Undergraduate</td>
<td>24.00</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>24.93</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>24.45</td>
<td>0.43</td>
</tr>
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<td></td>
<td></td>
<td>Graduate</td>
<td>25.23</td>
<td>0.30</td>
</tr>
<tr>
<td>Planning</td>
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<td>Undergraduate</td>
<td>24.20</td>
<td>0.57</td>
</tr>
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<td></td>
<td>Graduate</td>
<td>26.21</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td>11 or more</td>
<td>Undergraduate</td>
<td>24.21</td>
<td>0.56</td>
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<td>Graduate</td>
<td>25.22</td>
<td>0.39</td>
</tr>
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<td>0.62</td>
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<td>Graduate</td>
<td>26.76</td>
<td>0.73</td>
</tr>
<tr>
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<td>11 or more</td>
<td>Undergraduate</td>
<td>24.57</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
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<td>0.43</td>
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Table 26

Means and Standard Deviations for Warm-Up Teaching Practices by Experience and Education

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<thead>
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<th>Effect</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
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<td>10 or less</td>
<td>101</td>
<td>10.04</td>
<td>3.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>186</td>
<td>10.47</td>
<td>4.16</td>
</tr>
<tr>
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<td>Literature Use</td>
<td>Undergraduate</td>
<td>121</td>
<td>10.34</td>
<td>4.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
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<td>3.94</td>
</tr>
<tr>
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<td>Procedure</td>
<td>10 or less</td>
<td>101</td>
<td>24.39</td>
<td>3.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>186</td>
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<td>3.33</td>
</tr>
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<td>3.55</td>
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<td>Graduate</td>
<td>166</td>
<td>25.15</td>
<td>3.23</td>
</tr>
<tr>
<td></td>
<td>Planning</td>
<td>10 or less</td>
<td>101</td>
<td>25.04</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 or more</td>
<td>186</td>
<td>24.88</td>
<td>4.39</td>
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<td>24.21</td>
<td>4.73</td>
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<td>25.47</td>
<td>4.12</td>
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<td>26.00</td>
<td>4.65</td>
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<td>11 or more</td>
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<td>25.51</td>
<td>4.85</td>
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Table 27

Effects of Experience and Education on Four Warm-Up Teaching Practices

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<th>p</th>
<th>η²</th>
<th>P</th>
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</tr>
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<td>0.39</td>
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<td>0.14</td>
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<td>0.38</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
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<td>1.92</td>
<td>0.17</td>
<td>0.01</td>
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</table>

(continued)
Table 27 (continued)

*Effects of Experience and Education on Four Warm-Up Teaching Practices*

<table>
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<tr>
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<th>$\eta^2$</th>
<th>P</th>
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<td>0.00</td>
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<td>0.05</td>
<td>0.01</td>
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<td>0.03</td>
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<td>0.86</td>
<td>0.00</td>
<td>0.05</td>
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<td>0.80</td>
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<td>0.00</td>
<td>0.15</td>
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<tr>
<td></td>
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<td>0.93</td>
<td>0.00</td>
<td>0.05</td>
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<td></td>
<td>Planning</td>
<td>283</td>
<td>(19.29)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Content</td>
<td>283</td>
<td>(22.61)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature Use</td>
<td>283</td>
<td>(16.66)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Number in parentheses represents mean square error.

A better picture can be made of the regressions when analyzing the philosophical statements made by more successful and less successful choral directors. Of the $n = 277$ statements collected, and after dividing the participants on success using Crochet’s (2006) modified study for choral directors, successful choral directors ($n = 211$) used the terms “focus attention,” “vocal health,” and “use [a particular method]” to describe their choral warm-up philosophies. Inverse relationships of less-successful directors and their philosophies identified terms like “time management” and “being influenced by [a previous director].”

**Predictors of Choral Warm-Up Philosophical Beliefs and Teaching Practices**

To address the fourth research question, two sets of multiple linear regressions were conducted on the dependent variables (5 philosophical belief variables, and 4 teaching practice variables), using education, musical background, and teaching style as
independent variables. Five dependent variables are associated with warm-up philosophical beliefs: focus, health, success, method, and influence. Four dependent variables are associated with choral warm-up teaching practices: literature use, procedure, planning, and content. Results for the multiple regressions are presented first for warm-up philosophical beliefs and then for choral warm-up teaching practices. The results of the multiple linear regressions on warm-up philosophical beliefs are presented in Table 4 and the results for choral warm-up teaching practices are presented in Table 5.

**Warm-Up Philosophical Beliefs**

Five multiple linear regressions were conducted to test the prediction of each of the five warm-up philosophical beliefs with the dichotomized education variable, the three musical background variables, and the eight teaching style variables. The model predicting focus was significant, $F(10, 291) = 3.63, p < .001$, and accounted for 11.1% of the variance in focus scores. The model predicting success was not significant, $F(10, 291) = 1.20, p = .29$, and the model predicting influence was not significant, $F(10, 291) = 1.71, p = .08$. The three other models predicting focus, mental, and method were significant. Both education and the teaching style student independence significantly contributed to the model. The relationship of these variables was such that as participant education increased from undergraduate to graduate, focus scores decreased by .19 points, and as student independence scores increased by one point, focus scores decreased by .24 points.

The model predicting the warm-up philosophical belief of health was also significant, $F(10, 291) = 3.28, p < .001$, and accounted for 10.1% of the variance in health scores. Education, group dynamics, music concept, and artistic performance all
significantly contributed to the model predicting health. The relationship between the variables significantly contributing to the model and health was such that as participant education increased from undergraduate to graduate, health scores increased by .30 points; as group dynamic scores increased by one point, health scores decreased by .37 points; as music concept scores increased by one point, health scores decreased by .50 points; and as artistic performance scores increased by one point, health scores increased by .46 points.

The model predicting the warm-up philosophical belief of method was significant, $F(10, 291) = 1.98, p = .04$, and accounted for 6.4% of the variance in method scores. Only the student independence teaching style significantly contributed to the model predicting method. The relationship of student independence and method was such that as student independence increased by one point, method scores decreased by .64 points.

Again, the results are summarized in Table 28.

Table 28

*Significant Multiple Linear Regression Results of Music Teaching Styles on Warm-up Philosophical Beliefs*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Focus</th>
<th>Health</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>95% CI</td>
<td>β</td>
</tr>
<tr>
<td>Education</td>
<td>-0.15**</td>
<td>[-0.33, -0.05]</td>
<td>0.12*</td>
</tr>
<tr>
<td>Experience (Years)</td>
<td>0.00</td>
<td>[-0.15, 0.15]</td>
<td>-0.06</td>
</tr>
<tr>
<td>Assertive*</td>
<td>-0.10</td>
<td>[-0.27, 0.03]</td>
<td>-0.002</td>
</tr>
<tr>
<td>Nonverbal Motivation*</td>
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<td>[-0.29, 0.13]</td>
<td>-0.01</td>
</tr>
<tr>
<td>Time Efficiency*</td>
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<td>[-0.18, 0.2]</td>
<td>0.02</td>
</tr>
<tr>
<td>Learning Environment*</td>
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<td>[-0.17, 0.22]</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

(continued)
Table 28 (continued)

*Significant Multiple Linear Regression Results of Music Teaching Styles on Warm-up Practices*

**Philosophical Beliefs**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Focus β</th>
<th>95% CI</th>
<th>Health β</th>
<th>95% CI</th>
<th>Method β</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Dynamics&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.01</td>
<td>[-0.17, 0.19]</td>
<td>-0.18*</td>
<td>[-0.71, -0.03]</td>
<td>-0.05</td>
<td>[-0.60, 0.34]</td>
</tr>
<tr>
<td>Music Concept Learning&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.09</td>
<td>[-0.13, 0.35]</td>
<td>0.21*</td>
<td>[0.03, 0.96]</td>
<td>0.11</td>
<td>[-0.28, 0.99]</td>
</tr>
<tr>
<td>Artistic Performance&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.09</td>
<td>[-0.28, 0.08]</td>
<td>0.22*</td>
<td>[0.11, 0.81]</td>
<td>0.04</td>
<td>[-0.37, 0.60]</td>
</tr>
<tr>
<td>Student Independence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.22*</td>
<td>[-0.44, -0.04]</td>
<td>-0.04</td>
<td>[-0.46, 0.31]</td>
<td>-0.23*</td>
<td>[-1.16, -0.11]</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.11</td>
<td>.10</td>
<td>.06</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>3.63**</td>
<td>3.28**</td>
<td>1.98*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = 365. CI = confidence interval. <sup>a</sup>Composite variables from MTSI portion of the survey representing teaching style.  
<sup>†</sup>p < .10.  <sup>*</sup>p < .05.  **p < .01

**Warm-Up Teaching Practices**

Four multiple linear regressions were conducted to test the prediction of each of the four warm-up practices with the dichotomized education variable, the three musical background variables, and the eight teaching style variables. The model predicting literature use was not significant, $F (10, 291) = 1.50, p = .14$, and the model predicting procedure was not significant, $F (10, 287) = 1.78, p = .06$. Only the models predicting planning and content were significant. Table 5XX contains the results.

The model predicting the warm-up teaching practice of planning was significant, $F (10, 288) = 8.07, p < .01$, and accounted for 21.9% of the variance in planning scores. The model predicting the warm-up teaching practice of content was significant, $F (10, 291) = 3.06, p < .01$, and accounted for 9.5% of the variance in content scores. The results are found in Table 29.
Table 29

Significant Multiple Linear Regression Results of Music Teaching Styles on Choral Warm-Up Teaching Practices

<table>
<thead>
<tr>
<th>Variable</th>
<th>Planning</th>
<th></th>
<th>Content</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>95% CI</td>
<td>β</td>
<td>95% CI</td>
</tr>
<tr>
<td>Education</td>
<td>0.08</td>
<td>[-0.22, 1.64]</td>
<td>0.07</td>
<td>[-0.45, 1.78]</td>
</tr>
<tr>
<td>Experience (Years)</td>
<td>-0.07</td>
<td>[-1.63, 0.31]</td>
<td>-0.08</td>
<td>[-1.95, 0.37]</td>
</tr>
<tr>
<td>Assertive&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.11&lt;sup&gt;†&lt;/sup&gt;</td>
<td>[-1.91, 0.12]</td>
<td>-0.13&lt;sup&gt;†&lt;/sup&gt;</td>
<td>[-2.38, 0.04]</td>
</tr>
<tr>
<td>Nonverbal Motivation&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.23&lt;sup&gt;**&lt;/sup&gt;</td>
<td>[0.78, 3.56]</td>
<td>0.09</td>
<td>[-0.77, 2.56]</td>
</tr>
<tr>
<td>Time Efficiency&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.05</td>
<td>[-0.82, 1.67]</td>
<td>0.12</td>
<td>[-0.34, 2.63]</td>
</tr>
<tr>
<td>Learning Environment&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.01</td>
<td>[-1.36, 1.23]</td>
<td>0.01</td>
<td>[-1.42, 1.67]</td>
</tr>
<tr>
<td>Group Dynamics&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.04</td>
<td>[-1.47, 0.89]</td>
<td>-0.09</td>
<td>[-2.2, 0.62]</td>
</tr>
<tr>
<td>Music Concept Learning&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.09</td>
<td>[-0.83, 2.39]</td>
<td>-0.10</td>
<td>[-2.92, 0.92]</td>
</tr>
<tr>
<td>Artistic Performance&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.19&lt;sup&gt;*&lt;/sup&gt;</td>
<td>[0.23, 2.66]</td>
<td>0.15&lt;sup&gt;†&lt;/sup&gt;</td>
<td>[-0.16, 2.74]</td>
</tr>
<tr>
<td>Student Independence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.07</td>
<td>[-0.77, 1.87]</td>
<td>0.18&lt;sup&gt;*&lt;/sup&gt;</td>
<td>[-0.03, 3.14]</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.22</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>8.07&lt;sup&gt;**&lt;/sup&gt;</td>
<td>3.06&lt;sup&gt;**&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $N = 365$. CI = confidence interval. <sup>a</sup>Composite variables from MTSI portion of the survey representing teaching style.<br><sup>†</sup>$p < .10$. <sup>*</sup>$p < .05$. <sup>**</sup>$p < .01$

As seen in Table 29, scores associated with the teaching styles of nonverbal communication and artistic performance significantly contributed to the model predicting planning. The relationship was such that for every one point increase in nonverbal communication, planning scores increased by 2.17 points, and for every one point increase in artistic performance, planning scores increased by 1.44 points.

