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An Examination of the Influence of Band Director Teaching Style and Personality on Ratings at Concert and Marching Band Events

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An Examination of the Influence of Band Director Teaching Style and Personality on
Ratings at Concert and Marching Band Events

by

Timothy J. Groulx

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Center for Music Education Research
School of Music
College of The Arts
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Dedication

This research is dedicated in part to my loving wife, Shirdellah who has supported me throughout my entire doctoral program, and patiently endured my many long hours of writing. It is also dedicated in part to my beautiful daughter Claire who has kept my spirits high throughout the entire process and reminded me of what is most important. Finally I also dedicate this in part to my parents, Dennis and Mary Groulx, who have always believed in me, supported me, and encouraged me to pursue my dreams.

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An Examination of the Influence of Band Director Teaching Style and Personality on
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Timothy J. Groulx

ABSTRACT

This descriptive correlational study examined the relationship between high school band directors' teaching style and personality and their ratings in marching and concert band festivals using the Five-Factor Model of personality and Gumm's Music Teaching Style Inventory. The sample ($N=176$) consisted of 46% of all high school band directors in Florida. Criterion variables included marching and concert festival ratings, state concert band ratings, Florida Marching Band Coalition marching competition scores, frequency of attendance of these last two events, and the balance between marching and concert band. Predictor variables included thirty personality facets and eight teaching styles. Four demographic variables included gender, experience, academic degree, and primary instrument.

One predictor, Time Efficiency, stood out as having particularly strong correlations with all of criterion variables. Regression models produced the following findings: 23% of the variation in concert band ratings can be explained from Time Efficiency, Immoderation, Music Concept Learning Assertiveness, and Nonverbal Motivation; 22% of the variation in marching band scores can be explained by Time Efficiency, Music Concept Learning, Imagination, Modesty, Cheerfulness, and Anxiety;

20% of the variation in participation in state Florida Bandmasters Association concert band festival participation can be explained by Time Efficiency, Positive Learning Environment, Immoderation, Music Concept Learning, Group Dynamic, and Assertive Teaching, and 11% of the variation in FMBC competitive marching band event attendance can be explained by Time Efficiency, Nonverbal Motivation, Dutifulness, and Modesty. Most subjects (84.3%) were balanced, while the remaining 15.7% were marching oriented. There was no significant difference in marching ratings between groups, although balanced subjects scored significantly higher in concert band and attended significantly fewer marching competitions. A discriminant function selected four predictor variables with a significant effect: Assertiveness, Immoderation, Adventurousness, and Emotion (Wilks' $\lambda = .84$, $\chi^2 = 23.42$, $df = 4$, $p < .001$) which was able to successfully predict group membership 72.3% of the time.

Recommendations include emphasizing the concert band as the core and playing concert music all year. Directors may benefit from being cognizant of their personalities and teaching styles which may enable them to modify their behavior and practices when appropriate to be more effective teachers.

Chapter 1: Introduction

Music educators define success a number of different ways, one of which is by the success of their students. For high school band directors, one form of student success is through a highly polished and artistic performance, especially if it is recognized as such by qualified critics or judges (Burnsed, Hinkle, & King, 1985; Davis, 2000; Dawes, 1989; Stitt, 1997; Stuber, 1997). Achieving this may provide the director with intrinsic benefits such as artistic fulfillment and pride as well as extrinsic benefits such as awards, admiration, recognition, fame, promotion, and in some cases greater job security. Success in a performance can also be measured in a number of different ways including the enthusiasm of audience applause, positive reviews, high ratings at adjudicated performances, or through a shared awareness by the students and director that a great performance has taken place.

In the pursuit of excellence, many aspiring band directors who have not yet attained the highest levels of musical achievement strive to understand what differences exist between themselves and those directors who have already achieved it. There are numerous variables among band programs such as the type, size, and location of their school, funding, the value students place on music, quality and support of administration, community support, and the experience and education of the band director (Beaver, 1973; Dawes, 1989; Davis, 2000; Goodstein, 1984; Goodstein, 1987; Hewitt 2000; Rickels, 2008; Washington, 2007). Many of these factors have already been the subject of research, although much work remains to be done before there are consistent and

complete data on all of these factors. Both director-related factors and school-related factors can influence band ratings, although research indicates director factors are more closely associated with the variability in scores (Groulx, 2009).

The literature review (Chapter 2) reveals how some factors influence band programs and band achievement, although it also reveals where there are gaps in the body of research. Such areas that have received less attention include how the personality and teaching style of the director affect the achievement of band. These factors are not easy to casually observe, and are somewhat more difficult to measure quantifiably when compared with factors such as school enrollment, years of band director experience, number of students in the program, or percentage of student retention in bands.

A teacher's personality may have a great deal of influence over his or her ability to thrive professionally and teach and inspire students effectively. While research on teacher recruitment shows no concern for aspects of personality or character, the public believes personal characteristics such as personality and ethics are critical in a teacher. Deeply ingrained traits, attitudes, and beliefs are unlikely to change significantly during a four or five year undergraduate teacher education program (Colwell, 2006). Psychologists agree that fundamental personality traits do not change once a person reaches adulthood (McCrae & Costa, 2003), although an awareness of personality traits and how they affect professional performance may help a teacher overcome any possible negative effects. A band director's teaching style may be more easily changed. Most often a music educator teaches the way in which they themselves were taught, despite years of undergraduate education. However, it is possible to change and better balance teaching styles with careful reflection and understanding of one's own strengths and weaknesses (Fontana,

1977; Fontana, 1986). Teaching style can directly affect student learning in the classroom, and consequently may affect achievement in performance (Gumm, 2003a). It is therefore important to determine if there is a correlation between band achievement and aspects of teaching style and personality.

I do not consider the pursuit of high ratings to be a valuable end in itself. While the competitive and adjudicated performances are considered sources of pride and motivation to achieve for band students (Austin, 1988; Burnsed & Sochinski, 1983; LaRue, 1986), an excessive amount of competition may be an indicator of ratings as a priority over broader music learning goals and a perception that musical self-worth is based on how the band is rated (Austin, 1990; Hayslett, 1992; Temple, 1973). Croft (1984) describes how these as “trophy seekers” focus excessively on their “musical sport” yet pay little to no attention to their concert band programs which achieve much lower levels of success. Some directors may spend the entire school year working on three pieces of music which are to be performed in the spring for a concert festival, or a single halftime show for marching band. This may lead students to learn music to a high level of technical perfection but diminish the musical and expressive aspects of it. This also may limit students’ exposure to a small number of pieces which they are capable of perfecting rather than teaching appreciation of music, important music concepts, and exposing them to a wide variety of good musical literature (Battisti, 1989; Davis, 2000; Dawes, 1989; Laib, 1984; Rickels, 2008; Temple, 1973). Focusing on perfecting a smaller amount of literature rather than studying a wider variety of literature also may result in students’ reduced success in sight-reading (Harris, 1991).

Theoretical Framework

In this research I examine how band directors' personalities and teaching styles affect the success of their bands' performances. Personality is represented by personal characteristics of the subject described using the thirty facets of the Five-Factor Model of personality consisting of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, which is described in detail in the review of literature (Chapter 2). Teaching style is examined using Gumm's model which includes a subject's strengths in eight different modes of instruction. The measure of performance success used here is band festival ratings and attendance frequency.

A fundamental premise of this research is aspects of a teacher's personality can influence the quality of learning in his or her classroom. Education research supports this using personality types systems such as the Five-Factor Model (Chamorro-Premuzic, Furnham, & Lewis, 2006; Emmerich, Job, 2004; Rock, & Trapani, 2006; Zhang, 2007), as well as the Myers-Briggs Type Indicator (Roberts, Harlin, & Briers, 2007; Rushton, Morgan, & Richard, 2007). There is also specific research on personality types and how they influence a music educator's teaching effectiveness, (Donovan, 1994; Krueger, 1976; Lewis, 1998; Lutz, 1963; Teachout, 2001), as well as personality research which specifically focuses on band directors' teaching effectiveness (Bullock, 1974; Stitt, 1997; Westbrook, 2004). The literature also supports the idea that teaching style can affect the way a teacher prepares his or her classes or ensembles and consequently influence student achievement or festival ratings (Costello, 2005; Davis, 1998; Dunn & Frazier, 1990; Gumm, 2003b; Gumm, 2004a; Kelly, 1972; Liberman, 1986; Yarbrough, 1998). Both of these factors are examined here to determine their relationship to festival ratings.

Purpose

The purpose of this research is to examine the relationship between aspects of high school band directors' teaching style and personality and the director's achievement in marching and concert band festivals. This research may help illuminate the relationships among teaching style, personality, and achievement in musical performance. This research may also enhance the bodies of personality and teaching style research in relation to active high school instrumental music educators, and may also hold implications for personality types and teaching styles which are predictors for success for all music educators.

Research Questions

There are five questions which are examined in this research. These questions examine the relationships between teaching style, personality, and achievement in marching and concert band festivals, as well as the relation of personality and teaching style to the director's balance of marching and concert band.

1. What kinds of relationships exist between band directors' personalities or teaching styles and their concert band ratings?
2. What kinds of relationships exist between band directors' personalities or teaching styles and their marching band ratings?
3. In what ways do band directors' personalities or teaching styles contribute to the number of state concert band events in which their bands participated?
4. In what ways do band directors' personalities or teaching styles contribute to the number of competitive marching band events in which their bands participated?

5. In what ways do band directors' personalities or teaching styles contribute to the balance between marching and concert band participation and scores?

Band director characteristics (teaching style and personality) represent the predictor variables which are correlated to their effect on the criterion variables, contest ratings (marching band and concert band). The population in this study is all public high school band directors in Florida who direct both marching and concert band programs.

Significance of the Study

This research may help fill gaps in knowledge about the personality of active high school band directors. It would also help to establish a broader and more unified body of research based on Gumm's model of teaching style and how teaching styles may affect band ratings. It would also make a connection between personality and teaching style and how these may correlate with success at concert and marching band festivals. Finally, this research would determine if there are specific personality traits or teaching style traits which correlate with or predict a band director's focus on marching band, concert band, or balance between the two responsibilities.

Published research on Gumm's model of teaching style is limited and diverse due to the recency of its development and publication. Due to the nature of the different teaching styles, it seems that a teacher's personality may have an effect on which teaching styles he or she may prefer and needs to be investigated. "A crucial next step in this line of research has been to find the effect of personality on music teaching style..." (Gumm, personal communication, May 20, 2009). There is also a body of research which may be classified as pertaining to teaching style prior to Gumm's model, although the

topics are rather diverse and do not center on a single, organized theory or model of teaching style. Rather, each individual study is based on its own theoretical constructs.

Most of the research into personality has focused on music education students and applied studio teachers, and the few studies which did involve middle and high school band directors' personalities have had small sample sizes (Stitt, 1997 had nine, Stuber, 1997 had twenty, Westbrook, 2004 had fifteen), which limits the generalizability of their studies. Another shortcoming of the existing literature on personality research is that research on music education students may not be generalized to active music educators; not all music education majors become music educators. The literature on professional teachers mostly focuses on applied studio instructors at the college level, which also cannot safely be generalized to K-12 music educators. Applied instructors are typically responsible for highly specialized instruction on a single instrument in a one-on-one setting, and often see fewer than twenty students per week. High school band directors work with younger students typically in large-group settings. The high school as a working environment is also different from a college or university as a working environment. The findings of the research on applied studio teachers is also difficult to correlate even within the group itself, as Kemp (1996) discussed the numerous differences between typical personalities of pianists, vocalists, brass players, woodwind players, string players, and percussion players (among others).

Operational Definition of Terms

The term "festival" in this research will refer to adjudicated band performance events. Currently the Florida Bandmasters Association (FBA) refers to these as Music Performance Assessments, or MPAs, although this is a relatively new term and readers

may likely be familiar with the more universal term “festival.” There are both concert and marching band festivals in Florida at the district level, sponsored by the FBA, as well as a state concert band festival. There is a state marching band festival, although it is run by the Florida Marching Band Coalition, or FMBC, and not the FBA. This state marching band festival and the related FMBC-sponsored regional events utilize a different rating system. Instead of the five categories utilized by the FBA, FMBC assigns a numerical score between 40 and 100 which is a composite of several judges’ scores rating the band on different aspects of their performances.

The term “rating” refers to the final score or division a band is given based on the individual scores awarded by the several judges who are adjudicating the band. A marching band rating is composed of two music judges, a marching and maneuvering judge, and a general effect judge. A concert band rating is composed of three music judges and a sight-reading judge. In this study, “rating” is used to refer to the judges’ evaluations of bands at festivals.

The term “balance” used in this research refers to a categorical variable which is a researcher-created exploratory construct which indicates which of three categories a subject fits based on marching and concert band ratings and participation. This idea of examining how a director balances responsibilities was examined by Head (1983) who referred to this as *emphasis*, but included director focus but not achievement. This represents how the subject’s band ratings are balanced: earning higher ratings and participating in extra concert band events without the same efforts in marching band, earning higher ratings and participating in extra marching band events without the same

efforts in concert band, or balanced between the two. The categories are labeled *marching-oriented*, *concert-oriented*, and *balanced*.

Limitations

One possible limitation of this study is the reliability of district festival ratings as a basis to determine success. Another limitation is that fatigue may affect accuracy of responses due to the number of questions in the survey instrument. Traditional limitations of personality research may also arise where some subjects may answer questions in a fashion they believe is more professionally desirable rather than giving honest answers which truly reflect their personalities.

Chapter 2: Review of Literature

An examination of band director personalities, teaching styles, and how they affect performance quality requires investigation into three distinct bodies of existing research. There has been a great deal of research done on the topic of personality, and a number of researchers have also examined various factors which affect ratings at band festivals. Research in teaching style has gone on for some time, although it has not been a unified and organized concept until relatively recently. First I discuss the research which pertains to band ratings. The next section focuses on personality research in music education, followed by the relatively recent body of teaching style research.

Factors Affecting Band Ratings at Festivals and Competitions

There are three major themes that emerge in the published studies regarding the factors which influence the ratings of bands. The first category to be examined here includes factors related to the band director such as teaching experience and level of education. The second major category includes factors which may influence band performance aside from the director, such as the size of the band and school, factors pertaining to students, budget and finances, custom marching shows, assistant directors and staff, use of rehearsal time, success at marching band versus concert band, frequency of festival attendance, as well as other factors. A third line of research examines the contest scores themselves; such as the reliability of judging and the criteria for justifying a given score.

Director qualities/factors

Easily observed and measured factors pertaining to the band director include the director's highest degree earned, teaching experience, and tenure at the current school. Beaver (1973), Dawes (1989), Davis (2000), Fosse (1965), Goodstein (1984), Maxwell (1970), Mann (1979), Saul (1976), and Washington (2007) all found a positive correlation between more advanced degrees and higher-achieving bands. While causality cannot be determined from these correlations, it may be speculated that those band directors who are ambitious and industrious are more likely to both earn an advanced degree and have a band which earns high ratings. Dawes (1989), Davis (2000), DeCarbo (1986), Fosse (1965), Head (1983), Maxwell (1970), Mann (1979), Saul (1976), and Washington (2007) found festival ratings improve with increased band director experience, although Rickels (2008) found a correlation of only .02 (non-significant) between director experience and ratings. Dawes (1989) found competitions were of greater interest to younger directors than older directors. Less experienced and younger directors attended a larger number of competitions than older, more experienced directors.

The amount of time and number of days the director spends rehearsing the band can affect ratings. Davis (2000) studied rehearsal schedules and strategies of different band directors to find which aspects correlated with higher ratings. The bands in this study were rated using the five-category rating scale which is used in Florida as well as many other states (I-superior, II- excellent, III- good, IV- fair, V- poor). He found specific rehearsal strategies (such as focusing on marching or music fundamentals, rhythm counting patterns, etc.) did not significantly affect marching band scores,

although superior bands were found to practice one to three hours per day, two to four days per week. This is simply a statement of the practices of superior marching bands, not a correlation, and is not especially informative as there is a great deal of difference between practicing one hour per day twice a week and practicing three hours per day four days per week. Neither Davis (2000) nor Rickels (2008) found significant correlations between rehearsal frequency and ratings or length of rehearsal and ratings. Having a band camp was found to correlate positively with improved marching band ratings, although the improvement was not statistically significant.

Goodstein (1984, 1987) examined band directors from the standpoint of leadership characteristics using a leadership behaviors measurement instrument developed by Hersey and Blanchard (the Leadership Effectiveness and Adaptability Description Self-Test). He found leadership behaviors were strikingly similar between a selected group of 99 successful band directors and a group of 63 randomly selected band directors.

Another aspect of band directors which correlates to band achievement and student musicianship is motivation. Using the Motivation Analysis Test (MAT), the combination of “conscious concern for security” and “subconscious concern for home and parents” were statistically significant predictors of ensemble performance. Additionally, “subconscious concern with ethical values” was a statistically significant predictor of student achievement on the Hoffer and Long Musicianship Test (Caimi, 1981).

Aspects of the School and the Band

Beaver (1973), Caimi (1981), Davis (2000), Fosse (1965), Goodstein (1984, 1987), Rickels (2008), and Saul (1976) found the size of the school from which the band comes significantly affected scores at marching band festivals, and the number of students in the band program showed a significant positive correlation with band ratings. Davis' study of Georgia high school bands also showed that the smallest division of schools (Class A) showed only 25% of their bands earning superior ratings, whereas the largest division (Class AAAA) yielded approximately 75% superiors. The size of the band was also correlated with higher ratings. More than 90% of bands larger than 125 members earned superior ratings. There was a significant difference between the mean festival scores of bands in the largest schools ($n = 28$, $M = 86.51$) and the smallest divisions of schools ($n = 6$, $M = 80.23$). Harris (1991) found a different result that the size of the band had a very low correlation ($r = .05$) with sight-reading scores at concert band festivals.

Washington (2007) found aspects pertaining to students and the school were the most significant contributing group of factors to a band's overall festival ratings (combining concert and marching), more so than the director's background, teaching practices, or how he/she administrates the band program. Additionally, there is a positive correlation between student achievement in band and student levels of musicianship as measured by the Long-Hoffer Musicianship Test (West, 1985). Harris (1991) found the percentage of 11th and 12th graders in the band had a significant positive correlation with sight-reading scores at concert band festival ($r = .323$, $p < .01$ and $r = .400$, $p < .01$, respectively), and there is a negative correlation between 9th graders and sight-reading

scores ($r = -.364, p < .01$). The most influential student-based factor in this research on factors influencing sight-reading scores was the percentage of students in the band who took private lessons ($r = .426, p < .01$), which Washington (2007) also found to be a significant contributing factor to a band's overall success at marching and concert festivals. Student contributions to the decision-making process regarding expressive elements of the music did not significantly affect band performance quality (Petters, 1976).

A band budget may include funds for professionally written marching band drill and music, hiring additional instructors to assist with the band, purchasing higher quality instruments, and attending festivals and competitions. Goodstein (1984, 1987) and Washington (2007) found the amount of money a band was able to raise showed significant positive correlations with their marching and concert ratings. The factors with the strongest positive correlation with band ratings were money brought in through fundraising by students and parents, followed by money collected through student fees, and finally school or district budget money. Rickels (2008) found significant positive correlations between marching band budget and ratings ($r = .41, p < .01$) as well as overall yearly band budget and ratings ($r = .46, p < .001$). The mean marching band budget was reported as \$7,768.65 with a standard deviation of \$12,421.89, and the mean overall band budget (for marching band, concert band, jazz band, and other activities combined) in this study was \$14,516.28 with a standard deviation of \$18,256.20. This extreme variability may indicate outliers of enormous budgets. For the marching band budget, the median value was \$4,500 and the inter-quartile range was \$1,600 to \$8,300, while the median value for the total band budget was \$9,000 with an inter-quartile range

of \$3,000 to \$18,000. Considerable positive skewness was reported for both of these variables (although a specific number was not reported). It is quite probable there would be one or more outliers in the data since any one of the approximately eighty bands involved in the research might have made a significant purchase during the year of data collection. Purchases that could cause an outlier might be one-time purchases or purchases which only occur once every several years such as a new set of uniforms, an equipment truck (some band programs own a semi tractor-trailer), or a large purchase of new instruments. The post-hoc Tukey test revealed significant differences between the budgets of bands receiving an overall “superior” rating ($n = 21$, $M = \$16,092$), an overall “excellent” rating ($n = 41$, $M = \$5,521$), and an overall “good” or lower rating ($n = 15$, $M = \$2,260$). These numbers should be read with caution, however, because money is often spent in proportion to the number of students in the band, and as indicated by Davis (2000), Goodstein (1984, 1987), and Rickels himself, larger band sizes correlate positively with higher ratings. A smaller band will require less expenditure for equipment, repairs, transportation. It may have been helpful for Rickels’ study to include the mean amount of money spent per student.