The model predicting the warm-up teaching practice of content was significant, $F$ (10, 291) = 3.06, $p < .01$, and accounted for 9.5% of the variance in content scores. Scores associated with the teaching style of student independence significantly contributed to the model predicting content. The relationship was such that for every one point increase in student independence, content scores increased by 1.56 points.
Predicting Choral Director Success

To test research question 5, a single multiple linear regression was conducted using a dichotomized education variable (undergraduate vs. graduate), the composite measurement of musical background, eight teaching style variables (assertive teaching, nonverbal motivation, time efficiency, positive learning environment, group dynamics, music concept, artistic performance and student independence), two variables representing composite warm-up philosophical beliefs (focus + vocal health + method, success + influence), and two variables representing warm-up teaching practices (literature use + procedure, planning + content). After controlling for years of teaching experience, the model predicting choral director success scores was significant, $F(14, 203) = 8.05, p < .01$, and accounted for 39.1% of the variance in success scores. Five variables significantly contributed to the model predicting choral director success. The warm-up teaching practice variable Content significantly contributed to the model predicting choral director success. The relationship was such that for every one point increase in the variable Content, choral director success scores increased by .40 points. The warm-up teaching practice variable composite Literature/Procedure significantly contributed to the model predicting choral director success. The relationship was such that for every one point increase in the variable Literature/Procedure, choral director success scores increased by .34. The Music Teaching Styles Inventory contained three variables (Assertive Teaching, Time Efficiency and Student Independence) that significantly contributed to the model predicting choral director success. The relationship was such that for every one-point increase in the variable Assertive Teaching, choral director success scores would decrease 5.9 points; for every increase in variable Time
Efficiency, choral director success scores would increase 7.98 points; for every increase in the variable Student Independence, choral director success scores would increase 5.87 points. The results are presented in Table 30.

Table 30

*Predictors of Choral Director Success*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 $\beta$</th>
<th>$\beta$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>--</td>
<td>--</td>
<td>[6.46, 14.52]</td>
</tr>
<tr>
<td>Experience</td>
<td>0.34**</td>
<td>0.27**</td>
<td>[4.70, 12.21]</td>
</tr>
<tr>
<td>Education</td>
<td>0.16**</td>
<td></td>
<td>[1.29, 8.37]</td>
</tr>
<tr>
<td>Assertive Teaching</td>
<td>-0.22**</td>
<td></td>
<td>[-9.84, -1.99]</td>
</tr>
<tr>
<td>Nonverbal Motivation</td>
<td>0.09</td>
<td></td>
<td>[-2.78, 8.96]</td>
</tr>
<tr>
<td>Time Efficiency</td>
<td>0.25**</td>
<td></td>
<td>[3.00, 12.96]</td>
</tr>
<tr>
<td>Positive Learning Environment</td>
<td>-0.11</td>
<td></td>
<td>[-9.13, 1.44]</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>-0.07</td>
<td></td>
<td>[-6.47, 2.86]</td>
</tr>
<tr>
<td>Music Concept Learning</td>
<td>0.05</td>
<td></td>
<td>[-4.54, 7.29]</td>
</tr>
<tr>
<td>Artistic Performance</td>
<td>0.05</td>
<td></td>
<td>[-3.77, 6.24]</td>
</tr>
<tr>
<td>Student Independence</td>
<td>0.27*</td>
<td></td>
<td>[0.87, 10.87]</td>
</tr>
<tr>
<td>Background (CBT)</td>
<td>0.12*</td>
<td></td>
<td>[-0.014, 0.7]</td>
</tr>
<tr>
<td>Planning$^b$ + Content$^b$</td>
<td>0.13</td>
<td></td>
<td>[-0.02, 0.95]</td>
</tr>
<tr>
<td>Literature Use$^b$ + Procedure$^b$</td>
<td>-0.14*</td>
<td></td>
<td>[-0.79, -0.02]</td>
</tr>
<tr>
<td>Focus$^c$ + Method$^c$ + Vocal Health$^c$</td>
<td>0.04</td>
<td></td>
<td>[-0.69, 1.24]</td>
</tr>
<tr>
<td>Success / Time$^c$ + Influence$^c$</td>
<td>0.03</td>
<td></td>
<td>[-0.59, 1.00]</td>
</tr>
</tbody>
</table>

$R^2$ .11 .39  
$F$ 26.36** 8.05**  
$\Delta R^2$ .28  
$\Delta F$ 6.08  

*Note. N = 365. CI = confidence interval. $^a$Variables from MTSI portion of the survey representing teaching style. $^b$Composite variables representing teaching practices. $^c$Composite variables representing warm-up philosophical beliefs. * $p < .05$. ** $p < .01$.  

The warm-up teaching practice variable Content significantly contributed to the model predicting choral director success. The relationship was such that for every one point
increase in the variable Content, choral director success scores increased by .40 points. The warm-up teaching practice variable composite Literature/Procedure significantly contributed to the model predicting choral director success. The relationship was such that for every one point increase in the variable Literature/Procedure, choral director success scores increased by .34. The Music Teaching Styles Inventory contained three variables (Assertive Teaching, Time Efficiency and Student Independence) that significantly contributed to the model predicting choral director success. The relationship was such that for every one-point increase in the variable Assertive Teaching, choral director success scores would decrease 5.9 points; for every increase in variable Time Efficiency, choral director success scores would increase 7.98 points; for every increase in the variable Student Independence, choral director success scores would increase 5.87 points.

Discussion

This study (a) obtained the relevant demographics, the musical background and music teaching styles of successful high school choral directors, (b) correlated the background, music teaching styles and success measures upon choral warm up beliefs and practices of high school choral directors, (c) examined the strength and predictability of the instruments to measure success of a high school choral director based upon their warm-up beliefs and practices. The results of this study were mixed. While Background had modest correlations upon the various tests and subtests, the underlying hypothesis that musical training and music teaching styles impact a successful choral director’s beliefs and practices upon choral warm-ups was upheld.
Relevant Demographics, Background and Teaching Styles

The open-ended response in item 13 of the CWPH provided anecdotes that are of interest to this study. Items were categorized into three groups: (a) Action; (b) Body; and (c) Content. The comments provided relevance to the operationally defined variables of teaching practices and philosophical beliefs about choral warm-ups by allowing the participants to respond anecdotally to open-ended question regarding their warm-ups. Examples of responses include: (a) Warm-ups at the beginning of class are just that, like stretching before gymnastics [sic], we work the instrument and get it ready, (b) “Warm-ups should be done on a consistent basis, correlate to the music being practiced, to optimize health, strength, technique, range, [sic] technique and articulation. New warm-ups are inserted to help break up and add fun to the exercise,” (c) “engage the minds towards singing,” and (d) “The warm-up, in my view, is the method to ‘focus’ the voice for singing. Students talk all day, so the vocal folds are warm and flexible by the time they appear in my rehearsal room. My focus is to expand the voice beyond the normal speaking range, maximize breath control and support, and to unify vowel creation and placement in the warm-ups,” (e) Choral warm-ups assist with focus and preparing the mind and body for singing. I also utilize warm-ups for sight singing,” and (f) “daily.”

The results of the background portion of this study indicate that experience plays a vital role in the success of choral directors. Experienced directors were found, from this study, to have certain warm-up teaching practices and philosophies that correlated with their success. Experienced choral directors indicated that vocal health was a critical issue that was discussed in the classroom. Less experienced directors focused more on the need for classroom management issues and focusing of attention at the beginning of a
choral rehearsal. These results confirm the research of Berliner (1986), Driscoll (1985) and Coltan and Estill (1981) who focused on background as musical influence. Education was also central to the outcomes of this study. Those with advanced degrees correlated to success in the classroom. Furthermore, those with advanced degrees showed stronger tendencies towards certain music teaching styles of successful choral directors. This advanced degree research confirms the findings conducted by Holahan, Sanders, and Goldberg (2000). Having an advanced degree is consistent, as well, with Gumm (2003).

A variety of background elements, including prior piano lessons, a foundation of music prior to teaching, and having sung in choirs led to increases in scores on a variety of the instruments in this study. Having years of piano lessons and years of singing showed significant correlation with successful choral director warm-up teaching practices. This confirms Demorest and May (1995), who studied factors relating to individual performance in music. Absolute pitch was removed from the results. Only 28 directors reported having absolute pitch (AP). None of their reports correlated with success, choral warm-up practices or beliefs. This confirms Deutch (2006), who stated that while having AP is predominantly associated with highly accomplished musicians, it cannot be confirmed whether these individuals are more superior musicians or are able to process musical tasks better than non-AP musicians. While the background instrument regarding piano background, including an inquiry into absolute pitch, obtained a Cronbach’s α reliability coefficient of 0.81, removing the AP inquiry resulted in a Cronbach’s α reliability coefficient of 0.93.
Results suggest that music teaching styles have a considerable impact upon choral directors. Teacher Directed Performance and Deep Student Learning both showed significant correlations with success, practices, beliefs and background. Choral Warm-up Teaching Practices were significantly related to every instrument within the MTSI except Assertive Teaching. These correlations were between \( r = .11 \) and \( r = .35 \), suggesting that as scores increased on the music teaching style indicators, directors would increase their scores on the Choral Warm-up Teaching Practices measure.

Perhaps the most telling of the music teaching style analysis is the result of lower significance in the music teaching styles on Teacher Directed Performance about the philosophy and teaching practices instruments than with the Deep-Student Learning composite and the respective individual subtests. This corresponds with Gumm’s (2003b) research that more experienced teachers tend to “become more interested in students and deep learning than in their own controlling position or the breadth of learning” (p. 111).

Successful choral directors scored higher in the areas of planning and content and certain areas of procedure and literature. Interestingly, an inverse relationship between Assertive Teaching and Literature between the two instruments exists, suggesting that teachers who rely on literature for choral warm-ups and rate highly on the assertive teaching are less successful.

Choral director success was found to be related to musical background, music teaching styles, choral warm-up philosophies, and choral warm-up teaching practices. Obtaining success measures on philosophical statements of choral warm-ups provided a variety of outcomes. Research supports the philosophical statements made by Swann
and Pfautsch (as cited in Decker & Herford, 1973). More successful directors utilized a variety of methods whereas less successful directors used one or two specific methods or were rooted in one particular method. Crochet (2006) reported that less successful directors appeared to use published materials rather than attending live performances when selecting repertoire. The results of this study confirm Crochet (2006), and are similar to those of Forbes (2001) and Reames (2001).

Directors who selected vocal health were found to be more successful. When measuring success with vocal health about the MTSI, those whose scores increase in group dynamics, music concept and artistic performance were indicative of more successful directors. When measuring success with particular methodologies about the MTSI, the instrument of student independence measured greater with successful directors than with less successful directors. This is consistent with Gumm (2003).

When measuring teaching practices, more successful directors indicate planning of warm-ups to be critical over less successful directors, supporting results found by Pence (1999). More successful directors used nonverbal communication and artistic performance teaching styles. This also parallels the research of Gumm (2003).

Background, music training, experience, years of teaching, music teaching styles, beliefs and practices were significant predictors of choral teaching success, explaining 39.1% of the shared variance in choral success scores. The 39.1% of shared variance among the 10 variables results from no significance in scores from Philosophy or Teacher-Directed Performance variables. The 59.9% of shared variance left unaccounted may be due to unmeasured items such as charisma, leadership style,
rehearsal technique, financial stability within the school or district, or other undiscovered variables within this research.
CHAPTER 5

SUMMARY, CONCLUSIONS, RECOMMENDATION
FOR FURTHER RESEARCH, AND IMPLICATIONS

Summary

The purpose of this study was to investigate the impact of certain variables – musical background and training and music teaching styles - upon successful high school choral director’s choral warm-up philosophies and choral warm-up teaching practices. The collective research on choral warm-ups has yet to investigate musical background and music teaching styles as an impact upon warm-ups, particularly as they relate to successful high school choral director’s choral warm-up practices and beliefs.