One of the greatest single annual expenses for a marching band can be the purchase of custom written drill and music. Hewitt (2000) correlated average marching band scores to different categories of show customization. He surveyed 439 high school band directors in ten states about how their show was written and gathered publicly available ratings to correlate with the gathered data. One major finding is that field drill custom-written for the band by somebody other than the director yielded significantly higher marching band scores than drill written totally or in part by the director. This

supports Rickels' (2008) findings that greater budgets are correlated positively with higher ratings. One of the reasons for this may be that music educators may not be required to take a class in marching band methods/drill design in order to earn their degree. Since drill design can be a very intricate and complicated undertaking, especially with larger groups, the experience of a specialist in drill design who knows how to make a band sound and look good given their field positions and movements may result in a much more effectively designed show. The alternative is for the director to write his or her own drill. This can save a great deal of money but requires a large time investment from the director who may be less experienced in drill writing, has seen fewer bands on the field, and has observed them in a less critical way than drill design specialists. One of the strengths of this study is that Hewitt broke down the categories of director involvement into three groups of involvement – none, part, or all.

Hewitt (2000) also found it was significantly more advantageous for directors to have all of their show music written for them rather than none, and approximately 32% of the variability in marching band ratings was due to the customized drill and show music. The justification for this is that custom-written music is typically tailored to the individual strengths and weaknesses of the given band, thus maximizing the band's potential. This is often preferable over stock arrangements which are typically written for bands with average abilities in all sections of the band. A similar result was present in Davis' (2000) study where the use of custom wind and percussion parts showed a slightly positive (although non-significant) correlation with higher ratings.

The addition of staff members such as percussion and auxiliary instructors can help the band director delegate responsibilities to people who specialize in a specific area

of music instruction. Quality staff members can be expensive to hire. Beaver (1973), Davis (2000), Jarrell (1971), Rickels (2008), Saul (1976), and Washington (2007) found there was a significant positive correlation between the number of instructors and ratings. The most frequently reported instructor was the auxiliary/color guard instructor and the second most common instructor was the percussion instructor. Other types of instructors include marching instructors, brass instructors, woodwind instructors, percussion instructors who work primarily with the front ensemble (sometimes called “pit percussion”), and other music staff. Bands with multiple band directors (as opposed to instructors) earned Superiors more often than bands with a single director in Davis’ study, but Rickels showed a non-significant low correlation ($r = .05$) between number of directors and ratings.

During marching band season there is a great deal of focus on perfecting the music of the marching band show, which can result in students only working on the marching band show in class through the end of the season and not working on concert band music until after all marching activities have ceased. Directors must decide whether to focus exclusively on the marching band show or whether to budget time differently and work on concert band literature during class and relegate marching band music to after-school hours once band camp is completed. Rickels (2008) found a significant difference between the mean ratings of bands who only worked on the marching band show in class throughout the marching band season ($n = 39, M = 84.60$) and those who worked on concert band music starting at the beginning of the school year ($n = 18, M = 88.77$). Bands working exclusively on show music in class may be victims of “over-rehearsing” which can dull student interest in the music resulting in less passionate

performances. Bands which actually need the entire season to prepare their show music in class may be performing music which is above their ability level. There is great value to working on concert literature during marching band season, such as reinforcing musical fundamentals, developing a greater focus on developing an appropriate band sonority, and providing relief from the same eight minutes of show music being played every day for three months.

Some music educators believe a band director is either good at marching band or good at concert band, but usually not both. This problem was investigated by Dawes (1989) and found there was no significant correlation (positive or negative) between achievement in marching band and achievement in concert band. He also noted marching bands employing the one-show-per season model typically outperformed those learning multiple marching band shows in competition, but on average earned lower ratings in sight-reading at concert band festivals.

Bands which rate higher generally attend more festivals. Rickels (2008) found a significant positive correlation ($r = .49$) between number of festivals attended and ratings. While a band may get better as a result of reviewing and implementing the adjudicators' comments from a greater number of adjudicators, it is also possible a reverse causal relationship may exist; bands which are quite successful attend more festivals to showcase their talents and receive commendations and recognition (Burnsed, Sochinski, & Hinkle, 1983; Fleming, 1975; Laib, 1984). Sheldon (1994) also found students who perceive music as being for a "competitive" performance consider the music to be qualitatively better than for a non-adjudicated performance. Sullivan (2003) found that constructive input and exposure to other bands were seen as reasons to attend band

competitions, and inconsistent judging practices, funding inequities, and poorly organized festivals were found to be the most significant drawbacks. There were significant differences in responses about the size of bands from schools of different sizes, although community density (rural, urban, etc.) did not result in a significant difference.

Factors not discussed above which correlated positively with band festival ratings for concert band included the use of a metronome with rehearsal, the inclusion of non-contest music during regular rehearsals, and the use of outside music teachers rehearse or critique the band prior to the concert festival. Factors which influenced the success of marching bands included the use of an electric tuner and metronome, the use of outside music teachers to rehearse or critique the band prior to the festival, the band's basic marching style, student participation in "specialty" camps (not supervised by the band director) for auxiliary, drum majors, and percussionists, and participation in half-time performances at school football games (Washington, 2007).

The Rating of Bands

The aspect of consistency of scoring criteria in various national contests was examined by Oakley (1975). He requested judge's sheets from 21 field show festivals and 16 parade band festivals to compare the criteria used to evaluate the bands. Much inconsistency was found, although the categories of music and marching were always present. General effect was the third category considered and showed up on rating sheets in 18 cases. Many of the specific captions (e.g., tone, intonation, and balance) for bands were so highly related as to imply there may be a degree of overlap and that they are not fully independent. However, the final overall rating by each judge is considered to be a reliable indicator of performance achievement (Burnsed, Hinkle, & King, 1985).

The methods employed by band directors during adjudicated sight-reading sessions at festivals was correlated to sight-reading ratings and revealed the quantity and rapidity of instruction resulted significant positive correlations. Harris (1991) found the strongest positive relationships with sight-reading ratings and the quantity of concurrent instructions (instructions given while students were concurrently performing a task) ($r = .481, p < .01$), the quantity of expressive instructions (instructions relating to musical expression) ($r = .467, p < .01$), the rate (speed) of concurrent instructions ($r = .423, p < .01$), and the rate of non-concurrent instructions ($r = .419, p < .01$). There was a single significant negative correlation between teaching techniques during sight-reading and the sight-reading score, and that was the number of general instructions ($r = -.470, p < .01$). This would imply that time during sight-reading sessions is best spent talking about aspects of the music rather than logistical or procedural discussion (where to sit, which percussion players should play a given part, and so forth). Bauer (1993) found varying the sight-reading routine is more effective than using the same procedure each time.

Along with the importance of the criteria on which a band is judged is how consistently these criteria are evaluated by the adjudicators. One of the premises music educators who participate in contests assume is that the judging is basically fair and that the system is valid. Guegold (1989) examined the Ohio Music Educators Association (OMEA) adjudication procedure to check for adjudicator consistency. He compared results from several bands attending OMEA state finals contest over a three year term to see if bands maintained consistent scores. Although he found no compelling statistical results in the areas of consistency, he did conclude there is a “reasonable chance for groups attending the OMEA State Finals to receive a fair evaluation in the form of

consistent rankings and ratings” (Guegold, 1989, p. 103). One of the weaknesses in this study is it assumes band quality does not vary significantly from year to year. He also did not take into account bands which may have changed directors, a potentially significant confounding variable.

Synthesis of Band Ratings

The preceding studies suggest larger schools, larger bands, and larger budgets correlate positively with higher ratings. The literature on factors affecting band ratings reveals a number of important things. Beaver (1973), Dawes (1989), Davis (2000), Fosse (1965), Goodstein (1984), Maxwell (1970), Mann (1979), Saul (1976), and Washington (2007) found positive correlations between band ratings and the academic degree and years of teaching experience of band directors. Factors outside the immediate control of the band director which correlated positively with band ratings included larger school size and larger band size (Beaver, 1973; Caimi, 1981; Davis, 2000; Fosse, 1965; Goodstein, 1984 & 1987; Rickels, 2008; Saul, 1976), having a higher percentage of juniors and seniors in the band (Harris, 1991; Washington, 2007), larger budgets and greater ability to raise funds (Goodstein, 1984; Goodstein, 1987; Rickels, 2008; Washington, 2007), having a highly customized marching band show, including drill and music (Hewitt, 2000), having larger numbers of assistant directors and staff members (Beaver, 1973; Davis, 2000; Jarrell, 1971; Rickels, 2008; Saul, 1976; Washington, 2007), and attending a larger number of festivals and competitions. It is important to note here that many of these non-director related factors are essentially financial, which reinforces the positive correlations between large budgets and bands receiving high ratings. Another noteworthy factor which correlates positively with higher band ratings includes when a

band director begins rehearsing concert band literature earlier in the school year rather than waiting until after marching activities are concluded (Rickels, 2008).

Personality and Music Educators

The study of personality and its classification has a long history dating back more than two thousand years, including one of the earliest known personality classification systems of the four temperaments: sanguine, phlegmatic, choleric, and melancholic developed by Hippocrates (Kemp, 1996). Since then, many psychologists have developed the field of understanding and classifying personality types and traits. One of the most common personality inventories is the Myers-Briggs Type Indicator (MBTI), which was developed from the theories of Carl Jung in 1958 (Keirsey & Bates, 1984; Tyler, 1954). This model classifies personalities through four bi-polar dimensions: Introvert/Extrovert, Sensing/Intuitive, Thinking/Feeling, and Judging/Perceiving. Personality types are indicated as a set of four letters, representing the first letter of each personality type, except for the Intuitive type which is represented by the letter N. This inventory attempts to describe personality *types*, while some other personality inventories attempt to describe personality *traits*. The sections which follow include discussion of the personality profiles of music educators and implications of the four Myers-Briggs dimensions in music educators.

Developing the Myers-Briggs dimensions further, Keirsey established temperaments based on the sixteen personality types attainable through the MBTI. Each type was given a label which represented types of professions or vocations. There are four primary temperaments, which are Idealist, Rational, Guardian, and Artisan. Each of these four temperaments can be further broken down with the addition of another

dimension of personality. Idealists may be Mentors or Advocates while Rationals may be Coordinators or Engineers. Guardians may be Administrators or Conservators while Artisans may be Operators or Entertainers. The final dimension of Extraversion/Introversion determines the sixteen personality types (Keirsey & Bates, 1984). Figure 1 displays how the temperaments are organized and how the Myers-Briggs personality types represent these temperaments. From the perspective of a music educator, it should be noted that the Teacher personality (ENFJ) shares very little with Performer (ESFP), and is the polar opposite of Composer (ISFP). This is something that should be considered carefully when examining the personality of music educators, who are teachers by profession but often start as student performers or composers.

	Temperament	Role	Role Variant	
Abstract vs. Concrete	Cooperative vs. Utilitarian	Directive vs. Informative	Expressive vs. Reserved	
Introspective (N)	Idealist (NF) <i>Diplomatic</i>	Mentor (NFJ) Developing	Teacher (ENFJ): <i>Educating</i> Counselor (INFJ): <i>Guiding</i>	
		Advocate (NFP) Mediating	Champion (ENFP): <i>Motivating</i> Healer (INFP): <i>Conciliating</i>	
	Rational (NT) <i>Strategic</i>	Coordinator (NTJ) Arranging	Field Marshal (ENTJ): <i>Mobilizing</i> Mastermind (INTJ): <i>Entailing</i>	
		Engineer (NTP) Constructing	Inventor (ENTP): <i>Devising</i> Architect (INTP): <i>Designing</i>	
	Observant (S)	Guardian (SJ) <i>Logistical</i>	Administrator (STJ) Regulating	Supervisor (ESTJ): <i>Enforcing</i> Inspector (ISTJ): <i>Certifying</i>
			Conservator (SFJ) Supporting	Provider (ESFJ): <i>Supplying</i> Protector (ISFJ): <i>Securing</i>
Artisan (SP) <i>Tactical</i>		Operator (STP) Expediting	Promoter (ESTP): <i>Persuading</i> Crafter (ISTP): <i>Instrumenting</i>	
		Entertainer (SFP) Improvising	Performer (ESFP): <i>Demonstrating</i> Composer (ISFP): <i>Synthesizing</i>	

Figure 1. Keirsey's Temperaments with Myers-Briggs Personality Types, adapted from Keirsey and Bates (1984).

Cattell developed a personality trait inventory known as the *Sixteen Personality Factor Questionnaire*. These sixteen factors are denoted by letters indicating the factor itself followed by a plus or minus which places the subject into one of the bi-polar categories. Cattell's first-order factors are Aloofness (A-)/Outgoingness (A+), Low Intelligence (B-)/High Intelligence (B+), Low Ego Strength (C-)/High Ego Strength (C+), Phlegmatic (D-)/Excitability (D+), Submissiveness (E-)/Dominance (E+), Desurgency (F-)/Surgency (F+), Expediency (G-)/Conscientiousness (G+), Shyness (H+)/Adventurousness (H-), Tough-Mindedness (I-)/Sensitivity (I+), Zestful (J-)/Individualistic (J+), Trusting (L-)/Suspicious (L+), Practical (M-)/Imaginative (M+), Naiveté (N-)/Shrewdness (N+), Self-Assured (O-)/Guilt Proneness (O+), Conservatism (Q1-)/Radicalism (Q1+), Group Dependent (Q2-)/Self-Sufficiency (Q2+), Low Self-Sentiment (Q3-)/High Self-Sentiment (Q3+), and Low Ergic Tension (Q4-)/High Ergic Tension (Q4+) (Cattell & Schuerger, 2003; Kemp, 1996).

Since the 1980s there has been an increasing amount of agreement among personality researchers and psychologists that the most parsimonious model of personality typing is composed of five basic dimensions. Eventually, the Five-Factor Model made up of the dimensions Openness to Experiences ("O"), Conscientiousness ("C"), Extraversion ("E"), Agreeableness ("A"), and Neuroticism ("N") emerged through a degree of consensus among personality researchers, which are considered to be independent higher-order personality factors (McCrae & Costa, 2003; Piedmont, 1998). Another major development with this Five-Factor Model is it describes subjects by the degree to which each of those five factors are present along a continuum rather than being forced into a polarized category. This model has been employed in psychological

counseling and job selection since shortly after its inception, but later Costa and McCrae presented it as a possible tool in clinical psychopathology as well (McCrae & Costa, 2003; Piedmont, 1998; Schinka, Kinder, & Kremer, 1997). This Five-Factor Model has become the dominant model for the investigation of personality (Piedmont, 1998; Young & Schinka, 2001).

Each of the five categories includes six subsidiary factors, or “facets.” The facets for Openness are fantasy, aesthetics, feelings, actions, ideas, and values, the facets for Conscientiousness are competence, order, dutifulness, achievement striving, self-discipline, and deliberation, the facets for Extraversion are warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions, the facets for Agreeableness are trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness, and the facets for Neuroticism are anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability (See Figure 2) (Kemp, 1996). The inventory developed by Costa and McCrae in 1992 is known as the Neuroticism Extraversion Openness Personality Inventory Revised, or NEO-PI-R (McCrae & Costa,

Dimensions	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Facets	Imagination Artistic Interests Emotionality Adventurousness Intellect Liberalism	Self-efficacy Orderliness Dutifulness Achievement-Striving Self-Discipline Cautiousness	Friendliness Gregariousness Assertiveness Activity Level Excitement-Seeking Cheerfulness	Trust Morality Altruism Cooperation Modesty Sympathy	Anxiety Anger Depression Self-Consciousness Immoderation Vulnerability

Figure 2. The Five Factor Model of Personality: Dimensions and Facets. Adapted from Kemp (1996).

2003; Piedmont, 1998), although adaptations of the Five-Factor Model have been developed by a number of psychological researchers as well. Test items for a five-factor personality inventory have been gathered and organized into computer-based public domain pool of items known as the International Personality Item Pool, or IPIP (Goldberg, 1999).

Education research reveals that a teacher's personality can influence his or her teaching, classroom behavior, and education goals (Job, 2004). Zhang (2007) found teacher personality, as measured by the Five-Factor Model, significantly contributed to a teacher's teaching style, more than gender, education level, and quality of students. A study which examined teacher personality in the Five-Factor Model revealed Conscientiousness did not relate significantly to occupational success. Assertiveness, which is a facet of Extraversion, indicated more meaningful relationships with teaching quality than Extraversion, and Envy-Jealousy, a facet of Neuroticism, tended to enhance teaching quality more than Neuroticism (Emmerich, Rock, & Trapani, 2006). Different results for the Conscientiousness factor were found by Chamorro-Premuzic, Furnham, and Lewis (2006) where it was associated with "deep and achieving learning" approaches (based on Biggs' model of study processes). Deep learning was also associated with Agreeableness and Openness to Experience, and was negatively correlated with Biggs' "surface" approach to learning. Job (2004) found similar positive results for high levels of Conscientiousness, which was positively correlated with teaching effectiveness along with high levels of Extraversion and low levels of Neuroticism.

Education research which focused on the Myers-Briggs Type Indicator showed significant correlations between personality types and teaching efficacy. In a study

focusing on the teaching efficacy of agriculture teachers, Extraversion was significantly positively related to teacher efficacy, Judging was positively related to classroom management, and Sensing was significantly negatively related to student engagement (Roberts, Harlin, & Briers, 2007). Teachers in Florida have been considered in light of their MBTI types, revealing that the traditionalists tended to be Sensing and Judging, while more Intuitive and Perceptive types were recommended as being necessary to increase innovation and visions for new models of education. The ENFP type was identified as the most likely personality to be educational leaders in Florida, and many recipients of Florida's Teacher of the Year award were of this personality type (Rushton, Morgan, & Richard, 2007).

Personality research in music education has predominantly employed the Myers-Briggs Type Indicator. However, the Five-Factor model of personality incorporated in the NEO-PI-R of Costa and McCrae has been considered to be a more modern and effective tool for analyzing personality (Kemp, 1996) due to its non-polarized dimensions. A subject's personality with the MBTI must be labeled as either Introvert or Extravert, even if they are closely split between the two types. The benefit of the NEO-PI-R is that a subject is simply indicated as to their degree of Openness or Conscientiousness, rather than being categorized as wholly one type or another (Goldberg, 1999; Johnson, 2005). Costa and McCrae also include thirty sub-categories (six for each of the five dimensions) called "facets" which may isolate specific personality factors as being related to teaching style or achievement at band festivals.

The body of personality research in music education cannot always be safely generalized to practicing music educators, as in many cases the subjects of this research

were music education students (Kemp, 1996; Lanning, 1990; McCutcheon, Phillips, 1997; Schmidt, & Bolden, 1991; Steele & Young, 2006; Venesile, 1992; Wubbenhorst, 1994). The subjects of those studies which do focus on active professional teachers were usually college-level applied music teachers (Donovan, 1994; Fedoruk, 1992; Kim, 1993; Lewis, 1998; Schmidt, 1989). Notable exceptions are the research of Bullock (1974), Stitt (1997), Stuber (1997), and Westbrook (2004) who did study middle and high school band directors' personalities.

The personality of music educators is not the only factor which influences success in music programs. Student personalities have been found to affect dropout rates in instrumental music programs. Mowery (1993), using the MBTI, found Intuitive students in a string orchestra program were much more likely to remain in the group than Sensing students, which was the personality type of most orchestra dropouts. The Sensing-Intuition mode was the only dimension to correlate significantly with dropout rates.

Other personality and professional inventories have been incorporated in research in music as well. When examining the relationship between student teacher effectiveness and occupational personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional), Teachout (2001) found none of these types contributed significantly to the variance of teaching effectiveness. However, the three highest mean scores were in the Artistic, Social, and Investigative categories.

Personality Profiles of Music Educators

To develop an understanding of how personality plays a role in music education, an important first step is to examine some of the most prevalent personality types in existing research. Several studies have described typical personalities of music educators

or music education students in various fields of specialization. Some of these studies begin to describe what might be considered typical or even ideal personalities in these fields. Earlier research on music educators indicated a preponderance of Cattell's factors of dominance (E+), adventurousness (H+) and self-sufficiency (Q2+), but also lack of imagination (M-) and trustingness (L-), but also that they were more warmhearted, conservative, and group-dependent than musicians (Kemp, 1996). Wubbenhorst (1994) and Kemp (1979) both found music education students tended to be evenly split between Extraversion and Introversion, showed a slight preference for Intuition, and showed a preference for Judging. Wubbenhorst found an even distribution on the Thinking/Feeling dimension, while Kemp found a very strong preference for Feeling (84%). Wubbenhorst and Kemp found different results for music performance students in the dimensions of Extraversion/Introversion and Judging/Perceiving, even though in both cases the differences were rather slight. They found musicians were more Intuitive (66% in both studies) and Feeling (57% in Wubbenhorst, 1994; 74% in Kemp, 1996) than music education students.

A study comparing the personalities of elementary and secondary music education students revealed significantly different personalities. Elementary music education students had a tendency to be more Extraverted (80%), Sensing (74%), Feeling (80%), and Judgmental (85%), resulting in a very strong tendency towards an ESFJ (Keirsey's "Provider" temperament) personality. Secondary music education students were more often Introverted (61%), Intuitive (54%), Thinking (57%), and Perceiving (54%) resulting in an INTP ("Architect") personality which is less consistent than that of elementary music teachers (McCutcheon, Schmidt, & Bolden, 1991). The traits of

secondary music education students are much more similar to the typical INFP (“Healer”) personality of performing musicians as determined by both Kemp and Wubbenhorst. This seems to be an important distinction to take into consideration when looking at the results of personality assessments for music educators. Without separate results for different career tracks, meaningful correlations may be difficult to find. Contrary to the findings of McCutcheon, Schmidt, and Bolden (1991), both Stitt (1997) and Westbrook (2004) found high school band directors showed strong tendencies toward Introverted, Sensing, Thinking, and Judging personalities (ISTJ, “Inspector”), although the Introversion/Extraversion dimension was nearly balanced in Stitt’s study. It is important to note that while McCutcheon, Schmidt, and Bolden examined music education students, Stitt and Westbrook examined the personalities of active band directors.