Literature on the subject of choral warm-ups was reviewed from six areas: (a) the physiological aspects of warm-ups; (b) musical background and behavioral characteristics of choral directors; (c) music teaching styles; (d) philosophical beliefs about choral warm-ups; (e) choral warm-up teaching practices; and (f) choral director success. Opinions varied about the purpose and content of warm-ups. Limited research is available on measuring success based on musical background. Although studies have examined rehearsal practices of choral directors, including the opening minutes of a rehearsal, measuring success based on a director’s background, music teaching style, choral warm-up beliefs and choral warm-up practices, as far as can be determined, has yet to be done.
Prior research had investigated the impact of background on music teachers. Research had tried to define expert teaching behavior based on musical background. Even expressive performance abilities were measured as it related to prior musical background. Nevertheless, studies neglected the need to isolate background as it related to the success of a high school choral director. More specifically, no correlations had ever been examined on background as it impacted the beliefs and practices of successful high school choral directors.

Music teaching style has been thoroughly examined from the perspective of instrumental and choral directing. Music teaching style has even delineated the probability of a director’s teaching style based on years of experience. However, measuring teaching styles on a success measurement had yet been undertaken.

Furthermore, research on choral warm-up teaching practices and beliefs of high school directors remains vacant. Opinion suggests that certain practices and beliefs are necessary in order to be successful. Unfortunately, no research exists to begin to accurately assess success on these levels.

Three measures, the Choral Background and Training (CBT), the Choral Warm-Up Philosophy (CWPH) and the Choral Warm-Up Teaching Practices (CWTP) were created for this study. One instrument, Choral Director Success (CDS), was modified using Crochet (2006) instrument for measuring band director success. Gumm’s (2003b) Music Teaching Styles Inventory (MTSI) was used to obtain various teaching styles for measurement upon director’s beliefs and practices and upon success. Collectively these became the Olesen Choral Warm-Up Survey (OCWS) for the purpose of this research.
The survey instruments were accumulated and distributed through Survey Monkey to high school choral directors from thirty-eight states. Of the 1,284 survey requests submitted, five hundred ten potential participants responded agreeing to complete the survey. Upon agreement the OCWS was sent to these directors. The data were collected over a seven day period online. Three hundred sixty-five completed the survey, with a return rate of 28.4%, and for a return rate of recruited participants of 71.5%. Participants included high school directors from self-reported urban, rural and suburban school districts. Experience levels were skewed towards the more experienced directors with more than ten years of experience. The average participant age was 44.7 years old. Data obtained from this survey were analyzed quantitatively by descriptive, correlation, multivariate analysis of variance (MANOVA), and multiple linear regression techniques. Qualitative data were collected within the Choral Warm-Up Philosophy (CWPH) instrument by asking participants to state their own personal warm-up beliefs.

Conclusions

Significant differences among more successful and less successful directors exist, with respect to choral warm-up teaching practices and choral warm-up teaching philosophies. Background, certain music training and various music teaching styles impact the successful choral director. Experience and levels of education played a pivotal role in the research. Relationships exist among each of the variables, and, therefore assisted in prediction of choral director success based on background, music training, music teaching style, warm-up philosophies, and warm-up teaching practices. As a result, one-third of a director’s overall success has been accounted for based on a
director’s choral warm-ups. Limitations exist, however, in the success measure due to self-reporting.

**Background Impact upon Choral Warm-Up Teaching Practices and Philosophies**

1. Choral directors’ backgrounds impact their choral warm-up teaching practices.
2. Choral directors’ piano abilities impact the content of their warm-ups.
3. Choral director’s who sing or have sung in choirs affects the procedures that they carry out in the classroom.
4. Time spent concentrating on the need to focus attention of a choir correlates with lack of piano skills.
5. Time spent concentrating on the need to focus attention of a choir correlates with lack of prior choral singing experience.
6. Choral directors with graduate degrees are more likely to have developed a philosophy about their method of choral warm-ups.

**Successful Choral Warm-Up Teaching Practices and Philosophies**

1. Success of a director can be measured by a director’s choral warm-up teaching practices.
2. One-third of a measure of success of high school choral directors is based on choral warm-ups.
3. What a director says does not significantly impact their success. Nevertheless, what a director does has a significant impact upon their success.
4. The use of literature by more successful directors is varied. Less successful directors appear to use only one particular warm-up book.
5. More successful directors and less successful directors agree on necessary procedures within the context of choral warm-ups.

6. While more successful and less successful directors believe the warm-up should focus the attention of their singers, less successful directors did not self-select other variables beyond focus. More successful directors also concentrate on vocal health and relating a warm-up to music about to be rehearsed or performed.

7. Choral directors with advanced degrees are more likely to succeed in their procedures, planning and content than those with undergraduate degrees.

8. Vocal health was critical in measuring success. More successful directors indicated a discourse and knowledge about the vocal health of their students than less successful directors.

9. Planning warm-ups is critical to the success of choral directors.

**Music Teaching Styles upon Successful Choral Directors**

1. More experienced directors are tolerant of student independence.

2. Less successful, and likewise, less experienced directors tend to be dominated by certain teacher directed styles: (a) assertive teaching; (b) nonverbal motivation; (c) time efficiency; and (d) learning environment.

3. More successful, and likewise, more experienced directors tend to be dominated less by teacher directed styles and more by deep student learning: (a) group dynamics; (b) music concept learning; (c) artistic performance; (d) student independence.
4. Successful directors who plan their warm-ups are more likely to concentrate on artistic performances, as opposed to assertive teaching or their learning environment.

5. Successful directors who focus on the content of their warm-ups are more likely to develop student’s independence.

6. Successful choral directors have greater understanding of time efficiency during choral warm-ups.

7. Assertive teaching negatively affects the success of a choral director.

**Summary of Conclusions**

Choral directors now have measures created to assist in determining whether what they believe about choral warm-ups impacts the success of their program. Experience and education are critical to the measurement of successful choral directors, as well. Those directors who focus on a concentrated effort to discuss vocal health with their students have a tendency to be more successful. This is critical to our profession. As stated earlier, choral directors may be the only source of vocal health experts available to a large population of people. Singers rely on the director for artistic experiences, for independent thinking skills, and for variety in the content of warm-ups. Successful directors plan their warm-ups, and correlate them to music about to be rehearsed or performed. The impact of piano background, or learning another instrument, studying music theory, and prior choral experience, although not isolated but used as part of a larger model, can measure the success of a choral director.
Recommendations for Further Research

1. *Replication.* The model for measuring successful choral directors is the first of its kind, and, therefore, should be replicated among other groups of participants. These should include middle-school choral directors, collegiate choral directors, community choral directors and children’s chorus directors.

2. *Investigation of the variable’s impact based on various aspects of choral directing practices and philosophies.* Choral warm-ups are only one aspect of a director’s responsibilities and actions. Further research is recommended in areas such as the rehearsing of music, fiscal responsibility, leadership styles, recruitment, sight reading, ear training, music selection, music studying, conducting patterns, social-dynamics, and even student travel. This should lead to a complete model of choral director success.

3. *Administrative training.* High school choral directors may be hired by less musically inclined administration. The questions that prompt the hiring of a choral director may not garner the desired expectations of the choral director. If a choral director is more prone to assertive teaching, relies on one set of literature for selecting warm-ups and has no piano background, then these tendencies may be more likely to predict the success of that choral director than just education and experience.

4. *Student input.* The research compiled did not obtain student inquiry about perceptions of music teaching styles. Of interest should be how a director believes they perceive themselves against how the students perceive their director’s music teaching style.
5. *Impact studies of choral warm-ups on vocal health.* While prior research is mixed on the outcomes from physiological warm-ups, like leg stretching prior to a race, limited research is available on the outcome of vocal stretching. Do choral warm-ups actually assist in longer rehearsals? What warm-ups are better than other warm-ups? If they are better, do they really benefit the choir?

6. *Administration of individual testing instruments.* In order to create a stronger model of choral directing success based on impact of background, teacher training and music teaching styles, individual variable survey instruments, like Gumm’s (2003b) Music Teaching Style Inventory, should be created with more questions, and tested individually to various choral director groups.

7. *Expand content analysis of ABC’s of Choral Warm-ups into a measure.* Upon receiving the directors’ philosophy statements of choral warm-ups, it would appear that a measure should be created to evaluate the statements.

*Implications*

Impact studies that produce results can effect change. The direct implication for this study effects how we should prepare pre-service teachers for directing high school choirs. Knowledge of one’s own music teaching style, or the knowledge that we have a music teaching style tendency, is critical in both self-evaluation and predicting the success of choral directors. Choral warm-ups, by their nature, are either done with knowledge of the voice or done without complete understanding of what is happening during that timeframe. Directors labeled as less successful implies less knowledgeable directors. Critical self-evaluation is necessary. Resulting scores not only are meant to
predict the success of a director, but, hopefully, create an impetus for change necessary to become more successful by identifying weaknesses.

Less successful directors tended to focus on one dimension of warm-ups, particularly literature and focusing of attention. This seems logical considering that inexperienced teachers tend to have less of a grasp of their teaching abilities due to the very nature of experience. Nevertheless, years of experience do not make a person more successful. Successful directors change their teaching styles by focusing less on their assertive control of the classroom and more on the content of their lessons, their ability to focus on artistic musical experiences, and their student’s independent thinking skills. Maintaining success requires one to seek out new knowledge on their subject including vocal health information, plan for each part of the lessons to be covered, and create connective ideas in warm-ups to the music about to be rehearsed.

Pre-service choral directors remain the major focus of the implication of this study. For these new teachers, the knowledge of their own background, the training they received, and their music teaching style inventory will give them tools necessary to self-evaluate when a critical problem arises. Now, if one of their future students, for example, has a vocal issue, by preparing these teachers ahead of time, they will know better how to react to a situation. If pre-service teachers are trained properly how to plan ahead, how to develop quality content, how to assess the content, and how to create content that connects to other musical aspects within the rehearsal, the likelihood of success should be far greater than those that struggle just to get through the day and have no real working knowledge of their own abilities.
Given the impact of music background, music training, and music teaching styles upon choral warm-up beliefs and practices of successful choral directors, music education should begin to encompass a training of pre-service teachers to accommodate their own self-assessment prior to teaching. Success is a driving force for positive living. While background may be perceived as historic, and, therefore, unchangeable, this researcher would suggest that by knowing your weaknesses and strengths from your background, a director willing to advance the success of his or her choir may want to advance their own skill sets of piano or other instrumental studies, music theory or even joining another chorus. If training is involved, an advanced degree will provide a more focused and critical evaluation of musical skills needed to hone the craft of music making with singers. Finally, the perception of knowledge of one’s own music style can, with some certainty, predict a high school choral director’s success, as this research has shown.

When coupled with a choral director’s background and training, complete with philosophical understandings of choral warm-ups and choral warm-up teaching practices, the model for success of high school choral directors will not only point out who is and is not successful, but, as this author hopes, will inspire choral directors to become more successful directors.
REFERENCES


Bishop, D. (2003b). Warm up II: Performance changes following active warm up and how to structure the warm up. *Sports Medicine, 33*(7), 483-498.


Fiocca, P. D. (1986). *A descriptive analysis of the rehearsal behavior of selected exemplary junior high and middle school choir directors*. (Doctoral dissertation). Ohio State University, Columbus, OH.


APPENDIX A

CONSENT LETTER
Consent to Participate in Research

Choral Warm-Up Questionnaire – Olesen

University of Miami / Frost School of Music / Department of Music Education.

Impact of Background, Training and music Teacher Style on the Warm-up Philosophy and Choral Warm-up Teaching Practices of Successful High School Directors.

You have been invited to participate in the research project entitled “Impact of Background, Training and Music Teacher Style on the Choral Warm-up Philosophy and Choral Warm-up Teaching Practices of Successful High School Directors,” being conducted by Stephen F. Zdzinski, Director of Graduate Studies and Associate Professor of Music Education, and Bradley C. Olesen, a graduate student at the University of Miami Frost School of Music.

This study will identify the variables that influence successful high school choral directors warm-up practices. You will be asked to complete a questionnaire about your basic demographics and choral warm-up teaching practices. It takes about 20 minutes to complete this questionnaire.

There are no risks or direct benefits associated with participating in this study. Participation is voluntary and you are free to refuse to participate in the study or withdraw your consent at anytime.

You will not be asked to provide your name or other identifying information. If you have any questions concerning the study, you may contact Stephen F. Zdzinski, Ph. D. at (305) 284-2241 (szdzinski@miami.edu) and Bradley Olesen at (305) 764-0744 (b.olesen@umiami.edu). If you have questions about your rights as a research participant, you may call the Human Subjects Research Office at the University of Miami at (305) 243-3195.