Steele and Young (2006) found the most common personality type of music education students from eleven different U.S. universities to be ENFP, although the Judging/Perceiving trait was split at 49.7%/50.3% respectively, a very small difference. A study of seven applied studio instructors resulted in a typical personality of INFJ (“Counselor”), which is also similar to performing musicians (Donovan, 1994). Gender does not seem to play as large a role in determining personality types in music educators. The majority of males were ENFP (“Champion”) while females were predominantly ENFJ (“Teacher”) in a survey of music education majors at seven Oklahoma universities (Lanning, 1990). Ethnicity may affect personality tendencies, as 145 music and music education majors’ personalities at six historically African-American universities differed from many of the personality types found above. The sample resulted in several personality types by gender, major (music education or performance), and applied

instrument/voice. The majority of males were ISTJ (“Inspector”) and females were ESTJ (“Supervisor”). Brass majors were ESTJ, and keyboard majors were ISTJ. Voice majors were ESJ with an even distribution of Thinking and Feeling, woodwind majors were STJ with Extraversion and Introversion evenly distributed, and percussion majors were IST with an even distribution of Judging and Perceiving. Music Education majors were ESTJ (“Supervisor”), while Music majors were predominantly ISTJ (“Inspector”) (Phillips, 1997). The main difference between this sample and other findings is the preponderance of Sensing and Thinking types, where many other findings indicated Intuitive and Feeling types were more common. The one significant similarity is that the Sensing/Thinking music education students in Phillips’ study were very similar to active band directors in Stitt’s (1997) and Westbrook’s (2004) study.

It is not necessary that student and teacher personalities match in order for students to feel satisfied. Kim (1993) found there was no significant correlation between match of student to teacher personality and student satisfaction. She also found Extraverted (E), Thinking (T), and Judging (J) types shared similar teaching styles, and Introverted (I), Feeling (F), and Perceiving (P) types also shared similar teaching styles.

A teacher may adopt teaching styles which they feel compensate for weaknesses in their personality traits. Fedoruk (1992) looked at the personality and teaching style of six collegiate voice studio teachers to determine what relations existed between teaching style and personality. The personality type was determined using the Myers-Briggs Type Indicator (MBTI) and teaching styles were described qualitatively. Some observations include that the MBTI was helpful in describing the teaching styles, but the teacher’s MBTI type was not a good predictor of teaching style, and teachers can learn to

incorporate teaching styles which are not typical of their personality type (an Intuitive using Sensing modalities in teaching).

Implications of Myers-Briggs Dimensions in Music Educators

A number of research studies were conducted, mostly in the 1990s, which examined the effect of the various dimensions of the Myers-Briggs Type Indicator on aspects of music education. Some of these aspects include teaching behaviors, teaching effectiveness, student achievement, and professional achievement. These findings are organized by each of the MBTI dimensions and discussed below.

The Introversion/Extraversion Dimension.

Perhaps the greatest number of significant findings as well as the greatest number of seemingly contradictory findings pertains to the Introversion/Extraversion dimension. Interestingly, those findings which point more favorably towards Extraverted personalities focus on private applied teachers, often at colleges and universities. Those studies which found more positive evidence for Introverted teachers largely featured classroom music educators as their subjects, especially middle and high school band directors.

Some studies found favorable results for Extraverted subjects. In a group of forty-five private applied teachers, the Extraverted teachers displayed a significantly higher degree of approving behavior during lessons than the Introverted teachers (Schmidt, 1989), and students made more progress in their applied lessons with Extraverted teachers than with Introverted teachers (Donovan, 1994). In a group of college piano teachers, students indicated a higher satisfaction with Extraverted teachers, who favored nonverbal teaching styles, group instruction, and an analytical approach more than the

Introverted teachers (Kim, 1993). Extraverted music educators tended to take student interests into consideration when teaching, while Introverts tended to be overly familiar with their students (Kemp, 1996). Extraverted elementary music education students spoke to students with an expressive voice in class (Venesile, 1992).

Another group of researchers found more positive results for educators with an Introverted personality. Introverted music educators were more receptive to supervisors' criticism and were more willing to adjust their teaching to improve than Extraverts, who readily give feedback to students but who are themselves resistant to feedback from their own supervisors (Kemp, 1996). Introverted collegiate piano instructors were more verbally oriented, preferred individual instruction, emphasized functional skills, and tended to employ more holistic or global teaching styles (Kim, 1993). Introverted personalities correlated positively with teaching success in fourteen former students of a famous applied violin instructor, while Extraversion correlated negatively (Lewis, 1998). Students rated their band directors with Introverted types higher on the Director Evaluation Scale (DES) items "Brings out the best in students," "Doesn't talk down to students," along with the total DES score, the dimension of musicality, and showed the highest percentage of positive non-verbal behavior (Stitt, 1997). In a study where the subjects were a group of twenty band directors, 70% of the directors in the more experienced group were Introverted while 70% of less experienced directors were Extraverted. Although with such a small sample this may be due to chance, it may also indicate Extraverted band directors are less likely to remain in the profession for longer periods of time. Introverted band directors spent more time on warm-ups and tuning than Extraverted types, preferred concrete learning styles and were more approving in

teaching situations while Extraverted teachers more often preferred abstract learning styles and were more often disapproving (Stuber, 1997).

The research here supports Introversion as a more effective personality trait for high school band directors. Although there are some studies which show more positive results from Extraverted teachers, the subjects of these studies are primarily applied music instructors at the college or university level, or music education students. This is also reinforced by the findings of McCutcheon, Schmidt, and Bolden (1991) in that music education students focusing on secondary schools were more Introverted, especially when compared to elementary music education majors.

The Sensing/Intuitive Dimension.

As noted earlier, many studies have shown Intuition to be a common personality type in musicians and music educators. Five out of six applied music teachers had Intuitive rather than Sensing personalities in Fedoruk's (1992) study, which is consistent with Kemp's (1996) findings about music educators. In most of the studies where the Sensing/Intuitive dimension provided notable results, the results favored Intuitive types. Intuitive teachers provided significantly more modeling, more approval feedback to students, had a higher rate of reinforcement, and maintained a more rapid pace during lessons (Schmidt, 1989). Rhythmic sense and accuracy was scored highest with Intuitive teachers who taught Sensing students (Donovan, 1994). One study found favorable results for Sensing types, where Sensing band directors were rated by students as being more empathetic and better at communication than Intuitive directors. Notwithstanding, Intuitive directors also had a positive finding in the same study: they used more positive verbal behavior (Stitt, 1997).

The Thinking/Feeling Dimension.

Relatively few studies found significant results pertaining to the Thinking/Feeling dimension, especially compared to the Introverted/Extraverted dimension. Those that did produced more favorable findings for Thinking types, although there were also some positive findings for Feeling personalities.

A group of private applied piano students indicated a higher satisfaction with teachers of Thinking personality types more than the Feeling teachers. These Thinking types favored nonverbal teaching styles, group instruction, and an analytical approach (Kim, 1993). Thinking band directors spent more time on warm-ups and tuning than Feeling types, who were more often disapproving, spent more time in breaks, and spent more time disciplining students than Thinking types (Stuber, 1997). Directors with the Thinking personality were considered to be more empathetic than Feeling directors (Stitt, 1997).

Some aspects of Feeling types include being perceived by students as more musical and more effective at communication than Thinking directors (Stitt, 1997), and that Feeling personality types were more verbally oriented, preferred individual instruction, and tended to employ more holistic or global teaching styles (Kim, 1993). Rhythmic sense and accuracy was scored highest for Feeling teachers who taught Thinking students (Donovan, 1994).

The Judging/Perceiving Dimension.

Neither pole of the Judging/Perceiving dimension dominates as a common personality type among musicians or music educators, although the literature suggests Judging types are more desirable for educators. Judging type band directors showed more

empathy and effective communication skills than Perceiving directors who were considered more overbearing (Stitt, 1997). Judging types were better able to give students more information during class, although the more hesitant Perceiving types were more flexible with their teaching and could accommodate student interests (Kemp, 1996). Elementary music education students of the Judging type stimulated student interest, showed confidence, used time effectively, and used instruments, body movement, and singing in a musical way (Venesile, 1992). The Judging personality types favored nonverbal teaching styles, group instruction, and an analytical approach. Students indicated a higher satisfaction with Judging teachers than Perceiving teachers (Kim, 1993). Applied instructors with a combination of Extraversion and Judging had the highest mean rate of reinforcement, approval, and pace (Schmidt, 1989). The only findings on Perceiving personality types were that they were more verbally oriented, preferred individual instruction, focused on affective aspects of musicianship, and tended to employ more holistic or global teaching styles (Kim, 1993).

Personality Synthesis

The literature indicates some of the most common Myers-Briggs personality types for music and music education students and professionals include Intuitive types and Feeling types. The literature also indicates there is a relatively even distribution of Introverts and Extraverts, as well as Judgers and Perceivers. Studies which focus primarily on band directors indicate the highest percentage of personalities are ISTJ (Inspector). Despite these being the most common types, the literature does not necessarily consider them the most professionally advantageous. The studies mentioned

above indicate the most effective personality for a high school band director may be Introverted, Intuitive, Thinking, and Judging, or INTJ (Mastermind).

Music Educators and Teaching Style

The term “teaching style” refers to the way in which a person balances his or her teaching responsibilities and what level of priority he or she assigns to these aspects of the profession. Teachers do many different things during their time with students such as rehearse music, teach musical concepts, demonstrate, play recordings, lead or facilitate discussions, and so forth. Other duties include administrative responsibilities such as taking attendance, disciplining students, reading announcements, managing fire or tornado drills, and collecting forms or money. In an ideal situation, the entire class period might be spent engaged in musical teaching and learning activities. In reality, this is seldom the case. Blocher, Greenwood, and Shellhammer (1997) found that a group of Florida band directors spent an average of approximately 9% of class time performing non-musical activities such as administrative tasks and disciplinary procedures, approximately 8% giving feedback to students, 49% conducting and listening to students nonverbally, 31% giving verbal directions, and approximately 3% delivering conceptual information to students. This is reinforced with Goolsby’s studies on the effectiveness of time use of student teachers, novice teachers, and experienced teachers who regress slightly from being a constantly mentored student teacher to novice, but then improve significantly in how they use rehearsal time as they become experienced teachers (Goolsby 1996, 1997).

The published literature on music teaching styles falls into three main topic areas which are discussed below. These are teaching style and its effect on ensemble ratings,

Gumm's model of teaching style, and other models of music teaching style which have been considered.

Teaching Style and Ratings

Some research has shown the teaching styles and behaviors of music educators may influence ensemble performance quality. Smith (1999) examined the teaching styles of four band directors in an in-depth qualitative study for types of verbal and nonverbal communication and how they correlated with marching band ratings. Higher contest ratings were positively correlated with speaking about notation, rhythm, and style. Bauer (1993) found higher ratings were positively correlated with working on balance and intonation and a consistent utilization of a rhythm counting system. Directors talking about expression and rhythm were found to correlate with higher ratings than directors talking about general matters, notation, or stylistic aspects of the music. Higher ratings were correlated with direct indication of approval or disapproval than general comments of approval or disapproval to the group as a whole. This relates to the educational ideal that specific praise is better than general praise. Verbal imagery and questioning actually showed a negative correlation with higher contest ratings, although demonstration and modeling showed a significant positive correlation.

The way in which teachers manage their classrooms is an important aspect of teaching style. In a survey of choir directors in Michigan, Costello (2005) found high levels of self-reported classroom management skills as well as high levels of self-reported satisfaction with school district's professional development opportunities pertaining to classroom management skill development had significant positive correlations with ensemble ratings at festivals ($r = .45, p = .02$, and $r = .42, p = .03$, respectively). Price

(1983) and Yarbrough and Madsen (1998) found similar results in that the directors who had the highest rated performances conducted rehearsals with the least off task behavior, the most teacher eye contact, more changes of activity, and the average length of any activity by student or teacher was approximately five to six seconds. Yarbrough and Madsen also found that directors who rehearsed shorter sections of the music during rehearsals were consistently rated as higher in overall performance quality than those who typically rehearsed longer sections.

Some teaching behaviors that relate to student achievement include verbal instruction and teacher assistance during practice. During an examination of two schools' rehearsal seasons leading up to adjudicated performances (for a total of 83 rehearsals), Davis (1998) found both instructions and teacher assistance during student practice decrease with student improvement. One factor which greatly affects the generalizability of this study is that there are only two directors involved in this case study. It is noteworthy that more than forty rehearsals were observed with each director, although the small number of subjects does create a problem for generalizing the results to other situations.

Gumm's Model of Teaching Style

The phrase "teaching style" is not new to the teaching profession, although its specific meaning has often been subjective, imprecise, or even vague. Alan Gumm (2003a) examined the subject of teaching styles in depth and created a structured system of classifying and categorizing the teaching styles of music educators. In this system, teaching style is not determined by individual behaviors in the classroom, but rather it considers the underlying philosophy and motivation for these sets of behaviors.

Specifically, “The primary explanation behind the nature of music teaching style is that it is based on an individual’s *principles*” (italics original) (Gumm, 2003a, p. 13). He proposed a three-level model consisting of teaching behaviors, dimensions of music teaching style, and music teaching style itself. There are eight dimensions: Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment, Group Dynamics, Music Concept Learning, Artistic Music Performance, and Student Independence. Gumm created a “Music Teaching Style Inventory”, or MTSI which is a set of questions which help teachers identify their teaching priorities. Teachers may have higher or lower scores on each of the eight dimensions, but should not categorize themselves under discreet labels by these dimensions. Instead, the teacher should develop an understanding of strengths and weaknesses based on the results. In one application of the MTSI, Gumm examined the correlation between choir directors’ music teaching style and festival ratings and found teachers whose ensembles received higher ratings focused more on Artistic Music Performance and Nonverbal Motivation (Gumm, 2003b).

Gumm’s teaching styles include four dimensions that are classified as primarily teacher-directed (Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment) and four dimensions that are classified as primarily student-directed (Group Dynamics, Music Concept Learning, Artistic Music Performance, and Student Independence). Bazan (2007) surveyed middle school band directors in Northeastern Ohio for their predisposition to be student-directed or teacher-directed in their teaching styles and found teacher-directed styles were more prevalent. The mean ratings revealed a mean of 4.00 (frequently) on a 5-point Likert-type scale for teacher-directed styles and a mean of 3.08 (sometimes) for student-directed styles. Results were

compared between males and females, although it could not be determined whether gender differences impact teaching styles. Generally, younger teachers were found to employ student-directed teaching styles more than older teachers. This may be a result of the younger teachers recently coming from teacher education programs in which more modern student-directed pedagogy strategies were part of the curriculum. This is supported by Kelly (1972), Hamann (1990), Spurlock (2002), and Webb and Baird (1968) who found that student-centered classroom environments also contributed to higher levels of student achievement. Teachout (1997) found similar results when comparing the opinions of experienced and preservice music teachers on the importance of forty different teaching skills. The preservice music teachers ranked maintaining student behavior and maximizing time on task much lower than experienced music teachers, which may imply a lower priority for Gumm's teacher-directed dimensions. This might be a result of a different attitude towards teaching or possibly from a lack of awareness of what is truly necessary to maintain an orderly and effective classroom. Bazan also found schools with higher standardized test scores had a significant negative correlation with attention to student independence and student self-responsibility. This may be a result of a fact-driven scholastic atmosphere or attitude fostered by the administration to garner the highest scores on these standardized tests.

Some teaching styles may work well with some students and less well with others. Brakel (1997) considered the possibility that teaching style predicts attrition in band programs by investigating and correlating dropout rates with the ten teaching styles present in one of Gumm's earlier versions of the MTSI. Individually, no teaching style predicted band attrition as there were no significant correlations between any individual

teaching style and dropout rates. However, certain pairs of teaching styles did correlate significantly with dropout rates. High dropout rates had significant positive correlations with the combinations of Student Independence with Aesthetic Music Performance, Aesthetic Music Performance with Music Concept Learning, Aesthetic Music Performance with Eye Contact, Modeling with Positive Learning Environment, Teacher Authority with Eye Contact, and Positive Learning Environment with Eye Contact. These pairs may indicate a more traditional teaching style than the low-dropout pairs as the pairings seem to point to low degrees of student autonomy and greater teacher control. Low dropout rates had significant positive correlations with the combinations of Student Independence with Positive Learning Environment, Student Independence with Critical Evaluation, Aesthetic Music Performance with Nonverbal Motivation, Modeling with Student Led Rehearsal, Modeling with Critical Evaluation, Verbal with Eye Contact, Verbal with Student-Led Rehearsals, and Eye Contact with Critical Evaluation. These pairs which predict low dropout rates are largely student-oriented and indicate greater degrees of student freedom, intellectual independence, and ability for students to express themselves. Liberman (1986) found similar results with students in a non-music based educational setting.

Other Models of Music Teaching

Zhukov (2004) created a teaching and learning style classification system for private instrumental instructors in conservatories in Australia. Five different teaching styles were classified as disorganized, positive, routine, imposing, and extrovert. Disorganized teachers led lessons which lacked organization and direction, and included a large amount of talking on non-musical matters. Positive teachers employed teaching

strategies which are generally considered effective teaching such as positive specific feedback and specific questioning techniques. The largest group of teachers fell into the Routine teaching style, in which lessons were structured although less inspiring. There was a preponderance of general directions and little teacher demonstration. The second-largest group of teachers was labeled as Imposing, where the teachers dominated the lessons. These lessons contained high levels of technique and teacher demonstration, but low levels of positive specific feedback or specific questioning were included. The final teaching style was labeled Extrovert. The most prevalent behaviors included teacher demonstration, positive global feedback, and positive specific feedback, but less time was spent on general directions and giving answers to students.

Effective teachers adjust their teaching style to suit the learning style of their students. College students possess different stages of learning development just as younger students do, and it is important for professors at the college level to understand these developmental stages so they can adjust their teaching styles to best help their students. Cutietta (1990) examined three major stages of development for college students: dualism, multiplicity, and relativism, and then proposed effective ways to best reach these learners. Dualism is typically experienced by high school students and college freshman. Students perceive a polarized world of right or wrong, and the professors are authority figures who are expected to dispense the truth. With these types of students, the best approaches include lectures and demonstrations. When students reach the end of their first year and beginning of their second year, they often begin to conceive of the world through a broader perspective, and there can be multiple truths. This developmental stage is known as multiplicity. In this stage, all truths are equal,

everybody has a right to an opinion and those opinions are all equally valid, and the concept of better or worse begins to disappear. In this stage students can start to believe they know as much as their professors. For this reason, this is the stage where most college drop-outs occur. To address these students' needs, effective teaching strategies include students developing their own creativity through creative assignments, small group discussions, and reaction reports to assigned readings. The third and final stage is relativism, where students start to realize if all things truly are equal, then there can be no basis to make a decision. Students who are posed with the question, "What styles of music would *you* include in your classroom?" are forced to confront the fact that they must use their own judgment and values to work past a state of pure multiplicity in order to function as a professional. Teaching styles that are effective with these types of learners include seminar, individual presentations and research, and small group discussions.

Teaching Style Synthesis

The literature on teaching style does indicate that it can influence ensemble performance outcomes (Costello, 2005; Davis, 1998; Gumm, 2003b; Gumm, 2004a; Yarbrough, 1998), although the term "teaching style" has not always meant the same thing. Gumm's model consisting of eight different teaching styles has helped to better understand which teaching styles may influence behavior and performance outcomes, and helped educators understand which styles they employ and to what degree. The research indicates the four student-directed teaching styles are less prevalent than the four teacher-directed styles but may be indicators of more effective teaching (Bazan, 2007; Brakel, 1997; Gumm, 1993; Gumm, 2003a; Gumm, 2003b; Gumm, 2004a; Gumm, 2004b;

Gumm, 2007). Other studies which examined music teaching style but not applying directly to K-12 music educators include Cutietta's (1990) three-level classification of teaching styles as they apply to college students and Zhukov's (2004) research on the teaching styles of applied music teachers in Australia which resulted in a five-category classification system of teaching style.

Synthesis of Literature and Conclusions

The three fields of research included in the literature review seem to reveal important information as well as gaps in the knowledge. The research on factors influencing band ratings indicates a number of correlating factors, many of which have financial investment as their foundation. Director factors such as education and experience have been researched, but the personality and teaching style of the director have not been directly examined as possible factors influencing band ratings. The literature on music educator personalities is expansive and indicates common personality types but only includes a small number of studies which focus on band directors and how their personality types may affect their band's performance achievement. The majority of the literature also incorporates the Myers-Briggs Type Indicator, which many psychologists and personality researchers have replaced with Costa & McCrae's five-factor model as the personality type indicator of choice. The body of teaching style research reveals important knowledge on how teaching styles affect student outcomes, especially in light of student-directed styles versus teacher-directed styles. However, the field of research based on Gumm's model is relatively new and therefore limited in breadth. This study may connect and expand these three fields, fill in some of these gaps in knowledge, and provide information which may not only be beneficial to band

directors, but may also hold implications for personality types and teaching styles which are predictors for success for all music educators.