This dissertation will be available via Electronic Dissertation from the University of Miami Library, and a summary of the results will be available from the researcher following this study.

Thank you for your willingness to participate in this important project. By clicking the button, you agree to participate in this study.

Sincerely, Bradley Olesen

* Yes  * No
APPENDIX B
DEMOGRAPHIC INFORMATION &
CHORAL BACKGROUND AND TRAINING INSTRUMENT (CBT)
Please provide answers as they are presented in the text regarding your background and training.

**1. The state you teach is:**
State: __________

**2. The geographical location of my school would best be described as:**
(choose one)
- [ ] Urban
- [ ] Suburban
- [ ] Rural

**3. The socio-economic category that best fits the description of my current school is:** (choose one)
- [ ] Middle Class - Public School
- [ ] Middle Class - Private School
- [ ] Upper Class - Public School
- [ ] Upper Class - Private School
- [ ] Lower Class - Public School
- [ ] Lower Class - Private School

**4. My age bracket is:**
- [ ] 20-24
- [ ] 25-29
- [ ] 30-34
- [ ] 35-39
- [ ] 40-49
- [ ] 50-59
- [ ] 60+

**5. Sex**
- [ ] Female
- [ ] Male

**6. Race**
- [ ] Caucasian
- [ ] Hispanic
- [ ] African-American
- [ ] Asian
- [ ] Other

**7. Voice Category**
- [ ] Soprano
- [ ] Mezzo-soprano
- [ ] Alto
- [ ] Tenor
- [ ] Baritone
- [ ] Bass
- [ ] Other

**8. Highest degree earned:**
- [ ] Bachelor
- [ ] Master
- [ ] Doctorate

**9. Teacher Certification:**
- [ ] K-12 Music
- [ ] Secondary Music
- [ ] K-6 Music
- [ ] Other
- [ ] Not certified

**10. Please list any instruments you play:**
______________________________
11. **Age you began to play instrument(s)**

12. **Select any level(s) that you have taught:**
- [ ] K-5th
- [ ] 6-8
- [ ] 9-12
- [ ] College/University

*13. **Number of total students in my current choral program is:**
- [ ] <75
- [ ] 75-125
- [ ] 125-200
- [ ] 200-250
- [ ] 250-300
- [ ] 300+

*14. **Number of years of teaching:**
- [ ] 1
- [ ] 2-4
- [ ] 5-7
- [ ] 8-10
- [ ] 11+
3.

Please respond either yes or no to the following background and training questions:

1. I can play multiple instruments.
   - Yes
   - No

2. I use a piano regularly when I teach/warm-up the choir.
   - Yes
   - No

3. I have average to above average piano skills.
   - Yes
   - No

4. I consider myself to have absolute (perfect) pitch.
   - Yes
   - No

5. The class or private lessons I studied as a child included music theory as a separate class.
   - Yes
   - No

6. I sang in church choir for at least 1 year, but I no longer do.
   - Yes
   - No

7. I am, or have been, paid to sing in a church choir.
   - Yes
   - No

8. I direct a choir outside of my school position.
   - Yes
   - No
9. I am, or have been, a section leader of a choir.
   - Yes
   - No

10. I believe my elementary level of training in music gave me a strong music foundation.
    - Yes
    - No

11. I believe my secondary level of training in music gave me a strong music foundation.
    - Yes
    - No

12. I believe my undergraduate level of training in music gave me a strong music foundation.
    - Yes
    - No

13. I believe my graduate school experience in music gave me a strong music foundation.
    - Yes
    - No
    - Not applicable
APPENDIX C

CHORAL WARM-UP PHILOSOPHY INSTRUMENT (CWPH)
4.

Please respond by selecting the best answer that fits the philosophical statement presented. For the 2nd half, you will be asked to write a short response.

1. Warm-ups should be done for the purpose of focusing a choir on the task of singing.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

2. Mental preparation is central to the design of my warm-ups.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

3. My warm-ups are designed to educate the choir about vocal health.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

4. I use the idea of a healthy vocal production as a determining factor when creating my warm-ups.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

5. Choral success relates to choral warm-ups.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

6. Time in warm-ups relates to success.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

7. My predisposition for a certain college or choral tradition drives my structure of warm-ups.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

8. One could deduce from my warm-ups that I am deeply rooted in one particular method.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

9. My previous experience at conventions changes how I warm-up my choirs.
   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree
10. The success of another choir forces me to revise how I warm-up my choir.

- [ ] Strongly Agree  
- [ ] Agree  
- [ ] Disagree  
- [ ] Strongly Disagree

11. I am predisposed to warm-up instructional materials based on one particular choral tradition or method.

- [ ] Strongly Agree  
- [ ] Agree  
- [ ] Disagree  
- [ ] Strongly Disagree

12. In the space provided, please comment on your philosophy of choral warm-ups.

<input type="text" placeholder=""/>
APPENDIX D

CHORAL WARM-UP TEACHING PRACTICES INSTRUMENT (CWTP)
Please respond to the answer that best fits the item as it relates to your teaching practices.

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. I use a specific book of warm-ups.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>2. I utilize Frauke Haasemann's warm-ups and vocal exercises.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>3. I utilize Weston Noble/Paul Nesheim Nordic Choir warm-ups and vocal exercises.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>4. I utilize Tim Seelig's warm-ups and vocal exercises.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<td>5. I utilize James Jordan's warm-ups and vocal exercises.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>6. I sit at the piano while I warm-up my choirs.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>7. One of my students does my warm-ups.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<td>8. I combine my college and conference experiences to create my warm-ups.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>9. I write my warm-ups in my lesson plans.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>10. I prefer to spend between 5 and 10 minutes in warm-ups.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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<tr>
<td>11. I use different warm-ups depending on the time of day.</td>
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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
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</tbody>
</table>
12. I organize my warm-ups in a specific sequence.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

13. My warm-ups contain material from songs we are about to rehearse.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

14. Sirening is something I do during my warm-ups.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

15. My overall warm-up utilizes the body/breath/voice concept.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

16. I use vocal range extending exercises in my warm-ups.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

17. My choir uses burbles/lip-trills in warm-ups.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

18. I start the singing of warm-ups by vocalizing downward before going upward.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

19. I relate my warm-ups to the music about to be rehearsed.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

20. I organize my warm-ups in a specific sequence.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

21. I seek out successful ways to warm-up my choir.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

22. I spend time designing warm-ups based on the music about to be rehearsed.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

23. I revise my warm-ups weekly.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always
24. I am aware of the time I spend warming-up my choir.
   - Never  - Rarely  - Sometimes  - Often  - Always

25. I use warm-ups to conceptualize the success of my choirs.
   - Never  - Rarely  - Sometimes  - Often  - Always

26. I seek to use my previous choir warm-up experiences on my own warm-ups.
   - Never  - Rarely  - Sometimes  - Often  - Always
APPENDIX E

CHORAL DIRECTOR SUCCESS INSTRUMENT (CDS)
Please answer each item as they are presented. Your responses will be in the form of multiple choice and fill-in-the-blank.

1. Under your direction, the concert choir from your school has received an invitation to perform at which of the following? (check all that apply)
   - ACDA Regional Conference
   - ACDA National Conference
   - Music Educators National Conference
   - Your state Music Educators Conference
   - Your state Choral Directors Association Conference
   - Other
   - not applicable
   If Other (please specify)

2. How many years have you directed choirs at concert choir festival evaluation/contest?
   - 1-4
   - 5-10
   - >10

3. How many overall Superior (1) and/or Excellent (II) rating(s) or their equivalent in your state has the most advanced choir under your direction received at concert choir festival evaluation?
   - 0
   - 1-4
   - 5-10
   - >10

4. How many of the students enrolled in the choir participated at the most recent solo/small ensemble festival evaluation?
   - < 25 students
   - 25-75 students
   - 76-150 students
   - > 150 students
5. What ensembles are offered in your choral music program? (check all that apply)
- Beginning choir(s)
- Intermediate choir(s) (mixed/men/women)
- Varsity Mixed choir(s)
- Varsity Men/Women choir(s)
- Show Choir/Jazz Choir
- Madrigal Choir
- Solo/Small ensembles (include those that meet outside your school day)

6. Which five personality characteristics best describe your style of leadership?
- I set general goals for my program
- I set specific goals for my program
- I evaluate the status of my program goals
- I work at a high energy level
- I work at a moderate energy level
- I am willing to fail
- I make decisions based on my written philosophy of music education
- My students trust my judgment

7. What items are necessary to your program success? (check all that apply)
- good facility
- a set time daily for score study and preparation
- a set procedure for warm-up, tuning, and problem-solving within rehearsal
- a systematic approach for program management
- a sequential curriculum
- not applicable

8. List all professional music organizations in which you currently hold memberships.

9. List all offices that you have held within the professional organizations listed above (or have held in the past).

10. Which conference(s) have you attended in the past year? (check all that apply)
- ACDA National
- ACDA Regional (going this year)
- Music Educators National Conference
- Your state Music Educators Conference
- Your state Choir Director's Association Conference
- Not applicable
11. How do you feel about the majority of your students?

- □ my students are energetic  
- □ my students are intelligent  
- □ my students are good human beings  
- □ my students are passive  
- □ my students are powerless - they come from bad family situations  
- □ my students are difficult to discipline  
- □ my students are not very likable  
- □ my students share my enthusiasm and dedication

12. Which activities have you participated in during the last 2 years? (check all that apply)

- □ summer workshop(s)  
- □ clinician for local choir program  
- □ honor choir clinician  
- □ adjudicator  
- □ presenter at a conference  
- □ college courses  
- □ private study  
- □ published articles, research, or compositions  
- □ in-service in school district

13. How do you feel about your teaching situation? (check all that apply)

- □ I have control over all or most of the decisions involving my program  
- □ I have little or no control over all or most of the decisions involving my program  
- □ I have a supportive administration  
- □ My administration does not understand or support my program  
- □ I have a good feeder program  
- □ I do not have a good feeder program  
- □ The program success is based on a combined effort between myself and my students

14. My role as choir director includes: (check all that apply)

- □ counseling students about their personal lives  
- □ counseling students about their career choices  
- □ counseling students about their other classes and current grades  
- □ counseling students about college attendance  
- □ working with individual and small groups before and/or after school  
- □ listening to student opinions  
- □ accommodating student conflicts (schedule/work)
15. During the current school year, give the number of guest conductors, composers, and outside instructors that you brought into work with your students.

<table>
<thead>
<tr>
<th>Role</th>
<th>Number</th>
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<tbody>
<tr>
<td>Guest conductors</td>
<td></td>
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<tr>
<td>Composers</td>
<td></td>
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<tr>
<td>Outside Instructors</td>
<td></td>
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</tbody>
</table>
APPENDIX F

MUSIC TEACHING STYLE INVENTORY (MTSI)
For each of the descriptions listed below, rate how often you use the behavior when teaching music. The choices are Never, Rarely, Sometimes, Frequently, and Always, listed from left to right. Each behavior is rated by selecting the appropriate box on the screen that best represents your use of that behavior. For example if asked to rate USE HUMOR and you make rare attempts at humor, you would mark * in the box in the "rarely" column for that item.