Chapter 3: Methodology

This study was a descriptive correlational study, examining the strength of the relationship between aspects of high school band directors' personality, teaching style, and festival scores. This study also examined the strength of relationships between balance and festival scores. Survey responses were gathered and correlations were calculated among the variables.

Population and Sample

The target population of interest in this study was all high school band directors in the state of Florida who directed both concert and marching band programs. I distributed the link to the online survey instrument to the entire population of 384 high school band directors in Florida. The return rate was 45.9%; sufficient to produce valid and reliable statistical analysis for the thirty-eight predictor variables included in this study.

The Variables

The primary categories of variables in this research were band director personality type, teaching style, festival ratings, festival attendance, and balance. There were seven criterion variables which included marching and concert festival ratings at the district level and the competitive or state level, as well as frequency of attendance at those events and the balance between marching and concert band. There were thirty-eight predictor variables. Eight of these variables were teaching styles, and the other thirty were personality facets. Four additional demographic variables were included for preliminary

analysis and to help describe the sample: gender, experience, level of education, and primary instrument of the subject. Detailed descriptions and working names for the variables divided by variable type are listed below: criterion variables, predictor variables, and demographic variables.

Criterion Variables

A quantifiable assessment of the band's performance (festival and contest ratings) was used to determine a band's performance success in this research. In Florida, the majority of bands participate in district level Music Performance Assessments, or MPAs (often referred to by the more familiar name, "festivals" which is used throughout this study for consistency) for both marching and concert band performances. These festivals are organized through the Florida Bandmasters Association (FBA). Judges who are experienced professional music educators (and often are certified adjudicators by the FBA) give ratings of superior, excellent, good, fair, or poor. Some bands also choose to perform in competitive marching band events such as those sponsored by the Florida Marching Band Coalition (FMBC) or Bands of America (BoA). Scores from the FMBC and BoA are numerical, on a scale from 40-100 (100 being the highest), and bands are ranked in order from highest to lowest at each event. This is in contrast to FBA sponsored events where bands earn a rating which may be shared by many other bands which results in a non-competitive atmosphere where the goal is to reach a high standard of performance rather than to score higher than other bands. In this study, ratings from FBA festival and FMBC competitions were included for the purpose of consistency. The most recently published ratings were used, although to improve reliability I used a mean of the

band's ratings for up to three years if the director was at that school for more than one year.

The FBA categorical ratings of Superior, Excellent, Good, Fair, and Poor from each judge were converted to a numerical equivalent, and the final score was calculated based on these numbers. Since the sight-reading judge in concert MPAs was weighted slightly less than the stage judges, this affected the final ratings for bands earning what otherwise seemed to be the same ratings. For example, two bands could earn two ratings of Superiors and two ratings of Excellent, yet one might earn a final rating of Superior, and one might earn a final rating of Excellent. If there were two ratings of Excellent from the stage judges then the final ratings would be Excellent. However, if the two ratings of Excellent came from one stage judge and the sight-reading judge, the score remained a Superior. To reflect this in my numerical system, the former example would have a final rating of 1.51, while the latter example would be given a final rating of 1.49. Similarly, a band might earn an overall Excellent rating if they earned two ratings of Superior and two ratings of Excellent if one of the Superior ratings was from the sight-reading judge, but the same rating would be awarded to a band earning two ratings of Good and two ratings of Excellent if one of the Good ratings was from the sight-reading judge. In this research, the numerical ratings drew a sharp distinction between these two ratings as the former would earn a 1.49 and the latter would earn a 2.49. On a five-point scale, this was significant. Figure 3 summarizes the transformation of the categorical FBA ratings to numerical ratings.

Concert Band Ratings		Judge 1	Judge 2	Judge 3	Sight-Reading	Final Rating
School A	FBA ratings	Superior	Superior	Superior	Superior	Superior
	numerical ratings	1	1	1	1	1
School B	FBA ratings	Superior	Superior	Excellent	Excellent	Superior
	numerical ratings	1	1	2	2	1.49
School C	FBA ratings	Superior	Excellent	Excellent	Superior	Excellent
	numerical ratings	1	2	2	1	1.51
School D	FBA ratings	Good	Excellent	Excellent	Good	Excellent
	numerical ratings	3	2	2	3	2.49

Figure 3: FBA Concert Rating Conversion Example

Similarly, music judges in marching band MPAs are weighted higher than the marching judge and general effect judge. Numerical scores were adjusted to reflect this weighting. Figure 4 demonstrates the transformation of the FBA marching MPA ratings to numerical ratings.

Marching Band Ratings		Music 1	Music 2	Marching	General Effect	Final Rating
School A	FBA ratings	Superior	Superior	Superior	Superior	Superior
	numerical ratings	1	1	1	1	1
School B	FBA ratings	Superior	Superior	Excellent	Excellent	Superior
	numerical ratings	1	1	2	2	1.49
School C	FBA ratings	Excellent	Excellent	Superior	Superior	Excellent
	numerical ratings	2	2	1	1	1.51
School D	FBA ratings	Excellent	Excellent	Excellent	Superior	Excellent
	numerical ratings	2	2	2	1	1.75
School E	FBA ratings	Good	Excellent	Excellent	Good	Excellent
	numerical ratings	3	2	2	3	2.5

Figure 4: FBA Marching Ratings Conversion Example

Marching Ratings

This variable is a rating category referring to Florida Bandmasters Association (FBA) district-level marching music performance assessment. This reflects only the ratings of the two music judges, the marching and maneuvering judge, and the general

effect judge, which the FBA has ruled as the only four captions which count toward the final rating. Many bands are also given ratings exclusively for the percussion section and auxiliary units such as the color guard, but those are not factored into the final rating with FBA.

Concert Ratings

This variable is a rating category referring to FBA district-level concert music performance assessment. This is composed of the three stage judges as well as the sight-reading judge. Final ratings were calculated according to FBA rules. For bands with multiple concert bands, the given year's mean rating was a mean of all of the bands' ratings which participated that year.

Competitive Marching Ratings

This variable is a rating category referring to non-FBA sponsored marching band competitions which result in continuous numerical ratings of 40-100 rather than the FBA's categorical ratings. These were events sponsored by the Florida Marching Band Coalition (FMBC).

State Concert Band Ratings

This variable is a rating category referring to FBA state-level concert music performance assessment. In order to qualify to participate in this event, a band must receive a final rating of superior at the district level concert band music performance assessment. This rating was composed of three stage judges' ratings. Final ratings were a mean of the numerical equivalent of the judges' ratings.

Marching Competition Attendance Frequency

This is the mean number of annual competitive (non-FBA) marching events. This was a number between 0 and 10 (maximum number of weeks of FMBC competitions).

Mean High Score in Marching Competitions

This is a mean of the highest scores a band earns each year in which it participated in competitive marching band events. This number was between 40 and 100.

State Concert Festival Attendance Frequency

This variable is the percentage of times the subject participated in the state concert band festival during the three years sampled. A percentage was used in place of a number since not all subjects were at the same school for the past three years.

Balance

This categorical variable is an exploratory construct which indicates which of three categories a subject fits based on marching and concert band ratings and participation. This represents how the subject's band ratings are balanced: earning higher ratings in concert band, higher ratings in marching band, or balanced between the two. The categories are marching-oriented, concert-oriented, and balanced. Subjects were assigned a category of balance according to the following guidelines: if a subject's mean marching band rating was equal to or more than 0.5 points higher than subject's mean concert band rating, and the subject's band participates in a mean of one or more competitive marching band events per year, and the subject has not participated in state concert band festival in the past three years, then the subject was classified as "marching oriented." If the subject's mean concert band rating was equal to or more than 0.5 points higher than subject's mean marching band rating, and the subject participated in state

concert band festival at least once in the past three years, and the subject's band participates in a mean of less than one competitive marching band event per year, then the subject was classified as "concert oriented." All subjects who were not classified "marching oriented" or "concert oriented" were classified as "balanced."

Predictor Variables

There were thirty-eight predictor variables which fall into two categories. Personality factors make up the first category of predictor variables. This is the Five-Factor Model of personality derived from the International Personality Item Pool Representation of Costa & McCrae's NEO-PI-R, or IPIP-NEO, by John A. Johnson (2005). The five factors consisted of 30 facets. Personalities of individuals were reported as a number between 1 and 5 on each of the thirty facets. These thirty facets are Anxiety, Anger, Depression, Self Consciousness, Immoderation, Vulnerability, Friendliness, Gregariousness, Assertiveness, Activity, Excitement Seeking, Cheerfulness, Imagination, Artistic Interest, Emotion, Adventurousness, Intellect, Liberalism, Trust, Morality, Altruism, Cooperation, Modesty, Sympathy, Self Efficacy, Orderliness, Dutifulness, Achievement Striving, Self Discipline, and Cautiousness. Higher numbers indicate a greater degree of the personality facet present in the subject.

The second category of predictor variables is teaching style. These variables indicate the subject's strength on eight teaching styles as determined by Gumm's (2003) Music Teaching Style Inventory (MTSI). Each of the eight styles was represented by a numerical score between 1 and 5. These teaching styles are Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment, Group Dynamics, Music Concept Learning, Artistic Music Performance, and Student

Independence. Higher numbers for each teaching style indicated that the subject claimed to more frequently exhibit behaviors or attitudes relevant to that teaching style.

Demographic Variables

Demographic information were collected from subjects and used in the preliminary analysis to help describe the group of subjects who participated in the research. The demographic variables included gender, years of teaching experience, level of education, and what instrument (including voice) the subject considered as his or her primary performance medium. The four demographic variables were:

Gender

Subjects choose male or female for this categorical variable.

Experience

This was the number of years the subject has taught, rounded to the nearest whole number, and including the current school year as a full year.

Education

The ordinal variable Education represented the highest level of education attained by the subject. Subjects chose from a list including high school diploma, associate's degree, bachelor's degree, master's degree, specialist degree or doctoral candidate (ABD), or doctoral degree.

Instrument

This categorical variable represented the primary performance medium of the subject. Subjects chose from a list of flute, oboe, bassoon, clarinet, saxophone, trumpet, horn, trombone, euphonium, tuba, percussion, piano/organ/harpsichord, voice, stringed instrument, or other instrument.

The Survey Instrument

The survey instrument for this study was an internet-based researcher-created survey. The instrument consisted of three major parts: the Music Teaching Style Inventory, the IPIP-NEO, and school information.

The Music Teaching Style Inventory (MTSI) was created by Alan Gumm and published in his book *Music Teaching Style* in 2003. The MTSI has been reproduced in the survey instrument by permission from the copyright holder. The MTSI was meant to help music teachers determine to what degree they employ the eight teaching styles. There were a total of 57 items on the MTSI. There were seven questions for each of eight dimensions, along with the first question which was designed to prime the subject for the remaining questions. These eight dimensions were Assertive Teaching (represented by test items 2, 10, 18, 26, 34, 42, 50), Nonverbal Motivation (items 3, 11, 19, 27, 35, 43, 51), Time Efficiency (items 4, 12, 20, 28, 36, 44, 52), Positive Learning Environment (items 5, 13, 21, 29, 37, 45, 53), Group Dynamics (items 6, 14, 22, 30, 38, 46, 54), Music Concept Learning (items 7, 15, 23, 31, 39, 47, 55), Artistic Music Performance (items 8, 16, 24, 32, 40, 48, 56), and Student Independence (items 9, 17, 25, 33, 41, 49, 57). The items were statements about teaching behaviors such as “Communicate an awareness of student behavior.” Subjects took the MTSI at their own paces; all 57 questions were available simultaneously and answers can be changed. There was no time limit. Subjects were asked to select a response from a five point Likert-type scale which represented how often they engaged in this behavior. The five choices were Never, Rarely, Sometimes, Often, and Always, and each corresponded with a numerical value (one through five, respectively). Scores were calculated by totaling the numerical values for each of the

eight dimensions and then dividing the total by seven. The result was a mean value between 1 and 5 which indicated how often the subject employed the given teaching dimension in the classroom.

The MTSI has been validated in a number of ways since its conception. A pilot study established face validity for the list of teaching behaviors, and a national sample established construct validity for the current eight dimensions (Gumm, 1993). Predictive validity was established in a correlation between music teaching styles and music festival ratings (Gumm, 2003b). Shared variance and logical relationships between the MTSI and a college teacher evaluation support this predictive validity (Gumm, 2004a). The MTSI was compared to Asmus' measures of motivation for music and Kolb's Learning Style Inventory, indicating the MTSI measured music teaching style and not motivation for music or learning styles (Gumm & Essmann-Paulson, 2001; Gumm, 2004b). Concurrent validity existed between the MTSI dimensions and student opinion survey ratings of teacher effectiveness (Gumm, 2007). The alpha reliabilities reported for each of the teaching styles in the 2007 study were .751 for Assertive Teaching, .819 for Nonverbal Motivation, .792 for Time Efficiency, .787 for Positive Learning Environment, .725 for Group Dynamics, .828 for Music Concept Learning, .769 for Artistic Music Performance, and .864 for Student Independence.

The International Personality Item Pool representation of the NEO, or IPIP-NEO, is a public domain representation of the NEO-PI-R designed by Costa & McCrae (1992). The short version (120 items) in this study was designed by John A. Johnson (2003), and was included in the survey instrument. The IPIP-NEO used here was developed in 2003 and was derived from the IPIP which was developed in 1999 by Lewis R. Goldberg.

The IPIP-NEO was designed to give an indication of a subject's personality based on the Five-Factor Model of personality with its thirty facets. The short version employed in this study contains 120 items. This represented four questions per facet. Each item was a short sentence fragment such as "Like being in large groups of people" and subjects had five response choices from which to select: "very inaccurate," "inaccurate," "neither accurate nor inaccurate," "accurate," and "very accurate." Items represented the various dimensions and were shuffled so that items representing the same dimension are rarely adjacent in the survey. Surveys were administered electronically at the subject's convenience. There was no time limit to complete the 120 items. Many items were presented both positively and negatively (e.g. "I find it difficult to start conversations" and "I find it easy to start conversations"). Responses had a corresponding numerical score (1 for "very inaccurate" and 5 for "very accurate"). The mean score for all responses for a given dimension indicated the strength of that dimension or facet in the subject. Those that were presented negatively must have the numerical representation of the response reversed when scoring. The IPIP-NEO indicated a subject's personality dimension along a continuum represented numerically between 1 and 5. This was much more useful in determining correlations than the polarized categories of the MBTI. Scores closer to "5" indicate a subject tended to show more characteristics of a given dimension, while scores closer to "1" indicated a tendency towards the opposite trait. If a subject scored a "5" on Extraversion, then he or she selected answers which indicated an extremely high level of Extraversion. If a subject scored "1" on Extraversion, then he or she selected answers which would indicate an extremely low level of Extraversion and a correspondingly high level of Introversion.

The IPIP-NEO short version has slightly lower levels of reliability compared to the long (300-item) version, but still retains satisfactory levels of reliability. Alpha reliabilities were determined from a national sample of 20,993 subjects and are: Anxiety (.71), Anger (.77), Depression (.80), Self Consciousness (.63), Immoderation (.69), Vulnerability (.70), Friendliness (.77), Gregariousness (.60), Assertiveness (.75), Activity (.68), Excitement Seeking (.67), Cheerfulness (.71), Imagination (.70), Artistic Interest (.72), Emotion (.67), Adventurousness (.66), Intellect (.78), Liberalism (.76), Trust (.70), Morality (.62), Altruism (.65), Cooperation (.56), Modesty (.63), Sympathy (.68), Self Efficacy (.57), Orderliness (.76), Dutifulness (.47), Achievement Striving (.68), Self Discipline (.66), and Cautiousness (.70).

Protocol validity for the IPIP-NEO was determined by comparing results with results of other psychological measures which had been done by the subjects previously, as well as by correlating the items of the NEO-PI-R and the IPIP-NEO. The NEO PI-R on which the IPIP-NEO is based is one of the most widely used and well-validated personality inventories (Johnson, 2005), and the average correlation between corresponding scales of the extensively validated NEO PI-R and the IPIP-NEO is .73 (.94 when corrected for attenuation due to unreliability). This high correlation indicates a high degree of validity for the IPIP-NEO (Goldberg, 1999).

The remaining items on the survey instrument were intended to gather information about the subject's schools as well as demographic information regarding gender, experience, education, and instrument. Subjects were asked to indicate at which Florida high school they taught for each school year since 2000-2001. Based on this information, band rating and participation data were entered into SPSS from publicly

available FBA and FMBC score archives, consisting of the most recent three-year period at the same school. If three years of data were not available, then the most recent year or two years were used. The final section asked the subject to select responses to the demographic variables gender, years of experience, highest degree earned, and primary instrument. Additionally, the subject was asked if he or she would like to be informed of their personality and music teaching style profile results. The subject had the option to type in an email or postal address where the information could have been sent, or leave the space blank if they were not interested. There was a space at the end for “other input” where the subject had the opportunity to leave comments.

Data Collection

Data were collected electronically through a researcher-designed survey created through SurveyMonkey. This web service provided a link to the survey instrument which was inserted into an email inviting band directors to participate. In order to proceed with the survey, potential subjects were required to acknowledge that participation was voluntary and that they gave their consent. Specific instructions for items and sections were included in the online survey. The survey was distributed via email to all currently active and recently retired (less than five years) high school band directors in the state of Florida whose email addresses are listed in the Florida Bandmaster’s Association Member Directory. The link to the survey remained open for a period of seven weeks following the date the last email was sent. Three weeks into the data collection period, a second email was sent out by Survey Monkey to those who had not yet responded to please complete the survey. During the fifth week of the data collection process, a third and final request was sent out by Survey Monkey to non-responders to request

participation. At the end of seven weeks the survey was closed and data were downloaded. No personally identifiable information was gathered in the survey, so all data collected were fully anonymous. Furthermore, none of the information gathered through the survey was of a sensitive nature. Subjects were expected to have spent approximately twenty minutes completing the survey.

Data Analysis

Once the raw data from the survey were downloaded, they were entered into SPSS. Cronbach's alpha was calculated to determine the reliability of each of the five personality domains, eight teaching styles, and four types of band ratings. The following sections included the ways in which the raw data were transformed to create the criterion and predictor variables.

IPIP-NEO

The 120 test items were scored to determine final scores for each of the thirty personality facets. Each subject had a score between 1 and 5 for each of the thirty facets of personality.

MTSI

The 57 test items were scored to determine final scores for each of the eight teaching styles. Each subject had a score between 1 and 5 for each teaching style.

District FBA Concert and Marching Band Ratings

To compute the final rating for a given band in a given year, the four judges' ratings (not including final rating as stated by the subject) for each of the subject's bands was averaged. Each subject had a mean of these band ratings, between 1 and 5 (1 being "high").

Competitive Marching Band Events

A mean of the number of competitive marching band events a band has participated in over the past three years was calculated. The mean of the highest rating from each year was also reported.

State FBA Concert Band Events

This is the total number of times the subject reported attending state concert band festival during the last period of up to three years he or she was at the same school, divided by the number of years (up to three) the subject was at the school. A band can only attend this event once per year. The mean rating for all the subjects' bands participating during the same time frame was also reported.

State Concert Band Ratings

These data did not address the research questions and were not used beyond the preliminary analysis.

Mean High Score in Marching Competitions

These data also did not address the research questions and were not used beyond the preliminary analysis.

Analysis of the Variables

The variables included the thirty facets of personality, eight teaching styles, a mean concert band rating, a mean marching band rating, a mean frequency of participation in competitive marching band events, a mean competitive marching band rating, a total number of state FBA concert band events, and a mean state concert band rating for each subject. There were also demographic variables of gender, experience, education, and instrument for each subject. The balance variable was determined from the

marching and concert band data for each subject, and was the final category of data included for each subject for a total of forty-nine data points for each subject.

Before examining the data to answer the research questions, I presented a preliminary analysis of the data which included such descriptive statistics as means, standard deviations, skewness, and kurtosis for all 49 variables.

In addition to descriptive statistics, the preliminary analyses included reliability data for personality dimensions, teaching styles, and band scores. To present appropriate context prior to answering the research questions, a correlation table included correlations among personality facets, teaching styles, marching ratings, concert ratings, mean number of competitive marching events, number of state concert events, mean competitive marching rating, and mean state concert festival scores.

The research questions were addressed following the preliminary analysis of the data. To answer the first four questions, “What kinds of relationships exist between band directors’ personality types or teaching styles and their concert band ratings?,” “What kinds of relationships exist between band directors’ personality types or teaching styles and their marching band ratings?,” “In what ways do band directors’ personality types or teaching styles contribute to the number of state concert band events in which their bands participated?,” and “In what ways do band directors’ personality types or teaching styles contribute to the number of competitive marching band events in which their bands participated?,” the data were analyzed using multiple regression for the predictor variables of personality (anxiety, anger, depression, self consciousness, immoderation, vulnerability, friendliness, gregariousness, assertiveness, activity, excitement seeking, cheerfulness, imagination, artistic interest, emotion, adventurousness, intellect,

liberalism, trust, morality, altruism, cooperation, modesty, sympathy, self efficacy, orderliness, dutifulness, achievement striving, self discipline, and cautiousness) and teaching styles (assertive teaching, nonverbal motivation, time efficiency, positive learning environment, group dynamics, music concept learning, artistic music performance, and student independence), on the criterion variables of marching ratings, concert ratings, state FBA concert festival participation, and FMBC competitive marching event participation, respectively.

The fifth research question, “In what ways do band directors’ personality types or teaching styles contribute to the balance between marching and concert band participation and scores?” compared the predictor variables of personality facets and teaching styles, on the criterion variable of balance. Since the three categories of balance are categorical instead of continuous, this question was addressed using discriminant analysis.

Chapter 4: Results of the Data Analysis

The data analysis and results in this chapter begin with a preliminary analysis, which displays demographic information as well as descriptive statistics for the variables, and concludes with the results pertaining to the research problems. Narrative description followed by tables and graphs present the data for each section.

A link to the Survey Monkey-based survey instrument was sent to the entire population of 384 high school band directors in Florida. The first request resulted in 114 responses. Four weeks later, a second email was sent through Survey Monkey, which resulted in 40 additional responses. Three weeks after the second email, a third and final email request was sent from Survey Monkey, which resulted in 34 additional responses. Of the 188 total responses, 10 responses did not contain enough information to be of any use, and two subjects submitted two surveys. There were a total of 176 usable surveys, which represented approximately 45.8% of the population. Florida Bandmaster's Association (FBA) district numbers were identified for the subjects' schools and each of the 21 FBA districts were represented, reflecting the wide variety of communities from urban centers such as Miami, Tampa, Orlando, and Jacksonville to rural central and north Florida. Table 1 indicates response rates by district (note that District 20 is not included; District 20 is primarily made up of the Dade County private schools and schools in the Florida Keys, few of which participate regularly in FBA activities).

Demographic information submitted by participants included gender, academic degree, years of teaching experience, and what instrument the teacher primarily plays. Out of the 176 valid responses, 148 were male, representing 84.1% of the sample, and 28 were female, approximately 15.9% of the sample. This is a very accurate representation of the population where females constitute approximately 15.9%.

Table 1

Responses Frequency and Percentage by Florida Bandmasters Association Districts

Dist.	Counties in district	<i>n</i>	response
1	Escambia, Santa Rosa, Okaloosa	8	44.4%
2	Walton, Holmes, Jackson, Bay, Washington, Gulf, Liberty, Calhoun, Franklin	11	64.7%
3	Leon, Gadsden, Hamilton, Jefferson, Wakulla, Lafayette, Taylor, Madison, Hamilton, Suwannee	6	50.0%
4	Alachua, Dixie, Levy, Gilchrist, Columbia, Union, Baker, Bradford	9	64.3%
5	Pasco, Hernando, Citrus	8	47.1%
6	Seminole, Volusia	8	50.0%
7	Hillsborough	19	59.4%
8	Orange	10	47.6%
9	Pinellas	5	25.0%
10	Brevard, Osceola	9	40.9%
11	Manatee, Sarasota, Charlotte, DeSoto, Hardee	8	44.4%
12	Polk	8	53.3%
13	Indian River, Martin, St. Lucie, Highlands, Glades, Okeechobee	5	38.5%
14	Palm Beach	8	40.0%
15	Broward	12	36.4%
16	Dade	9	33.3%
17	Duval, Nassau	9	60.0%
18	Lee, Collier	7	35.0%
19	Marion, Sumter, Lake	9	45.0%
21	St. Johns, Flagler, Clay, Putnam	8	53.3%
Total		176	

Subjects were asked to indicate their highest level of academic degree, from the choices high school diploma, Associates Degree, Bachelor's Degree, Master's Degree, Specialist or incomplete Doctoral Degree, and Doctoral Degree. None of the respondents chose high school diploma, Associates Degree, or Doctoral Degree, and those choices are

no longer included in the data analysis. There were 96 subjects who indicated Bachelor's, representing 55.5% of the sample, 73 subjects who indicated Master's, which represents 42.2% of the sample, and 4 subjects indicated Specialist or incomplete Doctoral degree, (hereafter abbreviated as "Specialist") representing 2.3% of the sample. Three subjects did not report their highest academic degree.

Subjects were asked to indicate the instrument he or she considered to be his or her primary instrument from a list including flute, oboe, bassoon, clarinet, saxophone, trumpet, horn, trombone, euphonium, tuba, percussion, piano/organ/harpsichord, stringed instrument, voice, and other. The final two choices, voice and other were not selected by any subjects and will not be included in further discussion. Instrument information is displayed in Table 2 in the order of most frequently selected choices.

Table 2

Instruments- Frequencies and Percentage

Instrument	<i>n</i>	percent
Trumpet	51	29.5
Saxophone	23	13.3
Trombone	20	11.6
Percussion	18	10.4
Clarinet	16	9.2
Horn	11	6.4
Euphonium	11	6.4
Tuba	9	5.2
Bassoon	5	2.9
Flute	4	2.3
Piano/Keyboard	3	1.7
Oboe	1	0.6
Stringed Instrument	1	0.6
Total	173	100.0

Note: 3 subjects did not report instrument

The only demographic variable where responses were on a scalar continuum rather than in discrete categories was teaching experience. The mean number of years of teaching experience reported by the 173 subjects who completed this item on the survey was 12.77 years (*SD* was 9.94 years). The skewness was .93, and kurtosis was -.09. Teaching experience ranged from 1 year to 40 years.

Descriptive statistics for the criterion variables FBA marching band festival, (“Marching”), FBA concert band festival, (“Concert”), FMBC competitive marching band attendance (“FMBC attend”), FMBC marching band mean score (“FMBC score”), state FBA concert band attendance (“State concert attend”), and state FBA concert band mean ratings (“State concert score”) are presented in Table 3. Number of responses, mean, standard deviation, skewness, and kurtosis, are included.

Table 3

Descriptive Statistics for Criterion Variables

variable	<i>n</i>	<i>M</i>	<i>SD</i>	Skew.	Kurt.
Marching	163	1.45	.51	1.29	1.28
Concert	167	1.78	.61	1.16	1.74
FMBC attend.	175	1.34	1.31	.71	-.67
FMBC score	124	72.10	9.48	-.09	-.98
State concert attend.	175	.33	.40	.75	-1.10
State concert score	81	1.76	.57	1.07	2.01

It is noteworthy that while the same rating system is used by the FBA for both Marching and Concert festivals, the sample of directors overall scored higher for Marching (1.45, or a low Superior) than for Concert (1.78, a high Excellent). Subjects reported a mean FMBC frequency of 1.34 competitive marching band events per year,

although the standard deviation is nearly the same as the mean (1.31). The mean yearly score at FMBC is 72.10, which is just above the “Superior” classification (FMBC Superior is between 70.00 and 84.99). Unlike FBA, this is not the highest classification though, which is “Distinction” (scores of 85.00-100.00). The sample reported a mean FBA state concert festival attendance rate of .33, which was the equivalent of going to state concert festival once every three years. The mean rating for those who did attend state concert festival (81 subjects) was 1.76, which was a high Excellent.

Descriptive statistics of the predictor variables of teaching styles and personality are included in Table 4. The first eight variables, Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment, Group Dynamics, Music Concept Learning, Artistic Music Performance, and Student Independence are the eight teaching styles. The next 30 predictor variables are the sets of six facets for each of the five personality dimensions: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. These thirty facets are Anxiety, Anger, Depression, Self-Consciousness, Immoderation, Vulnerability, Friendliness, Gregariousness, Assertiveness, Activity, Excitement Seeking, Cheerfulness, Imagination, Artistic Interest, Emotion, Adventurousness, Intellect, Liberalism, Trust, Morality, Altruism, Cooperation, Modesty, Sympathy, Self-Efficacy, Orderliness, Dutifulness, Achievement Striving, Self-Discipline, and Cautiousness.

Nineteen subjects completed the first portion of the survey instrument, which contained the MTSI, but quit before completing the personality inventory, which accounts for the disparity in numbers between the teaching styles and the personality dimensions. All items are Likert-type scale items with possible values from 1 to 5.

Table 4

Descriptive Statistics for Predictor Variables

Predictor variable	<i>n</i>	<i>M</i>	<i>SD</i>	Skew.	Kurt.
Teaching Styles					
Assertive Teaching	176	4.00	.52	-.11	-.47
Nonverbal Motivation	176	3.89	.47	-.01	-.01
Time Efficiency	176	4.22	.46	-.32	-.61
Positive Learning Environment	176	4.22	.48	-.41	-.21
Group Dynamics	176	3.27	.55	.07	.19
Music Concept Learning	176	3.75	.51	-.46	1.02
Artistic Music Performance	176	3.53	.56	-.16	.32
Student Independence	176	3.43	.62	.12	.00
Personality Dimension- Neuroticism					
Anxiety	157	2.81	.85	.18	-.64
Anger	156	2.97	.95	-.13	-.69
Depression	156	2.04	.80	.66	.17
Self Consciousness	156	2.92	1.04	-.05	-.87
Immoderation	155	2.73	.77	.08	-.03
Vulnerability	155	2.25	.81	.37	-.44
Personality Dimension- Extraversion					
Friendliness	157	3.82	.78	-.48	-.53
Gregariousness	156	3.02	1.01	-.03	-.94
Assertiveness	155	4.19	.61	-1.19	2.59
Activity	155	3.64	.65	-.16	-.44
Excitement Seeking	155	2.95	.70	.14	-.13
Cheerfulness	155	3.95	.62	-.28	-.52
Personality Dimension- Openness to Experience					
Imagination	157	3.48	.84	-.12	-.55
Artistic Interest	156	4.05	.64	-.88	1.28
Emotion	155	3.78	.61	-.27	-.29
Adventurousness	155	2.98	.82	.13	-.28
Intellect	155	4.05	.83	-.69	-.12
Liberalism	155	2.48	.98	.09	-.99
Personality Dimension- Agreeableness					
Trust	157	3.66	.80	-.66	.14
Morality	156	4.36	.61	-.96	.70
Altruism	155	4.26	.55	-.74	.66
Cooperation	155	3.85	.83	-.59	-.04
Modesty	155	3.13	.84	.19	-.84
Sympathy	155	3.73	.69	-.70	.96
Personality Dimension- Conscientiousness					
Self Efficacy	157	4.30	.47	-.49	-.21
Orderliness	156	3.46	1.03	-.29	-.86
Dutifulness	155	4.52	.49	-.69	-.39
Achievement Striving	155	4.61	.44	-1.01	.19
Self Discipline	155	3.88	.65	-.34	-.79
Cautiousness	155	3.82	.91	-.65	-.19

The first four teaching styles are classified by Gumm as teacher-oriented, and the second four are classified as student-oriented. Subjects reported higher mean ratings on the teacher-oriented styles than on the student-oriented styles. Eight personality facets were higher than 4.00 and are listed from highest to lowest: achievement striving ($M=4.61$), dutifulness ($M=4.52$), morality ($M=4.36$), self-efficacy ($M=4.30$), altruism ($M=4.26$), assertiveness ($M=4.19$), intellect ($M=4.05$), and artistic interest ($M=4.05$). The three lowest facets were depression ($M=2.04$), vulnerability ($M=2.25$), and liberalism ($M=2.48$).

Descriptive statistics for the criterion and predictor variables are also broken down by the representative demographic groups and are located in Appendices A through I. These appendices present criterion scores by gender, by academic degree, and by instrument. Following those are appendices which present predictor variables by gender, academic degree, and instrument.

Reliability coefficients were calculated from the items on the Music Teaching Style Inventory and compared with existing reliability information. Teaching style reliabilities were published by the author of the MTSI (Gumm, 2003b) and are presented alongside reliabilities from this study in Table 5.

Similar reliabilities emerged for most of the teaching styles except for Nonverbal Motivation (.66), which was lower than Gumm's findings (.82). No individual item's removal from the Nonverbal Motivation items would have improved the reliability of that teaching style. The reliability for Music Concept Learning (.74) was also lower than the reliability reported by Gumm (.83), although being above .70 the reliability is still satisfactory. The results of the reliability procedure indicated the removal of some test

items would have improved reliability slightly on two dimensions. Since these teaching styles already had satisfactory reliability, the items were not removed. In the Artistic Musical Performance teaching style, deletion of question 5, “Develop musical skills through physical manipulation” would have raised the reliability slightly, from .74 to .76. For Student Independence, deletion of the question 5, “Use discussion and dialogue instead of one-way lecture” would have changed the reliability slightly, from .85 to .86. Reliability for Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment, Group Dynamics, and Music Concept Learning would have only decreased with removal of any survey items. Item to teaching style correlations were calculated for the MTSI and are displayed in Table 6. Inter-item correlation matrices for teaching style can be found in Appendix J.

Table 5

Reliability Data (Cronbach’s α) for the Music Teaching Style Inventory

MTSI dimension	this study	Gumm (2003b)
Assertive Teaching	.75	.75
Nonverbal Motivation	.66	.82
Time Efficiency	.75	.79
Positive Learning Environment	.79	.79
Group Dynamics	.78	.73
Music Concept Learning	.74	.83
Artistic Music Performance	.74	.77
Student Independence	.85	.86

Table 6

Item-Total Correlations with Teaching Styles for the Music Teaching Style Inventory

MTSI dimension	Item Number						
	1	2	3	4	5	6	7
Assertive Teaching	.66	.63	.68	.72	.57	.66	.54
Nonverbal Motivation	.60	.63	.47	.66	.58	.58	.53
Time Efficiency	.57	.64	.59	.72	.61	.60	.70
Positive Learning Environ.	.59	.64	.65	.67	.70	.72	.72
Group Dynamics	.60	.65	.56	.72	.72	.58	.75
Music Concept Learning	.57	.64	.57	.66	.67	.60	.69
Artistic Music Performance	.65	.68	.73	.64	.47	.60	.64
Student Independence	.75	.79	.74	.73	.55	.73	.79

These item-total reliabilities are generally moderately strong, ranging from .60 to .79 for the majority of the teaching styles. Items are particularly strongly correlated for Student Independence, with most items (except item 5) being higher than .70. The only two items on the MTSI with lower correlations with their teaching style than .50 are Nonverbal Motivation item 3, and Artistic Music Performance question 5 (both with $r = .47$).

Reliability coefficients were also calculated from the items on the IPIP-NEO and compared with existing reliability information. Reliability for the personality facets were published by Johnson (2005) and are presented alongside reliabilities from this study in Table 7.

Reliabilities for personality were sufficiently high for many facets, and were higher than in Johnson's study (which included approximately 21,000 subjects) on 24 of the 30 facets. Only seven facets had reliability coefficients lower than .70, and morality

Table 7

Reliability Data (Cronbach's α) for the IPIP-NEO Personality Facets

IPIP-NEO dimension	this study	Johnson (2005)
Neuroticism		
Anxiety	.72	.71
Anger	.85	.77
Depression	.83	.80
Self Consciousness	.72	.63
Immoderation	.61	.69
Vulnerability	.73	.70
Extraversion		
Friendliness	.80	.77
Gregariousness	.83	.60
Assertiveness	.80	.75
Activity	.53	.68
Excitement Seeking	.64	.67
Cheerfulness	.74	.71
Openness to Experience		
Imagination	.76	.70
Artistic Interest	.57	.72
Emotion	.43	.67
Adventurousness	.75	.66
Intellect	.74	.78
Liberalism	.76	.76
Agreeableness		
Trust	.87	.70
Morality	.67	.62
Altruism	.70	.65
Cooperation	.69	.56
Modesty	.75	.63
Sympathy	.70	.68
Conscientiousness		
Self Efficacy	.72	.57
Orderliness	.85	.76
Dutifulness	.72	.47
Achievement Striving	.71	.68
Self Discipline	.70	.66
Cautiousness	.89	.70

*indicates reliability prior to removal of items

(.67) and cooperation (.69) were quite close. The lowest five reliabilities were on excitement seeking (.64), immoderation (.61), artistic interest (.57), activity (.53), and emotion (.43). The reliability for three facets increased substantially by eliminating one survey item from each facet. These facets were dutifulness (increased from .58 to .72), self consciousness (increased from .69 to .72), and intellect (increased from .66 to .74). Pearson product-moment correlations between survey items and facets are indicated in Table 8. Inter-item correlations for personality facets can be found in Appendix K.

Correlations of survey items to personality facets were generally stronger than with survey items to teaching styles, with 74% of the items having higher correlations than .70 (highest was .92). Twenty-three items (19%) had correlations between .60 and .69, and only 8 of the 120 items (7%) had correlations below .60; the lowest one being .52.

Reliability was also calculated on the criterion variables of concert and marching band ratings, FMBC competitive marching ratings, and ratings at state FBA concert band festival, based on a three-year sample for each subject. This reliability information is presented in Table 9.

Alpha reliabilities for band ratings are strong for all types except state FBA concert festival, which is below the expected standard for reliability (.70). This may be a result of the small number of subjects who participated in state FBA concert festival ($n = 81$), and often a three-year mean was not available since subjects in the sample attend state FBA concert festival a mean of only once every three years (as indicated in Table 3). This may also be a result of state FBA judges often being college band directors from other states who may have different opinions as to what constitutes an ideal sound.

Table 8

Item to Personality Facet Correlations for the IPIP-NEO

Personality Facet	Item 1	Item 2	Item 3	Item 4
Neuroticism				
Anxiety	.73	.77	.68	.78
Anger	.86	.86	.87	.72
Depression	.84	.78	.92	.73
Self Consciousness	.78	.69	.78	.62*
Immoderation	.71	.62	.67	.72
Vulnerability	.78	.83	.66	.70
Extraversion				
Friendliness	.77	.87	.73	.80
Gregariousness	.85	.78	.74	.87
Assertiveness	.84	.74	.82	.77
Activity	.59	.71	.71	.59
Excitement Seeking	.63	.73	.67	.72
Cheerfulness	.77	.70	.72	.81
Openness to Experience				
Imagination	.54	.81	.85	.80
Artistic Interest	.54	.54	.79	.77
Emotion	.63	.54	.64	.63
Adventurousness	.70	.78	.77	.76
Intellect	.61*	.75	.72	.80
Liberalism	.91	.66	.89	.52
Agreeableness				
Trust	.88	.78	.86	.88
Morality	.83	.61	.78	.60
Altruism	.74	.79	.67	.73
Cooperation	.68	.77	.78	.69
Modesty	.78	.83	.83	.59
Sympathy	.80	.77	.65	.70
Conscientiousness				
Self Efficacy	.76	.71	.74	.77
Orderliness	.83	.83	.86	.80
Dutifulness	.70	.68	.72*	.68
Achievement Striving	.77	.78	.75	.69
Self Discipline	.73	.62	.83	.76
Cautiousness	.84	.89	.88	.90

*item was removed to improve reliability

Table 9

Reliability Data for Band Ratings

Band Ratings	Cronbach's α
FBA Marching	.83
FBA Concert	.74
FMBC Marching Competitions	.94
State FBA Concert	.60

Correlations were calculated for teaching experience and academic degree with the criterion variables. Although academic degrees are not considered interval data, they are ordinal, with the code (3) representing Bachelors degrees, (4) representing Masters degrees, and (5) representing Specialist or incomplete Doctoral degrees. These correlations and are presented in Table 10.

Table 10

Correlations for Criterion Variables with Experience and Academic Degree

Criterion Variable	Experience r (n)	Degree r (n)
Concert ratings	.34 (165)***	.18 (165)*
Marching ratings	.20 (161)*	.18 (161)*
State Concert ratings	.18 (80)	.20 (80)
State Concert attend.	.11 (172)	.11 (172)
FMBC ratings	.20 (123)*	.11 (123)
FMBC attend.	-.09 (172)	.06 (172)

* $p < .05$, ** $p < .01$, and *** $p < .001$

There are low but significant positive correlations for experience and concert ratings ($r = .34, p < .001$), marching ratings ($r = .20, p < .05$), and FMBC ratings ($r = .20, p < .05$). The table also indicates low but significant correlations for education and concert ratings ($r = .18, p < .01$), and marching ratings ($r = .18, p < .05$). Predictor variables were correlated with the criterion variables and are presented in Table 11.

Significant positive correlations exist between concert band ratings and the teaching styles Time Efficiency ($r = .39, p < .001$), Music Concept Learning ($r = .30, p < .001$), Artistic Musical Performance ($r = .24, p < .001$), and Student Independence ($r = .21, p < .01$). Significant positive correlations exist between marching band ratings and the teaching styles Assertive Teaching ($r = .16, p < .05$), Time Efficiency ($r = .37, p < .001$), and Music Concept Learning ($r = .27, p < .001$). The four remaining criterion variables each had a significant positive correlation with Time Efficiency. All four correlations with Time Efficiency were rather low, but all were significant: State FBA concert band ratings ($r = .25, p < .05$), State FBA concert band festival attendance ($r = .22, p < .01$), FMBC ratings ($r = .26, p < .01$), and FMBC attendance ($r = .20, p < .01$). It is noteworthy that Time Efficiency has a significant relationship with all of the criterion variables. State concert band attendance also had a significant correlation with Music Concept Learning ($r = .18, p < .05$).

Significant positive correlations exist between several personality facets and criterion variables. Higher concert band ratings are significantly positively correlated with Assertiveness ($r = .27$; facet of Extraversion), Self-Efficacy ($r = .25$; facet of Conscientiousness), Immoderation ($r = .19$; facet of Neuroticism), and Achievement Striving ($r = .10$; facet of Conscientiousness).