1. Train students to perform more skillfully.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

2. Verbally demand sharp attention to tasks.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

3. Use facial expressions as a primary way to communicate with students.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

4. Carry out more than one learning task at a time.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

5. Clarify information that students are uncertain about.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

6. Have students rehearse music in separate small groups.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

7. Teach music concepts of theory or history.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

8. Describe musical events by comparing to kinesthetic terms (energy, growth, gravity).
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

9. Teach students to define and compare how they feel about music.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

10. Communicate an awareness of student behavior.
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
11. Use eye contact as a nonverbal way to communicate to students.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

12. Try to get as many things done within the scheduled time as possible.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

13. Allow for complete answers by students after a question is asked.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

14. Have students work with each other on music.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

15. Have students learn about the music they perform.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

16. Help students refine the musical sound images in their memory.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

17. Help students to rate and characterize how they feel about music.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

18. Offer consequences to get students to follow directions.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

19. Purposefully change the pace of activities in class.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

20. Require students to act quickly to directions.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

21. Be responsive to student fatigue and frustration.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

22. Have students perform for their peers in class.
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always
23. Ask questions requiring student to recall or recognize musical terms and facts.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

24. Describe musical events by comparing to visual terms (color, shape, size, or more specific object).
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

25. Ask students what is important to them.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

26. Communicate that students should carry out the teacher’s decisions.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

27. Use body stance as a primary way to communicate to students.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

28. Keep a brisk pace of activities throughout the rehearsal.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

29. Support and care about student feelings.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

30. Have students learn about music through interactive groups.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

31. Ask students to diagnose problems in their own performance.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

32. Describe musical events by comparing to feelingful terms (angry, gentle, peaceful).
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

33. Encourage students to be creative and imaginative in class.
   ☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always
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<tbody>
<tr>
<td>34. Monitor student behavior closely.</td>
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<td>35. Change your visual appearance to alert students.</td>
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<td>36. Keep students busy and active as much as possible.</td>
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<td>37. Praise students when they do a good job.</td>
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<td>38. Allow an individual student to make a presentation.</td>
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<td>39. Ask students to find a solution to a musical or music-making problem.</td>
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<td>40. Develop musical skills through physical manipulation.</td>
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<td>41. Use discussion and dialogue instead of one-way lecture.</td>
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<td>42. Remind students that they need to follow directions.</td>
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<td>43. Use hand gestures to make students more attentive.</td>
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<td>44. Give directions as quickly as possible.</td>
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<td>45. Take time to answer student questions.</td>
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<td><strong>46. Have the class be led by student leaders.</strong></td>
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<td><strong>47. Use follow-up questions to probe for deeper information from students.</strong></td>
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<td><strong>48. Have students move to help them respond expressively to music they perform.</strong></td>
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<td><strong>49. Help students develop their own ideas about music.</strong></td>
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<td><strong>50. Give specific feedback as to how students respond to directions.</strong></td>
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<td><strong>51. Heighten student attention through conducting gestures.</strong></td>
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<td><strong>52. Try to meet numerous goals in each rehearsal/class period.</strong></td>
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<td><strong>53. Express appreciation for student efforts.</strong></td>
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<td><strong>54. Have students brainstorm among themselves.</strong></td>
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<td><strong>55. Ask questions requiring students to draw comparisons between different musical examples.</strong></td>
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<td><strong>56. Use metaphors to express musical sounds.</strong></td>
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<td><strong>57. Have students share what they think about the music.</strong></td>
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APPENDIX G

RECRUITMENT LETTER
Recruitment Letter for Olesen Study:

1. Please confirm your consent for recruitment to complete this survey.

My name is Brad Olesen. I am a doctoral candidate in Music Education at the University of Miami. As a successful high school choral director, your name has been selected randomly from a national database of choral directors.

In order to complete my dissertation, I have specifically designed a 20 minute online survey to investigate Choral Warm-Up Philosophies and Practices of High School Choral Directors.

Your ability to complete this research study will provide future teachers the insight and background potentially needed to become more successful teachers.

Your name and all information within the survey will be kept completely confidential, as governed by the Human Subjects Research Office of the University of Miami.

If you click yes below, a separate email will be sent to you within 24 hours. You will have a window of 7 days to complete the survey.

There will be no risks associated with participating in this study. The participation in this study is voluntary, and you are free to refuse to participate in the study or withdraw your consent at anytime without prejudice.

1. Will you agree to take the survey?  Yes  No

Thank you very much! Brad Olesen, University of Miami
APPENDIX H

REMINDER LETTER
Recruitment Letter for Olesen Study:

1. This is a final reminder to please confirm your consent for recruitment to complete this survey.

My name is Brad Olesen. I am a doctoral candidate in Music Education at the University of Miami. As a successful high school choral director, your name has been selected randomly from a national database of choral directors.

In order to complete my dissertation, I have specifically designed a 20 minute online survey to investigate Choral Warm-Up Philosophies and Practices of High School Choral Directors.

Your ability to complete this research study will provide future teachers the insight and background potentially needed to become more successful teachers.

Your name and all information within the survey will be kept completely confidential, as governed by the Human Subjects Research Office of the University of Miami.

If you click yes below, a separate email will be sent to you within 24 hours. You will have a window of 7 days to complete the survey.

There will be no risks associated with participating in this study. The participation in this study is voluntary, and you are free to refuse to participate in the study or withdraw your consent at anytime without prejudice.

1. Will you agree to take the survey? Yes No

Thank you very much! Brad Olesen, University of Miami
APPENDIX I

PARTICIPANTS’ PHILOSOPHICAL STATEMENTS
OLESEN CHORAL DIRECTOR SURVEY

PARTICIPANTS’ CHORAL WARM-UP PHILOSOPHY STATEMENTS

1. Warmups should improve focus, range flexibility, vowels, word stress, breathing, in addition to whatever problems the choir is currently having.

2. Warm-ups are to get students vocally and mentally ready for the rehearsal that is starting.

3. It is a period of vocal warm-up and vocal exercise. Building skills and techniques.

4. I use warm ups only for vocal technique or mental focus and since my choirs come in later in the day... their voices are pretty much already "warmed up". I don't use warm ups often.

5. I like to warm up the voice, so it frees the sound, reinforces necessary techniques for repertoire, reinforces intonation, and focuses singers for rehearsal.

6. Choral warmups are not just simply to warm up a voice. This is when I work on blend, balance, tone quality within a choir. I will choose a warmup that will compliment a concept that I am doing later in the rehearsal.

7. I believe that choral warm-ups are essential to the success of any choir. Warm-ups contribute to a unified sound, teach the students new skills and help singers to avoid damaging their voices.

8. Warm-ups are not only improve a choir but the vocalists as individuals.

9. To stretch the vocal mechanism, to raise and lengthen the vowel, to reinforce harmony and tuning, to master placement in the various ranges of the pitch

10. I use warm ups to settle down the choir, establish focus, etc. I do not always use the piano. Instead, I utilize accapella chordal warm ups ascending/descending by 1/2 steps. This allows students to really listen, and tune. They also learn chordal qualities (M,m, d, A) by my switching the chord members by 1/2 steps in the different sections (S,A,T,B) They love this warm up and I use it daily.

11. Choral warm-ups provide multiple opportunities in the classroom. 1. Physically and mentally allows the student for success. 2. The warm up can be geared toward the lesson of the day. 3. Vocal progress are evaluated thru warm ups.

12. I believe that choral warm-ups have many different facets. I us vocal warm-ups to warm up the voice and prepare the students to sing. I also use warm-ups
to allow my students to focus on singing rather than all their other subjects.

13. My warm-ups are usually brief. I try to stretch the voices and get the air moving.

14. These should be in context of what is needed for any particular group and its characteristics.

15. Due to our short class times, warm-ups must be kept relatively brief. Warm-ups should transition students from "normal" breathing, speaking and standing conventions to that expected for proper singing. Warm-ups should focus on specific goals. Begin with relaxed posture, then on to low, steady breathing (actuator). I use exercises that encourage tall, resonant vowel production and vary the attack. Finally, I try to connect our vocalization time with some of our repertoire. I use a motive from a piece to work on vowel space, or use text from a song to focus on diction. My goal is a seamless move from vocalization to concert preparation.

16. Choral warm-ups should focus on good vocal health. Warm-ups should be pulled from the literature being learned to reinforce difficult intervals, difficult rhythmic patterns. Scales should be practiced daily to improve a cappella singing.

17. My main concern is developing good vocal technique.

18. Warm-ups are essential to the success of the choir.

19. I prescribe to Dr. Robison's (formerly of BYU) approach. You may see it at beautifulsinging.com. It works.

20. I believe that they are essential for mentally and vocally preparing the ensemble to sing. They are also the main way to teach vocal technique to the vast majority of students who do not have private lessons. They serve as an aural prep for sight-singing and also an introduction to the literature being sung.

21. My warm-ups are designed to help my students find their vocal focus and to get their energy going.

22. I treat warm-up time more as a voice lesson than a choral warm-up now. Too many years of watching kids come out of choir with no transferrable singing skills led me to change my sound to a more forward produced, healthy, flexible sound that can be used soloistically or chorally.

23. I use them to focus the ensemble and help them prepare for state auditions.

24. I use a variety of warm-ups including a physical warm-up and breathing techniques. Rather than taking my warm-ups from conventions, I am influenced more by a friend and very knowledgeable mentor who is a collegiate choir director as well as a church choir director.
25. It has to relate directly or indirectly to the repertoire being studied that rehearsal.

26. keep some the same, vary enough to keep interest high, vocal health at the center

27. James Jordan has strongly influenced my philosophy of warming up the choir. He quotes Helen Kemp, "Body, Mind, Spirit, Voice... it takes the whole person to sing and rejoice." I say that in almost every rehearsal.

28. My warm-ups are based on the many elements of Choral singing. Breathing, flexibility, range, intervalic skills, balance, blend, etc. My students are always informed about the purpose of the warm-ups we do and understand that they are very important to being able sing in a healthy and appropriate manner.

29. It is essential to my students' vocal health to include warm-ups at the beginning of each rehearsal. I also use them to teach/demonstrate vocal technique. I have learned that my students perform/learn better in class when warm ups are used at the beginning of rehearsal. They are more successful on the music, both technically and expressively, which leads to stronger performances. I am convinced that warm ups are an essential part of rehearsals for more successful choirs.

30. Warm ups should focus on intonation, vocal health, building the voice, tone production and ear training.

31. I believe choral warm-ups should prepare the singer both mentally and physically. They should help loosen the body and well and prepare the vocal chords for a lengthy rehearsal. Breathing activities should help the student prepare for proper breath control, and vocalises should warm up the ranges, as well as focus on vowel sounds and enunciation.

32. Warm up set the tone for your rehearsal. They also can be used to prepare students for difficult passages they are going to encounter in the music they are singing.

33. I believe you can prepare your students for the rehearsal by choosing warm-ups that focus on key problems of the pieces we are rehearsing. Then you can refer back to the warm-ups rather than having to have a lengthy explanation while you are working the music.

34. Warmups focus the choir on the task at hand during rehearsal. They are pedagogical in nature and the ranges used in warmups have a great deal to do with the width of ranges that students develop.

35. I like to warm up body, mind (focus), breath, and voice.

36. I need to introduce more variety into my warm-ups!
37. Sequence of warm-ups is very important. (You don't start with a range expanding exercise.) The first step is physical stretching exercising. Students can be encouraged to empathize with the conductor, learn solfège information, learn vocal technique, learn phrasing, learn enunciation, learn difficult rhythm patterns, learn difficult portions of literature, learn how to conduct, learn body alignment, learn music history, and learn music theory. Pacing and variety are key. Consideration of student focus ability must be considered from moment to moment. Fun is a factor.

38. systematic

39. I use choral warm up to teach students the proper on throat, relaxed feeling needed to sing. So many kids listen to music that uses the wrong technic. My warm ups encourage proper vocal production.

40. My warm-ups are meant to promote relaxation/tension-free singing. My warm-up includes actual physical warming up as well as the voice itself. Warm-ups serve as a reminder of proper technique and good relaxation. I use methods that work for my choir; I believe following what another choir does can lead to failure, as no two programs are alike.

41. My warm-ups isolate techniques that need to be improved according to the literature we are currently working on.

42. Are designed to aide in sight reading, literally warm up the muscles involved, help with technique and vocal production, address problem areas of the literature at hand, teach proper breathing and support, and get students focused.

43. focus - blend - participation - posture - readiness to make music as a whole

44. My philosophy for choral warm-ups is not only warming the voice but the body as well. Stretching is a daily part of my choral warm-ups--if the body is awake, then the voice will be awake.

45. Choral warm-ups are vital! They are the BEST opportunity to teach technique, foreshadow elements of the rehearsal, and give attention to individual vocal needs. I assimilate the best techniques from as many sources as possible - one of the most critical is getting away from the piano. The most vital element in our warm-up process is finding meaning; meaningless repetition destroys the value of the warm-up.

46. My choral warm-ups are intended to 1) warm up the voice throughout the student's range 2) help students focus on using correct vocal technique and tone production, and 3) reviewing proper/correct vowel sounds.

47. As a singer, I know what it takes to get my own voice ready for singing, so first of all I am trying to get the voice going. I also use the warm-up as a time
for students to mentally focus on the rehearsal and to work on uniformity of vowel and pitch.

48. My focus is to warm-up the entire vocalist. We do physical exercises, including stretching/loosening the neck, shoulders, arms, and upper body on an individual basis. We also employ shoulder rubs & "karate chops" on an ensemble basis. We do breathing exercises to develop properly supported breathing techniques and use of the diaphragm. We do assorted vocal exercises, including ascending & descending scales, arpeggios, triads & chords as well as vocal exercises that focus on diction & articulation. Our final daily warm-up exercise includes sight-singing: rhythmic only, simple diatonic, advanced diatonic, and 3-4 part chorale.

49. Chorals warm ups are used to prepare, mentally and physically for singing as well as learning to sing properly.

50. I have certain warm-ups that I have always done, but I am always open to adding new warm-ups to my rep., as long as I can explain the reasoning behind the exercise! I want my students to understand why we do the warm-ups we do.

51. I believe that vocal warm-ups are useful to prepare a group to sing.

52. The warm-up is used to focus the students, prepare their voices and minds for music, and get more energy for the student after sitting through several classes and not moving.

53. I don't think I do a good job of warming up my choirs. I could do better. I get stuck in a rut.

54. My students would benefit from a more purposeful and educational series of warm ups. We do mostly the same things every day with little variation.

55. I believe warm-up to be the time when a choir defines its sound. How you sing in warm-up is exactly how you will perform. The two go hand in hand.

56. In my Choir, we have a certain number of warm-ups that remain constant. These are designed to focus the mind, wake up the body, get the breath flowing, and focus the ensemble. Secondly, we move to warm-ups that vary from day to day and are chosen to help us focus on concepts that will be used that particular rehearsal in our repertoire work. I.e. flexibility exercises when working on Mozart versus legato warm-ups. Finally, we focus our ears and tune using several different warmups that use solfege and intervallic relationships.

57. I believe that warm-ups are very important to maintain vocal health. My students perform wonderfully if their voices are completely warmed-up. We also use warm-ups for vocal technique and preparation in accomplishing our
tasks for rehearsal.

58. Choral warm-ups are a vital component of the choral rehearsal. It is a necessary prerequisite to good vocal health and proper tone production as well as mental preparation for singing. In my experience over the years I have integrated several schools of thought and methods to reach the desired results of instruction.

59. 3 parts: attention, vocal training, and ear training

60. I feel that the warmup time is the place where the best voice-teaching can take place in a choral program. It can be used to solve short or long-term issues related to range limitations, tone quality, pitch accuracy and more. I have also crafted warmups whose specific design is to solve a problem in our literature.

61. To warm up ranges outside of speaking voice; to work on proper consonant and vowel production; to have fun!

62. I use a lot of glissandos, exercises to get their voices forward, light, and floaty, and solfege warmups.

63. I use it mostly as a focusing tool to get my class on board with the idea of singing and getting them mentally prepared for a rehearsal. Next is the focus on vocal health and proper sound production.

64. I design my choral warm-ups based on the literature and the vocal needs of my students.

65. It gets the students in a frame of mind for singing. Warm up for taller sounds and high notes.

66. The choral warm up should warm up the voice, the mind, and the emotions and best fitted to the literature at hand.

67. It is easy to get in a warm up rut, and then often doesn't relate to that particular rehearsal. I have to force myself to change up what I do. Hard habit to break.

68. In addition to vocal preparation, Mental focus of the entire "team" in order to rehearse/perform. Also, I often create warmups which address a problem spot in repertoire.

69. Having students vocally prepared to sing is important and warm-ups should be incorporated. However, due to a small amount of time I have in class often times structured warm-ups are not done.

70. The workshop I just attended had some great ideas about warm-ups which I am going to start using. I love looking at new ideas and new ways to present concepts that are important to the success of my ensembles.

71. This is often the only opportunity to teach students vocal technique. Vocal
skills they need to improve singing.

72. If students' voices are not warmed up properly, I cannot expect vocal health and a good sound. SR is also affected.

73. Warm-ups should be focused on healthy singing, with a quality, focused tone. They should increase a singer's stamina and range through correct singing. The warm-up tone should be recreated when singing repertoire and should support the end product of the choir at performance.

74. Warm ups are necessary and provide excellent measure of the class for the day.

75. I believe in sticking to certain basic fundamentals in warming up, while varying other sections.

76. Use some warm ups over and over again to reinforce proper vocal technique, but also integrate new warm ups throughout the year to keep it fresh for the students. Both male and female singers need to sing in their "head voice" everyday. Generally after the singers do some basic stretching and breathing we will then spend a good portion of warm ups working toward an easily produced head voice.

77. Choral warm-ups / vocal technique are the most important part of my rehearsal used to teach healthy vocal production, build skills, and work out problems in repertoire.

78. Get the voice and mind set in a choral manner and ready to make open, bright and forward tones with an open throat and lifted palate.

79. They must focus the student, Provide instruction on proper breath support and technique in vocal production and instruct in musical fundamentals in 8-10 min.

80. Warm-ups are paramount to the success of any choir. The foundation for healthy vocal technique, ear training, and tone are built during the warm-up exercises. Failure to acutely plan and/or execute warm-ups has negative effects on the rehearsal to follow.

81. core to teaching the choir how to sing and develop an outstanding tonal profile.

82. I believe that warm ups are essential to good vocal health and correct singing. I am careful with the warm-ups I choose to do with my choirs, allowing physical as well as vocal warming in order for them to experience the total body and mind experience while singing. It creates a sense of focus and eliminates distractions as we enter our choral rehearsal zone.

83. Choral warm-up time is a time where I focus the choir, get the students using good breath support, addressing vowel shapes. Good warm-up = Good rehearsal/concert.
84. They focus the singers, prepare for tasks ahead, and warm up the vocal chords.

85. Warm-ups at the beginning of class are just that, like stretching before gymnastics, we work the instrument and get it ready. I then do short warm-ups before particular numbers to work problems in the piece.

86. This has actually been a struggle for me since I couldn't remember a lot of them from school. I am just now starting to use more (bought some books at convention.)

87. I try to ease the voice working first the mid range, then lower, then upper. I incorporate some chordal elements... then some sight reading.

88. Choral warm-ups are a good way to focus the choir for the day and can be used to work certain areas of music the choir is working on.

89. Warm-ups must engage the singer in healthy vocal production, in preparation for the scores being prepared. I try to connect body, mind, spirit, then voice into patterns that will prepare them to rehearse choral music.

90. My main focus in warm ups is vocal health, with vocal production being second in importance. I also try to gear the warm ups to the style(s) of music we will be rehearsing that particular day.

91. Choral warmups are very important for vocal health. Some side benefits to warm ups is focusing of attention, good posture practice, and an introduction of song passages to be learned.

92. Although warm-ups are important, I don't believe the success of a choir hinges on them. I think warm-ups are important for teaching technique, helping free the voice, and to introduce or reinforce certain musical elements in the literature.

93. I try to use vocal technique, rhythms in lit I am teaching as the basis for my warm up. As I teach in the middle of the day, the voice is warmed up already.

94. Warm-ups are designed to focus the mind and begin routines as well as address specific pedagogical issues endemic to the choir.

95. I cycle through several favorites weekly and sometimes get stuck. I try to incorporate breathing, long tones, agility, and intonation exercises in every warm-up, but often only get partway through. I will do warm-up exercises mid-rehearsal to fix errors of tone, placement, breathing, or vowel choice. I use a great deal of "sing-song speech" in teaching good vowels for singing, to promote forward placement and tall vowels, and I sing lots to demonstrate. We conduct, do hand signs and moveable do solfege, clap, tap, pulse, count, counting. Sometimes I will skip warm-ups altogether and do exercises throughout the rehearsal as needed. In essence, I would say that for me, warm-ups are a way to get the attention of the group and get it focused on music-making,
rather than physically warming-up the voice. I rarely warm-up to extreme ranges, but we sometimes do it for fun. In all cases I try to begin warm-ups, and the rehearsal in general, with non-verbal cues only, whether I just handsign, or begin conducting a fun consonant exercise, or just start with solfege scales in canon. I have invented my own warm-ups, I use my undergraduate and high school warm-ups, and I use some that I have collected over the years at conventions, from students moving in to my program, from my summer music program where I have 80 new students each summer. Nevertheless, while I have a vast repertoire, I regularly use only about 10 different ones, stretching sometimes to perhaps twenty.

96. I believe that the "warm-up time" is actually the time when you teach good, healthy singing technique. This can then be applied to the literature. I have found that choirs which have poor tone and technique in concerts often do not focus on tone/technique during their "warm-up time" on a daily basis.

97. I operate from the philosophy that warm ups should get students as individuals in touch with their abdominal breathing, vocal placement, range extension, consistent sounding of tall vowels, as well as chordal blending and tuning of the entire group.

98. physical, breath, vocal. mental

99. My choral warm ups are devised to relate to the music we are studying.

100. Warm ups are designed to prepare the singer, focus vowels, work intervals, and to prepare in every way for the music that we will sing in that particular rehearsal.

101. bel canto, skills (including notation) and knowledge across the gamut

102. 1. Warm-up the muscles of the vocal instrument 2. Focus the attention of the choir 3. Develop vocal technique of singers 4. Address certain aspects of repertoire

103. The choral warm-up should prepare students for the rehearsal by providing them the opportunity to improve technique and make a transfer to the music literature that will be rehearsed.

104. The choral director maybe the only vocal instruction a student receives. As a result, warmups should incorporate a mixture of vocal dev. exercises, ear training, choral balance and tone color, and sightreading.

105. Choral warm-ups are essential to the basis and foundations of choral singing and performance. Students learn to use their voices correctly and gain more knowledge of proper vocal production and health. The warm-up also serves as a preparation for some of the material that the choir will be singing or reading each day.
Warm Ups offer the perfect opportunity to address many areas of singing, resulting in multi-tasking. I strive to address vocal techniques, ear-training, vocal independence, blend and balance when warm-ing up in the choral setting. I believe warm-ups, while wonderful to use to focus and begin a rehearsal are a vital part of teaching and rehearsing.

Warmups should focus the choir on tuning, unified vowels and concentration

Body, breath, brain

Warm-ups are used to prepare the mind and vocal instruments for singing. They also ensure a focus on tone, vocal placement, raising soft palate, breathing, articulation and engaging the whole body

My emphasis on choral warm-ups vary throughout the year. We warm up daily but sometimes I teach vocal production through the warm-ups and at others it is a time to settle down and focus on the rehearsal that is beginning. I also teach aural skills during my warm-ups as well. These can relate to good choral blend practicing chord progressions or interval recognition with specific intervals targeted in the warm-up.

I use warm-ups to work on vowel and consonant production as well as proper breathing techniques. I design warm-up exercises to specifically emphasis something needed in the music to be rehearsed that day.

I believe the choral warm-up should relate, at least in part, to the music we are preparing at the time. It should also focus on building strong voices and adequate vocal range.

All warm-ups should have a purpose. It is the time you not only work you voice in vocalise but also a time to train the ear in various intervals and chord structures.

Class is so short...choral warm-up philosophy is the first thing that goes out the window. Teaching in public schools will quickly change your passions no matter how strongly you felt in college about them.

Choral warm-ups are used to engage the body, mind and voice-a combination of all. Teaching proper technique that relates to the music being studied and developing better aural skills is my primary focus.

Used briefly, mostly as a way to focus students and as a "procedure" they can count on to start a rehearsal. Often allow students to determine warm-ups and direct them as long as they can tell me why they're doing them. Try as hard as I can to do warm-ups that relate to something else later in the rehearsal.
118. The warm ups should reflect good vocal production and technique being used in the music the choir is practicing.

119. I believe it is a must in any choral program. In addition to the statements above, I believe warm-ups are the building blocks to a successful rehearsal, performance and program.

120. Focused on correct vocal production for the best choral sound and to train the ear to hear intervals and be able to reproduce them in the correct manner as well as tuning is the most important part of choral warm-ups. The ability of the students drives the focus and specific attention to what areas need reinforcement of solid, basic vocal skills.

121. I keep my warm-ups short and sweet at the middle school level to stretch their range and work on Kodaly ear training. Same w/ high school.

122. Choral warm-ups should not only be for warming up voice but teaching vocal technique: correct vowel-shaping, proper onset, proper breath management, quality tone production, etc. Additionally, it can be used to teach the use of dynamics and articulations. Warm-ups should be purposeful. Warm-ups definitely should focus the choir for the rehearsal ahead.

123. Warm-ups serve not only to prepare the voice and body of the singer, but also to unite the singers in preparation for singing as a "team."

124. Vocal Warm-ups are devised to teach good singing techniques.

125. Warm-ups constitute a group voice lesson, and over time offer the opportunity to build technique, develop discriminating listening skills and attain the optimum level of tonal beauty, intonation, freedom and flexibility, based on a specific group's potential.