Table 11

Correlations for Criterion Variables and Predictor Variables (n in parentheses)

Dimension	Concert	Marching	SCB Rating	SCB Attend	CM Rating	CM Attend
Teaching Style						
Assertive Teaching	.10 (165)	.16 (163)*	.02 (81)	-.03 (175)	.05 (124)	.02 (175)
Nonverbal Motivation	.11 (165)	.13 (163)	-.01 (81)	.03 (175)	.04 (124)	-.04 (175)
Time Efficiency	.39 (165)***	.37 (163)***	.25 (81)*	.26 (175)***	.26 (124)**	.20 (175)**
Positive Learning Environ.	.11 (165)	.03 (163)	-.08 (81)	-.04 (175)	.01 (124)	.00 (175)
Group Dynamic	.14 (165)	.04 (163)	-.17 (81)	-.03 (175)	-.08 (124)	.02 (175)
Music Concept Learning	.30 (165)***	.27 (163)***	.03 (81)	.18 (175)*	.14 (124)	-.02 (175)
Artistic Music Perform.	.24 (165)**	.12 (163)	.14 (81)	.10 (175)	.04 (124)	-.05 (175)
Student Independence	.21 (165)**	.12 (163)	.02 (81)	.11 (175)	.07 (124)	.04 (175)
Neuroticism						
Anxiety	-.04 (147)	-.07 (145)	.17 (71)	.02 (156)	.04 (110)	-.03 (156)
Anger	.04 (146)	-.06 (144)	.09 (71)	.15 (155)	.15 (109)	.08 (155)
Depression	-.03 (146)	-.03 (144)	.09 (71)	.02 (155)	.01 (109)	-.08 (155)
Self Consciousness	.04 (146)	-.05 (144)	.07 (71)	.12 (155)	.16 (109)	.10 (155)
Immoderation	.19 (145)*	-.02 (143)	-.17 (71)	.20 (154)*	-.03 (108)	.08 (154)
Vulnerability	-.09 (145)	-.08 (143)	.05 (71)	.01 (154)	.01 (108)	.03 (154)
Extraversion						
Friendliness	.11 (147)	.13 (145)	.02 (71)	.01 (156)	-.01 (110)	.04 (156)
Gregariousness	.10 (146)	.09 (144)	.07 (71)	-.01 (155)	-.06 (109)	-.05 (155)
Assertiveness	.27 (145)**	.13 (143)	.09 (71)	.19 (154)*	-.01 (108)	.06 (154)
Activity	.12 (145)	.19 (143)*	.09 (71)	-.01 (154)	.17 (108)	.18 (154)*
Excitement Seeking	.13 (145)	.08 (143)	-.15 (71)	-.04 (154)	.12 (108)	.16 (154)
Cheerfulness	.03 (145)	.05 (143)	-.10 (71)	-.10 (154)	-.07 (108)	-.06 (154)
Openness to Experience						
Imagination	.01 (147)	-.16 (145)	-.18 (71)	-.05 (156)	-.07 (110)	-.07 (156)
Artistic Interest	.04 (146)	.01 (144)	-.18 (71)	.02 (155)	-.13 (109)	-.01 (155)
Emotion	.07 (145)	.00 (143)	.08 (71)	-.01 (154)	-.09 (108)	-.17 (154)*
Adventurousness	.05 (145)	.05 (143)	-.08 (71)	-.03 (154)	.08 (108)	.10 (154)
Intellect	.14 (145)	.07 (143)	-.08 (71)	.07 (154)	.00 (108)	.12 (154)
Liberalism	.01 (145)	.06 (143)	-.21 (71)	-.01 (154)	.00 (108)	.11 (154)
Agreeableness						
Trust	.12 (147)	-.02 (145)	.12 (71)	.00 (156)	.11 (110)	.05 (156)
Morality	-.09 (146)	-.04 (144)	.07 (71)	-.10 (155)	.00 (109)	-.08 (155)
Altruism	.00 (145)	-.09 (143)	-.12 (71)	-.09 (154)	-.17 (108)	-.10 (154)
Cooperation	.08 (145)	.03 (143)	.05 (71)	.04 (154)	-.13 (108)	-.17 (154)*
Modesty	.01 (145)	-.12 (143)	.13 (71)	-.16 (154)	-.11 (108)	-.18 (154)*
Sympathy	.06 (145)	-.01 (143)	-.17 (71)	-.14 (154)	-.13 (108)	-.04 (154)
Conscientiousness						
Self Efficacy	.25 (147)**	.23 (145)**	.03 (71)	.17 (156)*	.10 (110)	-.01 (156)
Orderliness	-.04 (146)	.05 (144)	-.11 (71)	-.11 (155)	-.17 (109)	-.06 (155)
Dutifulness	.01 (145)	-.05 (143)	.07 (71)	-.04 (154)	-.16 (108)	-.16 (154)*
Achievement Striving	.10 (145)*	.09 (143)	-.01 (71)	.04 (154)	.12 (108)	-.01 (154)
Self Discipline	.10 (145)	.14 (143)	-.10 (71)	-.07 (154)	-.03 (108)	.03 (154)
Cautiousness	-.07 (145)	.07 (143)	.04 (71)	-.12 (154)	-.10 (108)	-.15 (154)

SCB- State Concert Band, CM- FMBC Competitive Marching Band

*significant at $p < .05$, **significant at $p < .01$, ***significant at $p < .001$

Higher marching band ratings are significantly positively correlated with Activity ($r = .19$; facet of Extraversion) and Self-Efficacy ($r = .23$; facet of Conscientiousness). There are four personality facets which have significant correlations with participation in FMBC competitive marching band events. Emotion ($r = -.17$; facet of Openness to Experience), cooperation and modesty ($r = -.17$ and $-.18$, respectively; facets of Agreeableness), and dutifulness ($r = -.16$; facet of Conscientiousness) all show significant negative correlations with participation in FMBC competitive marching band events. That is, participation in these competitive marching band events correspond with a decrease in emotion, cooperation, modesty, and dutifulness. The facet activity ($r = .18$; facet of Extraversion) has a positive correlation with FMBC competitive marching band events. Two personality facets correlate significantly with participation in state concert band attendance; Immoderation ($r = .20$; facet of Neuroticism), Self Efficacy ($r = .17$; facet of Conscientiousness) and Assertiveness ($r = .19$; facet of Extraversion). As recommended by Gumm, it may be important in teaching style research to determine the interaction of personality and teaching style. Correlations between teaching styles and personality facets are presented in Table 12.

There are some noteworthy correlations between teaching styles and personality facets. The strongest correlations were between Altruism and Positive Learning Environment ($r = .46, p < .001$), and between Self Efficacy and Time Efficiency ($r = .41, p < .001$). Four other significant correlations are worth noting: Self Discipline with Student Independence ($r = .39, p < .001$), Morality with Positive Learning Environment ($r = .35, p < .001$), Cheerfulness with Nonverbal Motivation ($r = .35, p < .001$), and Activity with Time Efficiency ($r = .34, p < .001$).

Table 12

Correlations Between Teaching Styles and Personality Facets

<i>Personality Facet</i>	<i>AT</i>	<i>NM</i>	<i>TE</i>	<i>PLE</i>	<i>GD</i>	<i>MCL</i>	<i>AMP</i>	<i>SI</i>
Neuroticism								
Anxiety	.11	-.08	.02	-.11	-.05	.04	-.09	-.05
Anger	.15	.02	.06	-.16	-.07	-.01	-.01	-.02
Depression	-.08	-.12	-.10	-.17*	.00	.01	-.13	-.11
Self Consciousness	.17*	.04	.09	-.13	-.05	.01	.01	-.01
Immoderation	-.06	.00	.03	-.11	-.01	-.02	-.12	-.06
Vulnerability	.01	-.10	-.08	-.12	-.09	-.04	-.14	-.17*
Extraversion								
Friendliness	.15	.25**	.12	.20*	.16*	.22**	.25**	.27**
Gregariousness	.19*	.27**	.11	.14	.18*	.20*	.20*	.18*
Assertiveness	.15	.23**	.28***	-.01	.18*	.11	.20*	.22**
Activity	.18*	.19*	.34***	.11	.31***	.17*	.14	.20*
Excitement Seeking	.00	.26**	.20*	.10	.21**	.17*	.15	.11
Cheerfulness	.09	.35***	.29***	.32***	.21**	.14	.22**	.19**
Openness to Experience								
Imagination	-.03	.14	.02	-.08	.08	.02	.12	.02
Artistic Interest	.00	.26**	.18*	.15	.19*	.18*	.28***	.25**
Emotion	.01	.31***	.10	.22**	.14	.14	.22**	.24**
Adventurousness	-.06	.15	.05	.11	.25**	.12	.10	.15
Intellect	-.03	.15	.05	-.06	.10	.11	.17*	.19*
Liberalism	-.06	.09	.11	-.05	-.01	-.05	-.05	.00
Agreeableness								
Trust	-.15	.03	.07	.14	.00	.01	.01	.00
Morality	-.07	.00	.07	.35***	.21**	.13	.07	.18*
Altruism	.05	.23**	.12	.46***	.20*	.17*	.20*	.30***
Cooperation	-.09	.03	.08	.30***	.14	.09	-.06	.02
Modesty	-.02	-.20*	-.05	.14	.08	.08	.01	.12
Sympathy	.06	.11	.04	.17*	.09	.07	.05	.06
Conscientiousness								
Self Efficacy	.21**	.29***	.41***	.21**	.19*	.26**	.26**	.28***
Orderliness	.12	.08	.04	.11	.19	.10	.02	.05
Dutifulness	-.05	.06	.13	.20*	.15	.02	.11	.07
Achievement Striv.	.07	.18*	.27**	.26**	.25**	.24**	.18*	.28**
Self Discipline	.16*	.31***	.27**	.29***	.32***	.26**	.30***	.39***
Cautiousness	-.01	-.08	.03	.16*	.02	.01	.01	.00

$N = 155$, * $p > .05$, ** $p > .01$, *** $p > .001$

The Research Questions

To answer the first two questions, “What kinds of relationships exist between band directors’ personality types or teaching styles and their concert band ratings?” and “What kinds of relationships exist between band directors’ personality types or teaching styles and their marching band ratings?” the data were analyzed using multiple regression for the thirty-eight predictor variables of personality (anxiety, anger, depression, self consciousness, immoderation, vulnerability, friendliness, gregariousness, assertiveness, activity, excitement seeking, cheerfulness, imagination, artistic interest, emotion, adventurousness, intellect, liberalism, trust, morality, altruism, cooperation, modesty, sympathy, self efficacy, orderliness, dutifulness, achievement striving, self discipline, and cautiousness) and eight teaching styles (assertive teaching, nonverbal motivation, time efficiency, positive learning environment, group dynamics, music concept learning, artistic music performance, and student independence), on the criterion variables of marching ratings and concert ratings.

To address the first research question, I used stepwise multiple regression with concert ratings as the criterion variable and the thirty-eight predictor variables in teaching style and personality as predictor variables. SPSS calculated which variables to include with the criteria probability of F to enter $\leq .05$, probability of F to remove $\geq .10$. I then repeated the regression procedure above except with marching ratings as the criterion variable. Table 13 displays a summary of the stepwise regression procedures.

Table 13

Stepwise Regression and ANOVA for Band Ratings and Predictor Variables

Step	Predictor Variables Included	<i>R</i>	<i>R</i> ²	adj <i>R</i> ²	<i>df</i>	<i>F</i>	<i>p</i> <
Concert Band ratings							
1	Time Efficiency (TE)	.37	.13	.13	1, 143	21.99	.001
2	TE, Immoderation (I)	.41	.17	.16	2, 142	14.52	.001
3	TE, I, Music Concept Learn. (MCL)	.44	.20	.18	3, 141	11.51	.001
4	TE, I, MCL, Assertiveness (A)	.47	.22	.20	4, 140	10.07	.001
5	TE, I, MCL, A, Nonverbal Motiv.	.50	.25	.23	5, 139	9.47	.001
Marching Band ratings							
1	Time Efficiency (TE)	.35	.12	.12	1, 141	18.69	.001
2	TE, Imagination (Im)	.38	.15	.14	2, 140	12.10	.001
3	TE, Im, Modesty (M)	.42	.17	.16	3, 139	9.75	.001
4	TE, Im, M, Cheerfulness (C)	.45	.20	.18	4, 138	8.75	.001
5	TE, Im, M, C, Anxiety (Anx)	.48	.23	.20	5, 137	8.20	.001
6	TE, Im, M, C, Anx + MCL	.50	.25	.22	6, 136	7.67	.001

Using concert band ratings as the criterion variable, SPSS entered Time Efficiency in the first step. The second step included both Time Efficiency and Immoderation, while the third step added to these two predictors Music Concept Learning, the fourth step added Assertiveness, and the fifth and final step included the previous four predictors along with Nonverbal Motivation. The final step containing the five predictors is considered significant: $F(5, 139) = 9.47, p < .001$, and accounts for approximately 23% of the variation in concert band ratings (adjusted $R^2 = .23$). SPSS did not include any other predictors in the stepwise regression for concert band ratings as they were determined not to contribute significantly to their variation.

Using marching band ratings as the criterion variable, SPSS entered Time Efficiency in the first step. The second step included both Time Efficiency and Imagination, while the third step added Modesty to these two predictors. The fourth step added Cheerfulness, the fifth step added Anxiety, and the sixth and final step added Music Concept Learning to the previous five predictors. The final step containing the six predictors is considered significant: $F(6, 136) = 7.67, p < .001$, and accounts for approximately 22% of the variation in concert band ratings (adjusted $R^2 = .22$). SPSS did not include any other predictor variables in the stepwise regression for marching band ratings as they were determined not to contribute significantly to the variation in marching band ratings.

Regression coefficients for each of the predictor variables included in the stepwise regression procedure were calculated along with p values and tolerance for multicollinearity. All regression coefficients were significant at the .05 level, and most have a very high tolerance for multicollinearity. The lowest two tolerance values were .68 for Time Efficiency as a predictor of concert band ratings and .65 for Cheerfulness as a predictor of marching band ratings. Table 14 provides regression coefficients for the predictor variables in each of the steps in the regression.

Although I used linear multiple regression to examine teaching styles and personality facets on the criterion variables, the data were also examined using nonlinear regression methods including logarithmic, quadratic, inverse, cubic, and compound methods to determine if there were any curvilinear or other nonlinear relationships. No significant relationships were detected using these nonlinear regression methods.

Table 14

Regression Coefficients for Predictor Variables associated with Criterion Variables

Predictors included	B	SE B	β	<i>t</i>	<i>p</i> <	tolerance
Concert Band ratings						
Time Efficiency	.40	.12	.30	3.35	.001	.68
Immoderation	.15	.06	.19	2.58	.05	.99
Music Concept Learning	.26	.09	.23	2.83	.01	.74
Assertiveness	.20	.07	.25	2.49	.05	.91
Nonverbal Motivation	-.27	.12	-.21	-2.39	.05	.72
Marching Band ratings						
Time Efficiency	.42	.10	.37	4.30	.001	.76
Imagination	-.12	.05	-.20	-2.51	.05	.91
Modesty	-.11	.05	-.19	-2.35	.05	.88
Cheerfulness	-.26	.08	-.31	-3.33	.001	.65
Anxiety	-.13	.06	-.21	-2.38	.05	.70
Music Concept Learning	.19	.09	.17	2.02	.05	.81

To answer the third and fourth questions, “In what ways do band directors’ personality types or teaching styles contribute to the number of state concert band events in which their bands participated?” and “In what ways do band directors’ personality types or teaching styles contribute to the number of competitive marching band events in which their bands participated?” I used stepwise multiple regression with the thirty eight predictor variables and the criterion variables of state FBA concert festival attendance and FMBC competitive marching band event attendance. Results of these regression procedures are indicated in Table 15.

Table 15

Stepwise Regression and ANOVA for State Concert Attendance and FMBC Attendance

Step	Predictor Variables Included	<i>R</i>	<i>R</i> ²	adj <i>R</i> ²	<i>df</i>	<i>F</i>	<i>p</i> <
State FBA Concert Band Attendance							
1	Time Efficiency (TE)	.24	.06	.05	1, 152	9.11	.01
2	TE + Pos. Learn. Environ (PLE)	.31	.10	.09	2, 151	8.17	.001
3	TE + PLE + Immoderation (Im)	.36	.13	.11	3, 150	7.31	.001
4	TE + PLE + Im + MCL*	.40	.16	.13	4, 149	6.87	.001
5	TE + PLE + Im + MCL + GD*	.45	.20	.17	5, 148	7.44	.001
6	TE + PLE + Im + MCL + GD + AT*	.48	.23	.20	6, 147	7.27	.001
FMBC Competitive Marching Band Attendance							
1	Time Efficiency (TE)	.19	.04	.03	1, 152	5.68	.05
2	TE + Dutifulness (D)	.27	.07	.06	2, 151	5.92	.01
3	TE + D + Nonverbal Motiv. (NM)	.32	.10	.08	3, 150	5.69	.001
4	TE + D + NM + Modesty	.37	.14	.11	4, 149	5.87	.001

*MCL- Music Concept Learning, GD- Group Dynamic AT- Assertive Teaching

Using state FBA concert band attendance as the criterion variable, SPSS entered Time Efficiency in the first step. The second step included both Time Efficiency and Positive Learning Environment, while the third step added to these two predictors Immoderation. Step four added Music Concept Learning, step five added Group Dynamic, and the sixth and final model included the previous five predictors along with Assertive Teaching. The final step containing the six predictors is considered significant: $F(6, 147) = 7.27, p < .001$, and accounts for approximately 20% of the variation in state FBA concert band festival attendance (adjusted $R^2 = .20$). SPSS did not include any other

predictor variables in the stepwise regression for state concert band attendance as they were determined not to contribute significantly to the variation in concert band ratings.

Using FMBC competitive marching band attendance as the criterion variable, SPSS entered Time Efficiency in the first step. The second step included both Time Efficiency and Dutifulness, while the third step added Nonverbal Motivation to these two predictors. The fourth and final step added Modesty to the previous three predictors. The final step containing the four predictors is considered significant: $F(4, 149) = 5.87, p < .001$, and accounts for approximately 11% of the variation in concert band ratings (adjusted $R^2 = .11$). SPSS did not include any other predictor variables in the stepwise regression for FMBC competitive marching band attendance as they were determined not to contribute significantly to the variation in FMBC competitive marching band attendance.

Regression coefficients for each of the predictor variables included in the stepwise regression procedure were calculated along with p values and tolerance for multicollinearity. All regression coefficients were significant at the .05 level, and most have a very high tolerance for multicollinearity. The only two tolerance values below .70 were Group Dynamic (.63) and Music Concept Learning (.56) as predictors for state FBA concert band attendance. Table 16 provides regression coefficients for the predictor variables in each of the steps in the regression.

To address the fifth research question, “In what ways do band directors’ personality types or teaching styles contribute to the balance between marching and concert band participation and scores?” I first generated frequencies and descriptive statistics for the variable balance, which indicated 83.4% ($n = 131$) of subjects were

Table 16

Regression Coefficients for Predictor Variables associated with Criterion Variables

Predictors included	B	SE B	β	<i>t</i>	<i>p</i> <	tolerance
State FBA Concert Band Attendance						
Time Efficiency	.31	.08	.36	4.07	.001	.70
Positive Learning Environ.	-.19	.07	-.23	-2.63	.01	.70
Immoderation	.09	.04	.16	2.24	.05	.98
Music Concept Learning	.30	.08	.36	3.71	.001	.56
Group Dynamic	-.21	.07	-.27	-2.97	.01	.63
Assertive Teaching	-.14	.06	-.19	-2.31	.05	.81
FMBC Competitive Marching Band Attendance						
Time Efficiency	.91	.25	.32	3.63	.001	.77
Dutifulness	-.46	.20	-.17	-2.25	.05	.97
Nonverbal Motivation	-.67	.25	-.24	-2.71	.01	.74
Modesty	-.29	.12	-.19	-2.42	.05	.94

Table 17

Descriptive Statistics of Criterion Variables by Balance

Variable	Balanced					Marching-Oriented				
	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Marching	131	1.44	.49	1.18	.90	26	1.37	.36	.57	-.96
Concert	131	1.62	.50	1.43	2.84	26	2.29	.36	.06	-.80
FMBC score	94	72.08	9.88	-.08	-1.05	26	71.98	8.20	-.22	-.74
FMBC attend.	131	1.23	1.20	.72	-.61	26	2.53	1.31	.00	-1.38

balanced, and 16.6% ($n = 26$) were marching oriented. No participants were classified as concert-oriented. Frequencies and percentages for balance by gender, academic degree, and instrument are located in Appendices G, H, and I. Descriptive statistics for the criterion variables based on balance classification are listed in Table 17. No information is provided for state concert band ratings or participation since by definition no marching oriented subjects participated in these events.

Although the two groups have very similar means for marching band ratings, there is slightly more variability in the mean ratings of balanced subjects. Balanced subjects scored a mean of .67 points higher than marching-oriented subjects on concert band ratings. The marching category was defined as having a concert rating a minimum of .50 points “lower” (closer to 1.00; a Superior) than their marching rating, but the data reveal marching-oriented subjects had a mean concert score .92 points lower than their mean marching ratings. The mean for FMBC competitive marching band events was actually .10 points lower for marching-oriented subjects ($M=71.98$) than balanced subjects ($M=72.08$). Marching-oriented subjects attended a mean of 2.53 FMBC events annually, more than twice as often as balanced subjects who attended a mean of 1.23 annually (a difference of 1.30 events per year).