126. I concentrate on vowels as a tool to create a corporate language of sound through which the choir will more readily experience success in tuning and ensemble. I also use this concentration to guide the singer's ear and to refine their understanding of vocal production.

127. Warm-ups are a crucial part of rehearsal and function in such a way as to focus the choir mentally, work on tuning, and to warm the voice. These goals are not in order of importance but each goal is important. It is especially critical that at the conclusion of the warm up the voice is ready to go. These should be done in a progressive manner, from an easy, breath-moving exercise, eventually graduating towards larger ranges and different articulations.

128. Warm-ups should help develop technique in singers, and flexibility.

129. At the high school level, I think warm-ups can be used to: focus the student's attention, as well as to engage vocal production, and thirdly, to work on attributes such as blend, diction, or balance.
Choral warm-ups have three main functions in my classroom: 1. group vocal instruction 2. ensemble building/ focus 3. preteaching - tone and skills

I believe warm-ups are used to teach the singers vocal technique that they can carry over to the literature they are singing. It is also a time for the ensemble to work on tuning exercises that will allow them to engage their brains and their ears to the needs of the ensemble.

Choral warm-ups are the most important singing during the rehearsal. I focus on exercises that will promote good vocal health and tone production. I also try to relate warm-ups to specific issues in our literature, e.g., difficult pitch patterns, range or tessitura issues, etc. Warm-ups are also tied to ear-training, with emphasis on solfege and audiation as they can promote better and more accurate singing.

My first priority is good vocal health. I structure my choral warm-ups as I would do in private vocal lessons. Then the second half incorporates choral blend and balance.

I use choral warm-ups to prepare the mind and body for singing. Warm-ups are also an opportunity to prepare difficult passages of repertoire.

they are used not only to warm up the voice but to tackle vocal difficulties in the literature they are working on

Warm-up's should be based on what goal you want your group to achieve. Rooted in short and long term goals. Then using various methods and studies to get them there is the key

Daily

It is important to focus the mind, prepare the voice, and begin make music and not just noise

Absolutely vital to a good rehearsal.

Provides a focus for engagement and vocal readiness

Two-fold....movement warms up the body, singing through the music that you are working on warms up the voice. Another thought - vocal warm-ups need to be relevant to the pieces being sung...not just a time-waster or a "let's get on task" maker.

I believe the purpose of choral warm-ups is three-fold. First, to focus the students on the class. I use a series of solfegge patterns. Second, to educate the student about the use of his/her own voice and breathing techniques. Third, to work on intonation and blend as a choir. I also plan steps 2 and 3 based on the repertoire we are working on a given day.
143. Choral warm up assist with focus and preparing the mind and body for singing. I also utilize warm up for sight singing.

144. My choral warm-ups are taken from other high school choral directors that I have observed. I have also studied and read much of what James Jordan has done and have applied many of his techniques. They have worked beautifully for my high school choral ensembles. They have helped with tuning and singing with a high, spacious, and forward sound. Lastly, I would say that my choral warm-ups are also taken from the repertoire we're rehearsing. I really try now to find something from a piece and put it into the warm-up process.

145. I believe choral warm-ups are an important and crucial component of the choral rehearsal. They should address vocal health, vocal flexibility, choral tone and balance, and the mental concentration of the singers. I also think they should relate to the concepts and strategies being implemented during the repertoire rehearsal.

146. I believe choral warm-ups are an integral and important of each rehearsal.

147. Warm-ups should be related to repertoire planned for any given rehearsal.

148. everyday for at least 15mins - I try to look at music we are working on and incorporate ideals into my warm up - I use warm up time like a vocal technique time

149. My warm-ups are primarily geared toward healthy vocal production for each singer. These warm-ups are good for choirs or soloists. I also concentrate on correct breath support through various exercises. I guess you could say that I give mini voice lessons every day. Once I feel the voices and bodies are adequately warmed up, I will then focus on choral warm-ups of tuning(listening), blend, balance and nuance based on the literature we are working on.

150. Choral warm-ups are a time of instruction to unify concepts of good choral singing. Unity of vowel, tone quality, breath management, range extension, and general vocal control are emphasized.

151. Used to "wake up" the voice Focus on particular vocal issues of singers Prepare for rehearsal of repertoire

152. I am deeply ROOTED in three approaches to warm-ups. I use a number of the exercises detailed in "Building Beautiful Voices." These are excellent vocalises designed to develop a warm, resonant tone, proper vowel formation, and a blended sound. I employ several warm-ups that utilize solfege syllables and hand signs. These exercises aid us in developing consistent intonation and improving our sight reading. In addition, I make use
of warm-ups I learned in college. The exercises use humming, vowel sounds, and shifting chords to develop a resonant tone, balance, and blend across the choir.

153. My warm-ups are designed to warm-up the voice as well as to ingrain intervals used in the solfege system. Thus preparing the students to sight read following the warm up portion of class.

154. I try to make my warmups similar to some element that is weak in our literature we are about to sing.

155. Should include physical, mental and vocal; should relate to music being rehearsed; essential for beginning of every choral rehearsal.

156. I use warm ups as a mini-voice lesson to try to instill healthy vocal technique which will allow them to sing with ease.

157. Based on previous or anticipated vocal problems

158. My warm-ups are directly related to a specific choral piece that we are working on whether it be for range, harmonic sequence, vowel uniformity, balance, blend etc.

159. Choral warmups should be used to focus a group. Warmups should also involve vocal pedagogy. Warmups should also reflect the material which will be sung. They could even be pulled directly from literature that is currently being rehearsed.

160. Choral Warm-ups can perform any number of functions. Warm-ups can help prepare the voice to sing, focus the mind, hone in on problem spots in a selection, teach flexibility, teach intervals, almost anything that can be imagined. The challenge is to make each exercise fit the particular group that you are facing at the moment.

161. The purpose of choral warm-ups are to work on and enhance blend, good choral tone, balance between sections, vocal flexibility, prepare students for repertoire.

162. warm-ups should be to help develop the voice of the age level in front of you. It should also compliment the literature you are currently teaching in order to achieve the sound of specific pieces. My warm-ups are written out on my lesson plans and though through based on my sightreading and literature plan for that day or week.

163. I believe warm-ups are a "mini voice lesson" and encourage my students to use the exercises to improve their voice. I believe in a well-planned, structured warm-up time that includes stretching, breath exercises, and vocal exercises that have been thoroughly prepared to help improve each voice.
164. I believe that singers need to understand HOW to sing through their vocal mechanism: the function of their tongue, the SHAPE of their lips, the SPACE between their teeth, and how to lift the soft palate.

165. Based on both vocal production and tuning.

166. Warm-ups serve to get both the vocal mechanism and the mind ready to sing.

167. Choral warm-ups are to focus the singer mentally, physically, and auditorially. The students must first warm-up their individual voice, making sure correct placement and support (breath) is being given to the voice. Then I use the warm-ups as a listening, blending, and tuning tool.

168. Choral warm-ups should educate the students in vocal health as well as proper singing technique. In addition, they should easily and progressively be used to loosen muscles, strengthen the breathing mechanism and remind the students of proper alignment and control all while training ears to listen to his own voice and those around him.

169. Warmups are to acquire healthy vocal production, vowel placement and introduce harmonic and rhythmic elements from the music currently being rehearsed.

170. I use the same type of vocalizes in both choral and private instruction.

171. Choral Warm Ups should be designed on a daily basis based on the needs of the choir/section and should be rooted in educational goals of the literature they are singing. "Warm Ups" or vocalizes should be incorporated throughout the entire rehearsal and not just performed at the onset. President of the United States of America when asked "What Offices have you held?"

172. warm up OR warm down the voice depending on the time of day. warm ups used to assist difficult passages in current repertoire, enhance vocal pedagogy or blend of voices for the proper tone and rehearsal mindset.

173. Choral warm-ups should get your choir ready to work on the music for the rehearsal. They should create good vocal production, tone, breathing, etc. I also think that interval work is imperative during the warm-up time to get them ready for sight reading as well.

174. To mentally prepare the students for the art of singing. To disengage the rest of the rat-race of school and focus on making pure sound (bel canto vowel production). I do not try to take everyone to their full extent of their range, rather get them thinking about breathing correctly and supporting the tone. Once satisfied with the tonal quality, we work on some rhythm challenges and intervalic challenges (from the music we're performing). Then we get after it.
175. I use warm-ups to prepare the voice for singing, with a primary focus on vowel production and tone quality.

176. I create warm-ups for the needs of my students, vocally, for sight-reading, and for the music we will be learning. I use many different books as resources.

177. Teaching tone, support, posture focus, blend and balance

178. The warm up curriculum for a class is strongly tied to the vocal development needs of the students in that particular class. Vocal Health, Vocal Development, and vocal awareness are all topics that are touched on. This is all very tied to my involvement in organizations like NATS and my regular attendance at masterclasses, conferences, workshops, and my participation in voice pedagogy classes.

179. I focus on vowel shape, blend between sections, proper breathing and internal training

180. A good way to get kids' attention and focus them on singing! If they are singing, they can't talk!

181. To train listening skills as well as develop vocal techniques required of the music to be studied

182. Focuses the choir; work toward uniform vowels; work toward developing listening and tuning skills; work toward learning how to balance chords; repertoire based warm ups depending on areas of difficulty in the music I am preparing.

183. Choral warm-ups serve many purposes. They give the choir mental focus. They are an opportunity to stretch and prepare the voice and body to sing. They give time to give the general "rules" about vocal health and tone that may then be applied to all repertoire. I vary my warm-ups daily based on the goals of rehearsal.

184. Choral warm-ups are a time to get a particular choir's sound unified, build aural skills, groove the voice into healthy breathing and singing, and to get a group mentally focused.

185. I believe warm-up help focus students on tonal production, breathe management and blend

186. To focus my choir on the upcoming rehearsal. We do many warm-ups related to sight-singing.

187. Choral warm-ups serve to warm-up and focus the body, mind, and voice.
188. I find that warm-ups can redirect the energy of the ensemble for the day. Kids come in dragging, I do energetic ones. Kids come in wired; I do longer legato ones. I think some warm-ups should be done almost daily and others should be alternated depending on the day's lesson.

189. I believe in using the literature we are currently working on as part of our warm-ups. I believe in warming-up using techniques and articulations used in the repertoire.

190. Warmups are not to kill time. They have purpose be it vocal instruction, sightreading or preparation for music to be learned. It is just as important that the students know what the purpose of the warmups are.

191. I think the largest purpose of a warm up is to get everyone focused and ready for the rehearsal. This includes getting the body set up to sing, beginning to use the voice in the appropriate manner, learning to listen, and centering the mind on the tasks ahead.

192. Warm-ups should focus on both the mind, body and even spirit.

193. I design my warm up vocalizations based on the biophysics of the human voice appropriate to the people I am working with, combined with possible preferred modes of learning of the people in that group, which will drive the varied methods of presentation of the technical components. If I help to increase the singers' technical skills, they will achieve higher levels of success, which will be vital internal motivation to spur the singers on to better focus and commitment to the complex task of singing. Within the parameters of what needs to be done technically, I try to monitor my use of warm up components to provide variety so that the brain cells stay alert and happy, and that the warm up time provides interest and emotional gratification, as well as technical improvement. The "feel" of resonance and the ability to listen to the sound produced to compare to the model sound that is desired are important for the singers to be able to do. That's a good portion of the individual part of warm ups. The corporate part of warm ups includes listening to the complex matrix of sound that is being produced in the ensemble and to produce vowels that resonate as a part of that sound, and to analyze the timing and shape of the consonants so that they participate clearly in the choral expression. Singers can be sensitized to, and trained in dynamic variation and control through the warm up activities also. At times, the activities can be used to relax the singer and his/her vocal instrument, or to make them more alert. They can be used to focus the mind on the complex psychomotor task of choral production, which is radically different than most activities the singers are engaged in prior to coming into the rehearsal area. For the high school and university settings I have designed vocalises to solve individual student needs, and I encourage students to participate in innovating warm up procedures based on needs they feel and ideas that they have. To summarize what has gone on perhaps too long, the vocal muscles and ligaments need to be literally "warmed up" so that they become supple and controllable before too many things are expected of
them, the mind needs to prepare brain connections in various parts of both hemispheres to make the vocal production efficient and precise, the listening and somatic response to tone production need to be focused, and the singers need to be re-sensitized to the importance of being a part of a very complex sound production matrix, which is not just mechanical, but that has potential to display aesthetic qualities, which are much deeper than just "emotional" due to their high level cognitive content. Then we could talk about how the warm ups relate to the various pieces of literature in various styles that the singers will be singing, but perhaps we should save that for another time.

194. focus mind, train the ear, train the voice

195. Choral warm ups should be a time to work on vocal technique, balance, blend and intonation every day.

196. Warming up properly and explaining the "whys" and "how it feels" will hopefully carry over into the music.

197. The warm-up, in my view, is the method to "focus" the voice for singing. Students talk all day, so the vocal folds are warm and flexible by the time they appear in my rehearsal room. My focus is to expand the voice beyond the normal speaking range, maximize breath control and support, and to unify vowel creation and placement in the warm-ups.

198. I want to 1) engage the minds towards singing; 2) warm up the voice, and 3) teach tonal philosophy.

199. I feel that traditional ascending/descending chromatic pentachords or arpeggios are inefficient. The time they consume could be better spent chanting words or Solfege, counting rhythms, or reciting tongue twisters. Those activities serve the same purpose of mental focus and oral articulation without the drudgery and boredom of SFMRD scales.

200. Warm ups should be used to promote thinking during singing and retention of choral sound and common intervals used. Warm ups are not for warm up sake, but to bring the choir to a high level of thinking and singing.

201. I believe that the warm-ups should be customized to help accomplish proper technique, vocal health, and also help teach or demonstrate passages of the music you will be working on during that rehearsal.

202. I believe warm ups are a vital time to focus energy, warm up the vocal mechanism, instruct students on proper vocal technique and solidify tone and vowel shape. Literature teaching should not happen without it.

203. Warmups should mentally and physically prepare the ensemble for a productive rehearsal while addressing a challenging aspect of the literature to
be rehearsed.

204. Warm-ups should focus the mind and the voice. I do not race singers up and down the keyboard. I use a collection of melodies and canons that I have assembled into my teaching "arsenal". While warming the voice, it teaches keys, rhythmic patterns, and the best...how to sing a beautiful connected line. These melodies prepare the singers to effortlessly move into choral rep. I have often wondered into the cafeteria to hear "my kids" singing one of the canons we used as our warm up. Gosh..what a life I lead!! [deleted for anonymity]

205. I use warmups to reinforce the material I plan to teach in class that day. I use them as an opportunity to teach vocal health, technique, and ensemble sound.

206. I try to incorporate vocalises that not only are routine, but also are novel to challenge singers to focus.

207. They are like mini private lessons and I encourage my students to treat them as such.

208. Choral warm-ups are used as an introduction to the rehearsal...not as a separate part of the daily routine.

209. It is dependent on teaching a healthy singing approach and secondarily on conquering aspects of the music that will require different techniques ie the music will frequently dictate what the warmup will be.

210. Establish healthy vocal tone production, ear-training, proper vowel placement

211. Focused on tone and tuning

212. I use choral warmups to develop the vocal technique of my choirs. Students must be focused - mentally, physically, and musically. The vocal health and technique of the entire instrument (body) is addressed through choral warmups.

213. I believe that warm-ups should be the foundation for good vocal health and technique. I believe it helps to focus students, especially at the secondary level. I believe that the tone quality, vowel quality, technique, breath support, etc that I teach in warm-ups carries through to everything my choir does.

214. For choirs, vocal warmups provide mental as well as physical focus. They should not be done in a routine manner. The teacher must constantly
monitor the physical attitude of the singers to be sure they are fully engaged. Warmups should not take more than 5-10 minutes of the rehearsal time unless there is a major teaching point that needs to be made regarding a new warmup or how something relates to the musical literature to be covered during the rehearsal.

215. I believe they should be directly tied to sound production (vowels, blend, range) and to subject content... the pieces were are working on. I often use material from the our songs in warmups.

216. I use warm ups to prepare the choir to employ good and proper vowel sounds when we move on to the repertoire. I like warmups that support breathing correctly as well. I routinely use warmups from "Building Beautiful Voices" by Weston Noble and Paul Nesheim--and Voice Builders for Better Choirs by Emily Crocker. I am a person who does not get stuck in routine and in doing things one way. I believe to try different things is the way we can reach the most students since no one learns in exactly the same way on any given day. We stretch our muscles before exercise, why not warm up the vocal muscle?

217. I think the warm-ups should be for 3 specific areas 1. Vocal health, production, stretching of vocal range 2. Choral tone and tuning. 3. Specific aspects of music to be rehearsed that day.

218. the purpose of my choral/vocal warmups is to communicate the proper (healthy/beautiful) method of vocal production. By "warming up" we remind the students of the physicality necessary to sing with beauty and health, thus preparing the mind and body (the "voice") for making music.

219. We have chori first thing in the morning, so warm ups are centered around getting the voice ready to sing and warm so that it is not strained or injured during rehearsal.

220. Vocal Warm-up is a great time to work on vocal technique, but should not be the only time it is worked on. Choral Warm-ups should be structured around music being worked on in the lesson for the day.

221. Warms ups should be the basis of vocal pedagogy in the classroom. In addition they should relate to the music you are teaching so that the kids know how to sing it before they are looking at the notes on the page.

222. Eclectic. Also influenced by perceived amount of time to rehearse before concert!

223. I use warm-up to teach a skil, sound or part of the music then I ask the students to apply their knowledge in the music we are singing or even sight reading.
still learning. don't know what I'm doing yet

They need to be planned, specific, varied by category as well as by exercise, and done as part of the regular class routine. They need to relate to what will be done in class later that day.

My warm-ups are designed almost as a group voice lesson. We focus on the fundamentals of breathing, posture, and singing - which then transitions into the music we are performing. I choose specific warm-ups that are dependant upon the literature we are working on. Many of my students do not take voice lessons, and this is a great way for me to give individual instruction (walking around the room as they warm up) to those who need it.

My philosophy is that I want to engage the student with fun warm-ups while they also teach them proper breath, vowel production, and articulation.

I like the term vocal exercise as opposed to vocal warm-ups. Whatever areas of vocal strength and agility are lacking in my choirs, I use that as the determining factor in the vocal exercises we do.

Necessary to rescue young singers from believing "pop" style is healthy, appropriate, or all that matters.

They should first prepare body and mind for the task of singing, and second relate directly to the demands of the music to be rehearsed.

...are intended to prepare the vocal instrument, the abdominal muscles, the breathing device, and the brain for more strenuous or complex activity.

Should be used to help produce good choral sounds which can be transferred into the music. Should be for developing range and good tone. Should help build good blend within a choir. Should be seriously participated in by students but needs to be fun for them as well.

I use some old and some new vocalises for every warm-up to keep things interesting. I often devise warm-ups that directly relate to the sightreading we will do or the literature of the rehearsal. I also use warm-ups to establish the tone quality I want to hear from my choir.

Warm-Ups help the singers focus on material to be rehearsed. Warm-ups not only are intended for the voice but the ears.

Warm-ups are very necessary in any choral class. Students need to consistently learn, experience, the process of the changing voice from the surrounding elements everyday. Health plays an intricate part of vocal pedagogy. Proper vocalizations improves the voice from one year to another, especially in the high school groups.

This year I have been focusing my warm-ups on having my choirs sing
with a forward, focused sound. When they do it, they sound glorious!!! When they don't, they sound average. I do think it is very important to have students become mentally prepared for class, but I don't do the best job of planning for that. I use some warm-ups most days, but I know that variety helps students not become bored.

237. I typically have a set routine of core warm-ups and will add others depending on the mood or timbre of the group. Some warm-ups reflect the style of a piece that we are working on and others develop good vocal technique (or so I hope!). My personal belief is that warm-ups should be a "centering" time for the choir to get focused and gather themselves mentally and vocally to prepare for rehearsal. However, there are times that high school students do not tend to see it as has a mental warm-up and view it merely as a vocal warm-up.

238. Warm-ups should be done on a consistent basis, correlate to the music being practiced, to optimize health, strength, technique, range, technique and articulation. New warm-ups are inserted to help break up and add fun to the exercise.

239. To me, vocal warm-ups serve as "voice lessons for choir." Students should demonstrate the ability to transfer learning from warm-ups to literature.

240. Vocalizations are a time for focus on the production of sound as an individual, and as a group. (I avoid calling them warm-ups, as they are more of a focus exercise, than revving up.) They should be based on skills the singer is learning in the music, and directed toward that goal. They should always promote a healthy sound.

241. I aim to warm-up their young voices in a very holistic way focusing on breath management and vowel formation first.

242. Warm-ups should be directly based upon elements that occur during the course of the class; rather than as "catch-all" generic vocal technique that may or may not transfer to the music.

243. I try to vary my vocal warm-ups from day to day. However, I also try to use the same warm-ups frequently with the choir to establish a sense of routine and to build skills. I try to choose warm ups that work toward different goals (i.e. articulation, breathing, sustained tone, tuning, etc.) and focus on one area each day during our warm-up time. Most of the time, the warm-ups I choose are dictated by my goal for rehearsal that day. (for example: this piece on page 7 needs much more breath support, therefore, our warm ups will concentrate on breathing and sustaining the breath.)

244. I use choral warm-ups as a focus tool for my choral ensembles. We also fix things in warm-ups that apply directly to our music, such as musical phrasing, or tuning.
245. I want to gradually involve the voice, moving from the middle range outward to as the voice gets going. Lots of top down exercises at first. Move from unison to parts.

246. Choral warmups should assist in vocal development for the individual singer and nurture a unified sound for the ensemble.

247. I use them to get what I want out of the choir when I use them. I understand the need for them in certain situations. I don't do them on a day to day basis.

248. I believe in using a whole-body approach to warm-ups. We ought to be developing our body as an entire musical instrument - and the way to do that is at the beginning - with a warm-up designed to increase body and breath awareness and then the voice.
APPENDIX J

MUSIC TEACHING STYLE

CONDITIONAL USE AGREEMENT
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For good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, I hereby agree that the permission granted to me by Alan Gumm to receive and utilize, without charge, the Music Teaching Style Inventory (MTSI), is subject to the following conditions, all of which I hereby accept and acknowledge:

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4. I will provide Alan Gumm with a copy of any research findings arising out of my use of the MTSI and will cite Alan Gumm in any of my publications relating thereto.
5. Alan Gumm will have no obligation to provide me with any scoring services for my use of the MTSI other than providing the instructions to score results.
6. Alan Gumm will not be deemed to have made any representation or warranty, express or implied, in connection with the MTSI, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.
7. My rights under this Agreement are non-transferable and non-exclusive and will be limited to a period of two (2) years from the date of this Agreement.
8. Alan Gumm immediately terminates this Agreement by giving written notice to me in the event I breach any of this Agreement’s terms or conditions.
9. This Agreement may not be assigned by me without the prior written consent of Alan Gumm.
10. Failure by Alan Gumm to enforce any provisions of this Agreement will not be deemed a waiver of such provision, or any subsequent violation of the Agreement by me.
11. This is the entire agreement with Alan Gumm pertaining to my receipt and use of the MTSI, and only a written amendment signed by Alan Gumm can modify this Agreement.

Agreed and understood:

Signature

Print Name

Date

For any and all applications of the MTSI, please print, sign, and send the agreement form to: Dr. Alan Gumm, School of Music, Central Michigan University, Mount Pleasant, MI 48859.
VITA

Bradley Christian Olesen was born in Dallas, Texas on January 22, 1970. He is the son of Spencer and Jeanette Olesen. As a product of Grand Prairie Independent School District in Grand Prairie, Texas, he attended Rayburn Elementary and Eisenhower Elementary Schools, John Adams Middle School, and Grand Prairie High School. In September 1988, he attended Texas Tech University and received a Bachelor of Arts in Music – Piano Performance degree in 1992. He remained at Texas Tech and completed his Masters Degree in Music Performance – Choral Conducting in 1995. His teaching experiences began with Lubbock High School in 1994, and from there was Director of Choral Activities at (a) North Mesquite High School, Mesquite, TX., (b) Round Rock High School, Round Rock, TX., (c) Director of Fine Arts at Cincinnati Country Day School, Cincinnati, OH., and (d) Director of Choral Activities at Stony Point High School, Round Rock, TX. In August 2007 he was admitted to the Graduate School of the University of Miami Frost School of Music and received his Ph.D. in Music Education in June 2010.

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