To establish a clearer picture of the differences between the balanced and marching-oriented groups in relation to the criterion variables, a MANOVA was computed using the criterion variables of marching and concert band scores as well as frequency of attending marching competitions and state concert band festival. Prior to the MANOVA, the Box’s M test of homogeneity of variance was 7.86 ($F = .74, p > .05$), non-significant, indicating the homogeneity of variance assumption was met. The

MANOVA result indicated a significant difference between the two groups, with a Wilks' $\lambda = .46$, $F = 33.33$, $p < .001$. There was a medium effect size (partial $\eta^2 = .54$) and a strong observed power of 1.00. The Univariate F tests (see Table 18) indicated there was no significant difference between the balanced and marching oriented subjects in their mean marching band scores: $F(1, 118) = .00$, $p > .05$. Concert band ratings were significantly higher for balanced subjects than marching-oriented subjects: $F(1, 118) = 63.82$, $p < .001$. The difference in FMBC scores between balanced and marching-oriented subjects is not significant: $F(1, 118) = .00$, $p > .05$. The finding that marching-oriented subjects attended a mean of more than twice as many FMBC events as balanced subjects annually was a significant difference: $F(1, 118) = 10.36$, $p < .01$. Again, data for state concert band were not included since by definition of the marching-oriented balance category, no subjects in this category participated in state concert band events.

Table 18

Univariate F-tests of Criterion Variables on Balance

Variable	<i>SS</i>	<i>df</i>	<i>F</i>	<i>p</i>
Marching	.00	1, 118	.00	>.05
Concert	10.34	1, 118	63.82	<.001
FMBC score	.23	1, 118	.00	>.05
FMBC attend.	13.22	1, 118	10.36	<.01

Next I examine the effect of predictor variables of personality (anxiety, anger, depression, self consciousness, immoderation, vulnerability, friendliness, gregariousness, assertiveness, activity, excitement seeking, cheerfulness, imagination, artistic interest, emotion, adventurousness, intellect, liberalism, trust, morality, altruism, cooperation, modesty, sympathy, self efficacy, orderliness, dutifulness, achievement striving, self discipline, and cautiousness) and teaching styles (assertive teaching, nonverbal motivation, time efficiency, positive learning environment, group dynamics, music concept learning, artistic music performance, and student independence) on the criterion variable of balance. Descriptive statistics comparing the two groups is in Table 19.

I then conducted a discriminant analysis with balance as the criterion variable, and the eight teaching style and thirty personality facets were the predictor variables. A total of 137 cases (77.8% of the total sample) contained enough data to be analyzed. Results of the univariate ANOVA tests of equality generated by the discriminant procedure are presented in Table 20. The results indicate only four predictor variables are significantly different between balanced and marching-oriented groups: Anxiety, Assertiveness, Emotion, and Adventurousness.

The discriminant analysis procedure which displayed the differences between means on predictor variables for balanced and marching oriented subjects revealed that they significantly differ on four personality facets. Anxiety (Wilks' $\lambda = .97$, $F [1, 135] = 4.11$, $p < .05$), Assertiveness (Wilks' $\lambda = .96$, $F [1, 135] = 5.56$, $p < .05$) and Adventurousness (Wilks' $\lambda = .96$, $F [1, 135] = 6.42$, $p < .05$) and Emotion (Wilks' $\lambda = .97$, $F [1, 135] = 3.93$, $p < .05$), and had significant effects on discriminating between balanced subjects and marching oriented subjects.

Table 19

Descriptive Statistics of Predictor Variables by Balance

Variable	Balanced					Marching-Oriented				
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>skew.</i>	<i>kurt.</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>skew.</i>	<i>kurt.</i>
Teaching Style										
Assert. Teach.	132	4.01	.53	-.23	-.44	26	3.98	.50	.22	-.46
Nonv. Motiv.	132	3.91	.49	-.08	.00	26	3.75	.34	-.31	-.29
Time Effic.	132	4.25	.48	-.42	-.66	26	4.10	.38	-.12	1.28
Pos. Lrn. Env.	132	4.22	.49	-.56	-.03	26	4.11	.42	.50	.03
Group Dynam.	132	3.27	.54	.14	.05	26	3.24	.46	-.71	.79
Mus. Conc. L.	132	3.78	.49	-.38	.48	26	3.64	.44	.50	-1.07
Art. Mus. Perf.	132	3.55	.51	-.42	.56	26	3.36	.59	.41	.02
Stud. Indep.	132	3.45	.59	.01	.06	26	3.32	.69	.66	-.35
Personality- Neuroticism										
Anxiety	116	2.90	.83	.01	-.75	24	2.63	.83	.85	1.73
Anger	116	3.08	.94	-.26	-.53	23	2.82	.81	.10	-1.34
Depression	116	2.09	.85	.63	-.06	23	1.84	.56	.05	-1.00
Self Consc.	116	3.03	1.04	-.18	-.77	23	2.76	.87	.13	-1.15
Immoderation	115	2.87	.74	-.07	.41	23	2.56	.64	.36	-.39
Vulnerability	115	2.31	.84	.31	-.52	23	2.15	.71	.29	-.16
Personality- Extraversion										
Friendliness	116	3.81	.78	-.53	-.45	24	3.90	.74	-.34	-.56
Gregariousness	116	2.98	1.00	-.06	-.96	23	3.07	.92	.17	-.52
Assertiveness	115	4.25	.63	-1.37	3.31	23	3.90	.59	-1.04	1.78
Activity	115	3.63	.68	-.16	-.55	23	3.68	.61	-.25	.00
Excite. Seek.	115	2.96	.72	.18	-.42	23	2.95	.52	.20	-.28
Cheerfulness	115	3.90	.63	-.23	-.66	23	3.98	.55	-.60	.64
Personality- Openness to Experience										
Imagination	116	3.46	.84	-.12	-.54	24	3.63	.84	.27	-.92
Artistic Int.	116	4.00	.67	-.90	1.08	23	4.18	.54	-.30	-.52
Emotion	115	3.80	.59	-.23	-.29	23	3.53	.56	-.53	-.76
Adventurous.	115	2.88	.82	.12	-.42	23	3.35	.73	.56	.29
Intellect	115	4.06	.83	-.67	-.30	23	4.12	.73	-.42	-.09
Liberalism	115	2.50	.96	.14	-.84	23	2.38	.96	-.24	-1.47
Personality- Agreeableness										
Trust	116	3.62	.78	-.65	-.10	24	3.70	.87	-1.16	1.78
Morality	116	4.33	.62	-1.02	.93	23	4.34	.55	-.34	-1.13
Altruism	115	4.25	.59	-.76	.39	23	4.28	.40	.51	-.75
Cooperation	115	3.84	.86	-.70	.06	23	3.73	.74	.09	-.32
Modesty	115	3.12	.86	.12	-.91	23	3.08	.73	.60	-.85
Sympathy	115	3.68	.71	-.70	.91	23	3.84	.62	-1.00	2.56
Personality- Conscientiousness										
Self Efficacy	116	4.30	.49	-.57	-.15	24	4.19	.44	.19	-.56
Orderliness	116	3.47	1.05	-.34	-.83	23	3.33	.88	.00	-.93
Dutifulness	115	4.47	.50	-.57	-.57	23	4.52	.46	-.65	.32
Achieve. Striv.	115	4.61	.45	-1.02	.22	23	4.50	.46	-.41	-1.17
Self Discipline	115	3.86	.67	-.29	-.89	23	3.85	.58	-.22	-.07
Cautiousness	115	3.78	.96	-.64	-.29	23	3.84	.73	-.63	-.57

Table 20

Difference of Group Means Between Balanced and Marching Oriented Subjects

Predictor	Wilks' λ	F	df	p
Teaching Style				
Assertive Teaching	1.00	.01	1, 135	NS
Nonverbal Motivation	.99	1.93	1, 135	NS
Time Efficiency	.98	2.17	1, 135	NS
Positive Learning Environment	1.00	.41	1, 135	NS
Group Dynamic	1.00	.10	1, 135	NS
Music Concept Learning	.98	2.50	1, 135	NS
Artistic Musical Performance	.98	2.65	1, 135	NS
Student Independence	.99	1.07	1, 135	NS
Personality- Neuroticism				
Anxiety	.97	4.11	1, 135	< .05
Anger	.99	1.69	1, 135	NS
Depression	.99	1.82	1, 135	NS
Self Consciousness	.99	1.52	1, 135	NS
Immoderation	.97	3.68	1, 135	NS
Vulnerability	1.00	.72	1, 135	NS
Personality- Extraversion				
Friendliness	1.00	.05	1, 135	NS
Gregariousness	1.00	.15	1, 135	NS
Assertiveness	.96	5.56	1, 135	< .05
Activity	1.00	.07	1, 135	NS
Excitement Seeking	1.00	.00	1, 135	NS
Cheerfulness	1.00	.34	1, 135	NS
Personality- Openness to Experience				
Imagination	1.00	.31	1, 135	NS
Artistic Interest	.99	1.41	1, 135	NS
Emotion	.97	3.93	1, 135	< .05
Adventurousness	.96	6.42	1, 135	< .05
Intellect	1.00	.09	1, 135	NS
Liberalism	1.00	.35	1, 135	NS
Personality- Agreeableness				
Trust	1.00	.01	1, 135	NS
Morality	1.00	.01	1, 135	NS
Altruism	1.00	.09	1, 135	NS
Cooperation	1.00	.33	1, 135	NS
Modesty	1.00	.06	1, 135	NS
Sympathy	.99	1.08	1, 135	NS
Personality- Conscientiousness				
Self Efficacy	.99	1.99	1, 135	NS
Orderliness	1.00	.27	1, 135	NS
Dutifulness	1.00	.13	1, 135	NS
Achievement Striving	.99	.93	1, 135	NS
Self Discipline	1.00	.00	1, 135	NS
Cautiousness	1.00	.08	1, 135	NS

A discriminant function was run using all predictor variables with a stepwise selection procedure, which used the probability of F (entry: .05, removal .10) method to determine inclusion in the discriminant function. Four steps were produced by SPSS, beginning with Adventurousness, followed by Adventurousness plus Assertiveness, then the previous two plus Immoderation, and finally the preceding three predictors plus Emotion. This discriminant function was able to significantly differentiate the variance between groups (Wilks' $\lambda = .84$, $\chi^2 = 23.42$, $df = 4$, $p < .001$). These results are presented in Table 21.

Table 21

Discriminant Function Analysis of Balance (Stepwise Entry Method)

Statistic	Function
Eigenvalue	.193
% of variance	100.0%
Canonical correlation	.402
Wilks' λ	.839
χ^2	23.417
df	4
$p <$.001
Group centroid: Balanced	.191
Group centroid: Marching-oriented	-.996

The discriminant function using the predictors Adventurousness, Assertiveness, Immoderation, and Emotion was able to successfully predict group membership 72.3% of the time. Prediction for membership in the balanced category is based on higher levels of

Assertiveness, Immoderation, and Emotion, and lower levels of Adventurousness, while the opposite predicts membership in the marching-oriented group. The function correctly predicted balanced subjects 73.0% of the time, and correctly predicted marching-oriented subjects 68.2% of the time.

Chapter 5: Summary, Discussion, Conclusions, Implications, and Recommendations

This chapter begins with a summary of the study including the problem, theoretical framework, purpose, research questions, literature review, methodology, and results of the data analysis. Following these are a discussion of the results, conclusions, and implications of this research for the field of music education. The final section includes recommendations for further research in music education.

Summary

The purpose of this research was to examine the relationship between high school band directors' teaching style and personality and the director's ratings in marching and concert band festivals. Personality was examined using the Five-Factor model of personality which consists of five personality domains and thirty personality facets, and teaching style was examined using Gumm's Music Teaching Style Inventory which examined eight different modes of instruction. Band performance success was represented by concert and marching festival ratings.

The literature indicated significant factors influencing band ratings such as school size, band size, budget, academic degree and teaching experience of band directors, having a higher percentage of juniors and seniors in the band, having a highly customized marching band show (both drill and music), having larger numbers of assistant directors and staff members, attending a larger number of festivals and competitions, and studying concert band literature during marching band season. The literature on personality

focused primarily on Myers-Briggs personality types, and the most effective personality for a high school band director may be Introverted, Intuitive, Thinking, and Judging, or INTJ (Mastermind). Gumm's model of teaching style has helped to better understand which teaching styles influence behavior and performance outcomes, and helped educators understand which styles they employ and to what degree. The research indicated the four student-directed teaching styles are less prevalent than the four teacher-directed styles but may be indicators of more effective teaching.

This study was designed as a descriptive correlational study, with data gathered through an online survey and publicly available band ratings on the internet. The entire population of 384 high school band directors in the state of Florida who directed both concert and marching band programs was offered the survey. Criterion variables included marching and concert festival ratings, state concert band ratings, FMBC competitive marching band scores, frequency of attendance of these last two events, and the balance between marching and concert band. Predictor variables included thirty personality facets and eight teaching styles. Four demographic variables examined were gender, experience, highest academic degree, and primary instrument.

Data collection resulted in 176 usable surveys (45.8% of the population). Time Efficiency stood out as having particularly strong correlations with criterion variables. Regression models indicate 23% of the variation in concert band ratings can be predicted from five variables: Time Efficiency, Immoderation, Music Concept Learning Assertiveness, and Nonverbal Motivation. For marching band scores, 22% of the variation in ratings can be explained by a set of six variables: Time Efficiency, Music Concept Learning, Imagination, Modesty, Cheerfulness, and Anxiety. Variation in

participation in state FBA concert band festival participation can be partially predicted with a combination of six predictor variables: Time Efficiency, Positive Learning Environment, Immoderation, Music Concept Learning, Group Dynamic, and Assertive Teaching predict approximately 20% of the variation. Regression models found a combination of four variables which predict 11% of the variation in FMBC competitive marching band event: Time Efficiency, Nonverbal Motivation, Dutifulness, and Modesty. Most subjects (83.4%) were balanced in concert and marching band duties, while the remaining 16.6% were marching-oriented. Balanced and marching-oriented subjects differed significantly only on the criterion variables of concert ratings and FMBC competitive marching band frequency. A discriminant function selected four predictor variables which had a significant effect: Assertiveness, Immoderation, Adventurousness, and Emotion (Wilks' $\lambda = .84$, $\chi^2 = 23.42$, $df = 4$, $p < .001$). This function was able to successfully predict group membership 72.3% of the time. Prediction for membership in the balanced category is based on higher levels of Assertiveness, Immoderation, Emotion, and lower levels of Adventurousness, while the opposite predicts membership in the marching-oriented group.

Discussion

The purpose of this research was to examine some of the relationships between high school band directors' teaching style, personality and their ratings and attendance at marching and concert band festivals, as well as how band directors balance their responsibilities with marching and concert bands. This study employed the Music Teaching Style Inventory, the Five-Factor model of personality, and published band ratings to address the research questions. Most reliability coefficients were sufficiently

high, between .70 and .85 for all three instruments. The results are generalizable not only to Florida high school band directors (45.9% of the population responded to the survey instrument, $N=176$), but due to the variety of types of communities represented across the state of Florida the results may also be generalized to other states where high school band directors are active in similar activities of marching and concert band. This study only examines subjects in Florida in part since it is a relatively large and convenient sample which contains diverse communities. More importantly, keeping data from only one state helped to maintain consistencies with band ratings such as adjudication standards and rating systems. Reliability coefficients for all data sources were generally moderate to high (mid-.60s to low .90s), with a few exceptions. The following discussion is organized to begin with the results of the preliminary analysis and descriptive data, followed by the research questions in order.

The Preliminary Analysis

Demographic variables provided some contextual information about the subjects who participated in the study. As mentioned, the distribution of subjects by gender is a very accurate representation of the population, with 15.9% female and 84.1% male. Slightly more than half of the subjects indicated their highest degree was a Bachelors degrees (55.5%) while slightly less than half (42.2%) indicated Masters degrees. Only four subjects (2.3%) indicated a Specialist or incomplete Doctoral degree. The distribution of subjects' primary instruments may be influenced by the gender distribution, as well as which instruments tend to be more common in band programs. Nearly 30% of the subjects played trumpet, followed by saxophone, trombone, percussion, and clarinet. The least frequently chosen instruments were double reeds (5

bassoons and 1 oboe) which are the least used instruments in most bands, four flutes, all of whom were female (which represents less than 16% of the sample), and instruments which are not included in a typical band: piano/keyboard (3) and stringed instruments (1). Mean director experience was 12.77 years, although because of the number of less-experienced directors there was a standard deviation of 9.94 years and the distribution is skewed positively (.93).

The criterion variables indicated higher overall mean scores for marching band (1.45) than concert band (1.78). A possible reason for this may be that a school may only have one marching band, while it may have two, three, or sometimes even four concert bands, each receiving separate ratings (all bands in a school were averaged together for a given year in this study). While the shortcomings of weak musicians' playing on a marching band field may be covered up by the sound of stronger players, this is not the case in smaller ensembles where students are often grouped by musical ability.

Descriptive statistics for teaching styles may be classified by teacher-directed styles (the first four: Assertive Teaching, Nonverbal Motivation, Time Efficiency, Positive Learning Environment) and student-director styles (the second four: Group Dynamics, Music Concept Learning, Artistic Music Performance, and Student Independence). The teacher directed styles (means of 4.00, 3.89, 4.22, and 4.22, respectively) were all reported higher than all of the student-directed styles (3.27, 3.75, 3.53, and 3.43, respectively). This is similar to the results found by Bazan (2007) where middle school band directors reported a mean of 4.00 for teacher-directed styles and a mean of 3.08 for student-directed styles.

Most of the personality facets remained between 2.50 and 3.99, although eight personality facets were higher than 4.00. Three of these fell under the personality domain of Conscientiousness. The single highest personality facet was Achievement Striving ($M=4.61$), followed closely by Dutifulness ($M=4.52$) and Self Efficacy ($M=4.30$). Two particularly high facets were part of the Agreeableness domain: Morality ($M=4.36$) and Altruism ($M=4.26$). One of the highest facets was part of the Extraversion domain: Assertiveness ($M=4.19$), and the last two of the highest rated facets were parts of the domain Openness to Experience: Intellect ($M=4.05$) and Artistic Interest ($M=4.05$). Two of the three lowest facets were parts of the Neuroticism domain: Depression ($M=2.04$) and Vulnerability ($M=2.25$), and one low facet, Liberalism ($M=2.48$), is part of the Openness to Experience domain.

Some facets indicated different findings than general population norms reported by Johnson (2005). Subjects scored lower on all facets of Neuroticism, especially on Depression (2.04 here versus 2.66 for norm). Subjects scored higher on five of the six facets of Extraversion, although Gregariousness was nearly the same (3.02 here compared to the norm of 3.00). The one Extraversion facet subjects scored lower in was Excitement Seeking (2.95 as opposed to the norm 3.36). Openness to Experience had a mixture of higher facets and lower facets compared to the norms; two facets were higher (Artistic Interest was 4.05 instead of 3.89 and Intellect was 4.05 instead of 3.86) and four facets were lower. Subjects scored much lower than norms for Imagination (3.48 versus 4.01) and Liberalism (2.48 versus 2.98). For the domain of Agreeableness, subjects scored slightly above or very close behind the population norms. Trust, Morality, Altruism, and Cooperation were above population norms (by .35, .23, .18, and .17 points,

respectively) while Modesty and Sympathy were slightly lower than population (by .02 points and .03 points, respectively). The greatest amount of difference was in the domain of Conscientiousness, where every facet was higher than the population norms, and typically by a large amount. The greatest difference was with the facet of Achievement Striving, which was above pointed out as being the single highest facet for the subjects. The difference between subjects here and the population norms is .75 points. The other facets were Cautiousness which was .62 points higher, Self Discipline was .58 points higher, Dutifulness was .52 points higher, Orderliness was .45 points higher, and Self Efficacy was .36 points higher.

These findings indicate high school band directors in this study have high levels of Conscientiousness and each of its facets. In fact, subjects indicated higher levels of every facet of Conscientiousness than population norms. This may suggest the profession of high school band director may be attractive to people who are very conscientious, or being a high school band director develops conscientiousness in people. This may also suggest only conscientious high school band directors in the state of Florida completed the survey instrument. Along with being dedicated, prudent, self-disciplined, responsible, organized, and generally competent, a typical high school band director in Florida may also be somewhat more outgoing, and more emotionally stable, down to earth, and politically conservative than members of the general population.

Correlations between academic degree and band ratings and between experience and band ratings support the findings of existing research. There is a small but significant correlation between subjects' highest academic degree and band ratings ($r = .18, p < .05$ for concert and $r = .18, p < .05$ for marching), which agrees with the findings of Beaver

(1973), Davis (2000), Dawes (1989), Fosse (1965), Goodstein (1984), Maxwell (1970), Mann (1979), Saul (1976), and Washington (2007) who also found a positive correlation between more advanced degrees and higher-achieving bands. Researchers who indicated specific correlation coefficients produced correlations which were also relatively small yet significant. There is also a small but significant correlation between subject's experience and band ratings ($r = .34, p < .001$ for concert ratings, $r = .20, p < .05$ for marching ratings, and $r = .20, p < .05$ for FMBC competitive marching ratings). This agrees with the findings of Davis (2000), Dawes (1989), DeCarbo (1986), Fosse (1965), Head (1983), Maxwell (1970), Mann (1979), Saul (1976), and Washington (2007) who also found festival ratings improve with increased band director experience. As with academic degree, others found moderately low correlations similar to the findings here. Another finding in this study which corresponds with existing research is that there is a small negative correlation ($-.09$, but non-significant) between experience and attending FMBC competitive marching band events, which is similar to Dawes' (1989) finding that less experienced and younger directors attended a larger number of competitions than older, more experienced directors.

The correlation results indicate significant positive correlations with concert band ratings and several teaching styles and personality facets including Time Efficiency, Music Concept Learning, Artistic Musical Performance, Student Independence, Assertiveness, Self Efficacy, and Achievement Striving. There are also significant positive correlations for marching band ratings including Assertive Teaching, Time Efficiency, Music Concept Learning, Activity, and Self Efficacy. Time Efficiency, Assertiveness, and Self-Efficacy had significant positive correlations with State FBA

concert band festival attendance. It is noteworthy that Time Efficiency had a significant positive correlation with all of the criterion variables. Time Efficiency was the only predictor variable with a significant positive correlation with ratings at FMBC competitive marching band events and state FBA concert ratings. Time Efficiency and Activity have significant positive correlations with attendance at FMBC competitive marching band events, and there are four personality facets with significant negative correlations as well: Emotion, Cooperation, Modesty, and Dutifulness. This indicates those who attend fewer FMBC competitive marching band events indicated a tendency toward more emotion, a greater sense of cooperation, more modesty, and more dutifulness as measured by the IPIP-NEO.

Research Question 1: What kinds of relationships exist between band directors' personality types or teaching styles and their concert band ratings?

The data suggest there are five predictor variables which have a strong relationship with concert band ratings. The combination of the teaching styles Time Efficiency, Music Concept Learning, and Nonverbal Motivation along with the personality facets Immoderation and Assertiveness predict approximately 23% of the variation in concert band scores. These agree in part with the teaching styles Gumm (2003b) found to correlate to higher ratings for choral directors at contest, which were Artistic Music Performance and Nonverbal Motivation. Gumm's (2003b) study incorporated other criteria such as highest degree and geographical area along with teaching styles to determine factors which contributed to the variation in choral contest ratings. Artistic Music Performance and Nonverbal Motivation along with highest degree and geographical area explained 34% of the variation in choral ratings. The fact that

personality facets and teaching styles only contributed 23% of the variance in criterion variables agrees with Washington's (2007) conclusions that factors pertaining to the students and the school contribute far more to a band's success than aspects of the band director. Price (1983) and Yarbrough and Madsen (1998) found similar results with the predictor of Music Concept Learning influencing band ratings regarding teacher directions and class pacing.

It is interesting that the stepwise regression procedure identified these five predictors to establish a model, which is able to indicate the most variation in concert band ratings and not others which were more strongly correlated. The procedure first included the strongest three correlated predictor variables: Time Efficiency ($r = .33, p < .001$), Music Concept Learning ($r = .30, p < .001$), and Assertiveness ($r = .27, p < .01$) but then the model did not include the next most strongly correlated predictors: Self Efficacy ($r = .25, p < .001$), Artistic Music Performance ($r = .24, p < .01$), and Student Independence ($r = .21, p < .01$). However, the model then includes Immoderation ($r = .19, p < .05$) and another teaching style which is not a significant correlation: Nonverbal Motivation ($r = .11, p > .05$). Nonverbal Motivation is a negative predictor of concert band success: the *beta* coefficient indicates band ratings will decrease by .27 points for every 1 point of increase of Nonverbal Motivation. The fact that Student Independence was not included confirms the findings of Petters (1976) who found student contribution to decisions on how to interpret music did not contribute significantly to band ratings.

These findings seem to indicate a strong leader who takes charge, uses every moment of rehearsal effectively, and is able to instruct the band effectively and teach musical concepts will be more effective in preparing a band for a performance. It may be

a director who is passionate and can become emotionally involved with musical expression may also be prone to material indulgence, which may explain why there is a positive correlation between Immoderation and higher concert band ratings. Finally, as Nonverbal Motivation is a predictor of lower concert band ratings, it may be more important for directors in the concert band setting to communicate more overtly and directly to be effective.

Research Question 2: What kinds of relationships exist between band directors' personality types or teaching styles and their marching band ratings?

The data suggest there are six predictor variables which have a strong relationship with marching band ratings. The combination of the teaching styles Time Efficiency and Music Concept Learning and the personality facets Imagination, Modesty, Cheerfulness, and Anxiety predict approximately 22% of the variation in marching band scores. Again, the teaching styles which influence the variation in marching band scores are different from the teaching styles than Gumm (2003b) found to correlate to higher ratings for choral directors at contest (Artistic Music Performance and Nonverbal Motivation). As with concert ratings the personality facets and teaching styles contributing only 22% of the variance in criterion variables agrees with Washington's (2007) conclusions that factors pertaining to the students and the school contribute far more to a band's success than aspects of the band director. It is also important to note there is a negative relationship with all four personality facets in the regression model. The *beta* coefficients indicate marching band scores will tend towards a lower rating by .12 points for every 1 point increase in Imagination, decrease .11 points for every 1 point increase in Modesty, and decrease .26 points for every 1 point increase in Cheerfulness. While Imagination,

Modesty, and Cheerfulness may be considered by some as “positive” personality traits, there is also a negative correlation with one “negative” personality trait: Anxiety. The *beta* coefficient for Anxiety indicates marching band scores will tend toward a lower rating by .13 points for every point increase in Anxiety. Stated another way, marching band ratings improve with less anxious directors. Again the stepwise regression procedure used these six predictors to establish a model which is able to indicate the most variation in marching band ratings but did not include all of the significantly correlated predictor variables. The procedure included the two strongest correlated predictor variables, Time Efficiency ($r = .37, p < .001$), and Music Concept Learning ($r = .27, p < .001$) but did not include Self Efficacy or Activity.

As with concert band ratings, Music Concept Learning appears to be a salient component of music education and rightly is part of the prediction model. Time Efficiency’s role in predicting success is an indication of the importance of accomplishing the numerous tasks associated with running an effective marching band program. Directors with high levels of Anxiety may not be able to successfully handle the numerous simultaneous responsibilities and activities involved in marching bands. Band directors who are level-headed and somber of mood may be more prepared to successfully manage the direction and organization of the program which can result in emotional ups and downs with stress as well as performance success. Although Imagination may seem an important aspect of any creative art, the successful marching band director may hire drill writers and arrangers to take care of the creative aspects of the marching band program while the director manages the task of teaching the music and drill routines. A humble or modest director may be less inclined to show off the band’s

talent, while the director with a sense of pride may showcase the band to its fullest potential.

Research Question 3: In what ways do band directors' personality types or teaching styles contribute to the number of state concert band events in which their bands participated?

State FBA concert band festival participation appears to have a significant relationship with six predictor variables. The combination of the teaching styles Time Efficiency, Positive Learning Environment, Music Concept Learning, Group Dynamic, Assertive Teaching and the personality facet Immoderation predict approximately 20% of the variation in frequency of state FBA concert band festival attendance. The influence of Group Dynamic is similar to Gumm's (2003b) finding that Group Dynamic, along with Artistic Music Performance, experience, geographic location, and frequency of workshop training accounted for 31% of the variation in choral music festival participation. Increases in Time Efficiency, Music Concept Learning, and Immoderation predict increases in frequency of attendance at state FBA concert band festival, while the other three predict decreases in attendance. Higher levels of Assertive Teaching, Group Dynamic, and Assertiveness correlated with less frequent attendance at state FBA concert band festival. Three of the five significantly correlated predictors were included in this model, but Self Efficacy and Assertiveness were not.

To be able to participate in state concert band festival the director must use every moment of rehearsal time effectively while being an effective music teacher. In order to use rehearsal time effectively the director may be less concerned with student input or delegation of responsibility to students. Even though this may help develop effective

student leaders, the learning process of students taking charge may slow down the process of driving towards the goal of perfecting a piece of music. There is a negative relationship with Assertive Teaching, which is characterized by emphasis on following instructions and keeping discipline. It may be that the more successful directors have already established expectations of discipline earlier in their career and it no longer needs to be addressed on a regular basis. Like concert band ratings, an increase in Immoderation corresponds with an increase in participation in state FBA concert band festival. The negative relation with Positive Learning Environment (PLE) may be related to the need for the director to dominate the rehearsal with this very high level of performance achievement. Two-way interactions between director and students, careful and judicious use of praise, and positive reinforcement are some of the primary characteristics of PLE. The director who takes his or her band to state FBA more often may be more focused on rigorously correcting and perfecting the music than with what he or she may conceive of as coddling students' feelings during rehearsals.

Research Question 4: In what ways do band directors' personality types or teaching styles contribute to the number of competitive marching band events in which their bands participated?

Variation in FMBC competitive marching band event participation is predicted by four variables in the stepwise regression model. The combination of the teaching styles Time Efficiency and Nonverbal Motivation with the personality facets Dutifulness and Modesty predict approximately 11% of the variation in frequency of FMBC competitive marching band event participation. Increases in Time Efficiency predict increases in frequency of attendance FMBC competitive marching band events, while the other three

predict decreases in attendance. Higher levels of Dutifulness, Modesty, and Nonverbal Motivation are predicted to decrease frequency of attendance at FMBC competitive marching band events. Nonverbal Motivation is not significantly correlated with FMBC participation, but has been included in the model. Four personality facets which have significant correlations with FMBC participation were not included in the regression model, which are Activity, Cooperation, and Emotion.

Although personality and teaching style predict only 11% of the variation in participation in marching band competitions, those components that do influence it are similar to those indicators of success with marching band. The same reasons Time Efficiency and Modesty influence marching band seem to logically also influence participation in marching band competitions. Dutifulness is a predictor of *less* frequent participation in marching band competitions, which may indicate it could be irresponsible for the director to overtax students by engaging them in marching competitions repeatedly during the marching season.

Research Question 5: In what ways do band directors' personality types or teaching styles contribute to the balance between marching and concert band participation and scores?

Before examining the predictor variables' effect on balance, I first determined the percent of the subjects who are in each category. Balanced subjects were 83.4% of the sample, and the other 16.6% were marching-oriented. No directors were classified as concert oriented. I then indicated descriptive statistics for the criterion variables by balance category, and then determined if the difference were significant. There is no significant difference between balanced and marching-oriented subjects in achievement

at marching band events or FMBC competitive marching band events. That is, marching-oriented subjects are not significantly better than balanced directors at the two things which define them: FBA marching ratings and competitive marching ratings. However, balanced directors score significantly higher at concert band festival, and marching oriented directors attend FMBC competitive marching band events significantly more often than balanced directors. The discriminant function included four predictor variables: Assertiveness, Immoderation, Adventurousness, and Emotion. This discriminant function was able to significantly differentiate the variance between groups (Wilks' $\lambda = .84$, $\chi^2 = 23.42$, $df = 4$, $p < .001$). Since this variable of balance is an experimental construct and is not known to exist in any other literature, there is no available information with which to compare these results.

Assertive leaders who take charge of their ensembles may be more likely to be balanced since the success at marching bands may be a result of several other staff members or instructors, eliminating the need for the director to be assertive, take charge, and be a leader. Directors who prefer traveling and seeking new challenges may be more inclined to be more active with the marching band rather than focusing on the more consistent and stable indoor concert band where artistic performance is more common than high-pressure competitions at district, state, or national levels. The most intriguing finding is that of Immoderation. The findings with marching band directors indicated they were perhaps more down to earth and somber, so this may be an indication that those who tend towards excess may be indicative of a tendency to show a focus on concert band which balanced the marching band. With less self-discipline a person might be more prone to partake in excesses. The same passion, which is a part of rich

enjoyment of beautiful sounds, may also lead towards enjoyment of rich foods, drink, or other indulgences. Emotional expression may be related to this Immoderation. Since music is a form of expression, it is natural that emotional expressiveness can be tied to this. There are typically more opportunities for expressiveness, rich emotion, and passionate involvement with concert band literature than with a field show.

Some predictor variables are included in regression models for more than one criterion variable. Some of the predictors predict increases in the criterion variable, while others predict decreases. Table 22 provides a summary of the significant predictor variables which have been included in the regression models for research questions 1 through 4 as well as the discriminant function for research question 5. A positive sign (+) indicates the criterion variable is expected to increase with higher levels of the predictor variable, while a negative sign (-) indicates the criterion variable is expected to decrease with an increase in the predictor variable.

Conclusions

Although the subjects for this study were exclusively from the state of Florida, it may be fair to generalize the results to other states where similar concert and marching band events take place. Not only were responses received from each FBA district within the state covering a wide geographic distribution and a variety of community types, but the state of Florida is diverse in terms of socioeconomic status, ethnicity, as well as state of origin. Florida has been a refuge for northerners wishing to escape cold climates for decades, so there is a probability some, if not many, Florida high school band directors were not born and raised in Florida.

Table 22

Summary of Predictors included in Regression Models and Discriminant Function

<i>Significant Predictors</i>	<i>Concert</i>	<i>Marching</i>	<i>St. Concert. Att.</i>	<i>Cmp. March. Att.</i>	<i>Balance</i>
<i>Teaching Styles</i>					
Time Efficiency	+	+	+	+	
Music Concept Lrn	+	+	+		
Nonverbal Motivation	-			-	
Assertive Teaching			-		
Group Dynamic			-		
Positive Learning Env.			-		
<i>Personality Facets</i>					
Immoderation	+		+		+
Assertiveness	+				+
Modesty		-		-	
Imagination		-			
Cheerfulness		-			
Anxiety		-			
Dutifulness				-	
Emotion					+
Adventurousness					-

It is important to point out that while band ratings were used as criterion variables throughout this study, they should not be considered an ultimate criterion of success for a band director, or a band program. A principal reason for their use in this study is that these ratings are published on publicly available websites dating back several years, which makes them a convenient source of data. Most schools have ratings available over several consecutive years, and the judging criteria for both the Florida Bandmasters Association and the Florida Marching Band Coalition are both detailed and consistent which helps establish the validity of their use as a measure of achievement. With high reliabilities indicated in chapter 4 it can now be stated that these band ratings are also a reliable measure of band performance. This finding is in agreement with the literature,

which found music festival contest ratings are reliable measures over time (Burnsed, Hinkle, & King, 1985; Guegold, 1989; Oakley, 1975). Still, a director whose sole goal is to seek high band ratings may neglect other, very important goals of a band program such as examining a breadth of literature, including literature which is at a level of difficulty for which the band may not be able to earn the highest ratings if it were performed at a festival.

The teaching style Time Efficiency seems to be particularly noteworthy due to its significant correlations with all of the criterion variables. These correlations are also among the strongest correlations in this research. The nature of Time Efficiency is for a teacher to strive to accomplish as much as possible during time spent with students. This teaching style is particularly well suited towards large ensemble settings where a teacher who uses time efficiently can rehearse many parts of the music, answer many student questions, and address many musical concepts. Gumm (2003a) wrote, “Time Efficiency is worth considering in a performance or active learning situation. The skills of Time Efficiency are especially important to overcome bad habits of over-dwelling, fragmenting, and flip-flopping” (p. 41). Based on the results of the data analysis, Time Efficiency is an important part of being a successful high school band director. Wasting rehearsal time might mean students get less playing time, receive less feedback from the director or instructors, get less experience developing physical playing or marching skills, learn less literature, learn fewer concepts, and have less time to reflect on performances to consider how to make improvements for the future.

Music Concept Learning is another predictor variable, which has a strong correlation with concert and marching band ratings and state FBA concert band festival.

This requires good questioning skills and the ability to generate critical thinking skills. Music Concept Learning entails concepts of music theory and history, understanding the expressive properties of music, understanding musical terminology, getting students to think critically in drawing comparisons between musical examples including evaluations of quality, and getting students to develop problem solving techniques to address performance issues such as interpretation (Gumm, 2003a). Teachers should strive to refine these delivery and questioning techniques to help develop students' factual knowledge about the music they are playing as well as music in general.

Two other teaching styles which significantly correlated with concert band ratings are Artistic Music Performance and Student Independence. Artistic Music Performance is made up of skills such as aural imagery of sound, psychomotor skills such as breathing correctly and physically playing instruments, and teacher modeling of sound verbally or with an instrument (Gumm, 2003a). These are particularly important skills in developing students' ability to focus on good sound and perform accurately with a mature and musical sound. These are the only things concert bands are evaluated on at festival, while marching bands also have movement and physical coordination elements to consider. This may be one of the reasons the correlation was stronger for concert band than marching band. Student Independence is an important teaching style where the teacher is more of a coach or guide than a director. To foster Student Independence a teacher must involve students in dialogue and discussion, find out what is important to students, encourage students to be creative and imaginative, involve the students in leading or governing their peers, their section, or the ensemble. Student Independence may be a

significant factor in jazz improvisation, developing strong student leaders, and being successful at solo and ensemble events.

Based on the results, it is possible to discern personality facets and teaching styles which contribute to a high school band director's success with a concert band. The director must use every moment of rehearsal for meaningful teaching and learning experiences and be confident that he or she is capable of accomplishing the tasks at hand. The director must be able to teach musical concepts effectively through questioning skills, encouraging critical thinking, and developing an understanding of music in the students. The director must be assertive and able to take charge. A director who is timid or reluctant to take charge of the class may have difficulty managing student behavior, or may simply not do what needs to be done. Assertiveness is a measure of leadership and initiative, one who can take charge and manage classroom activities for the students. The passion and emotional investment a successful concert band director permits himself or herself to indulge in to be expressive may carry over to other aspects of life where overindulgence may manifest itself.

The results indicate a successful marching band director might be one who takes advantage of every moment of rehearsal to accomplish important teaching and learning activities. Time management can be very important when there are potentially very large numbers of students who need to learn how to perform music, often from memory, while moving in intricate patterns across a field. As in concert band, directors need to help students understand musical concepts and be able to develop critical thinking skills. Success in marching band may also be tied to a degree of being down to earth and less mired in fantasy (Imagination facet). Dealing with the here-and-now in a practical,

sensible fashion is indicated as contributing to higher marching band scores. Amidst the pomp and pageantry, bold sounds and vivid visuals of a marching band show, a degree of pride from the director may naturally be tied to success more than a humble or self-effacing director. Pride is often a hallmark of a marching band programs and is even the band's verbal response to a call to attention for some programs. Despite this pride, marching band directors may not be the most predisposed towards positive emotions such as jollity, lightheartedness, and joy. Many band directors take their responsibilities to the marching band very seriously and perhaps assume the same serious manner in everyday life. Finally, the successful marching band director may be inclined to be cool-headed and calm. Worry and anxiety may be associated with weakness, while the director who is already bold and proud takes challenges as they come with a cool head and responds to problems and dilemmas with the level-headed sensibility alluded to above.

More frequent participation in state FBA concert band festival must be linked to better ratings at concert band, as it is not possible to participate in the state festival without first earning a superior at district in given year. Therefore, the two are integrally linked. As above, the director must be able to use every moment of class time for teaching and learning activities, and must be able to communicate conceptual and musical knowledge effectively through discussion and questioning. Teachers who more frequently attend state FBA concert band festival may spend less time on classroom discipline, possibly because he or she established standards for behavior from an early point and students meet those expectations, thereby removing the need for constant policing. As with concert band ratings, the passion of the music may be tied to personal habits of indulgence. Related to this, these directors may be more concerned with the

music than students' feelings. Teachers focused on the highest levels of refinement and nuance may be less willing to give up their control of the ensemble for student leaders and may be more inclined to direct the group themselves; high school students may not be aware of how best to solve musical problems at this particularly intense level of musical detail and perfection.

Personality and teaching style were only able to predict 11% of the variation in FMBC competitive marching band event participation. Therefore these factors, while significant, make up only a small part of the variation in frequency of attendance. It is also important at this point to note it may not be desirable for every director to increase their attendance at competitive marching band events. An over-emphasis on competition can be counterproductive. The first component in predicting frequency of attendance at FMBC competitive marching events is Time Efficiency. As indicated with marching band, a heavy schedule of competitive marching band performances requires using every moment of every rehearsal to its fullest, developing marching and musical fundamentals, working on the show, and so forth. Those who attend more marching competitions may be more likely to maintain focus on the same activities during rehearsal for a significant length of time with little variation, maintain a stable appearance and location throughout rehearsal, and prefer to use language to communicate rather than eye contact or gestures. Those who attend fewer marching competitions are more likely to vary the pace of rehearsals, change the kinds of activities that take place during rehearsal time, move around the room, make more use of eye contact and gesture (conducting and otherwise). Similar to marching band, the band director who frequently showcases his or her ensemble in numerous venues is less likely to be self-effacing or even humble. He or she

may feel the hard work students have put forth is of great quality and therefore needs to be shown as much as possible. Lastly, those who attend marching competitions more often may have less of a sense of responsibility than those who moderate their competition schedule to one or two events per year. As stated earlier, excessive focus on competition may be a result of a director overtaxing the students. Directors attending fewer competitions tended to have a stronger sense of responsibility.

The data help establish an impression of personality and teaching style differences between the balanced director and the marching-oriented director. Balanced directors are more likely to take charge and be an assertive leader, although they are more comfortable with routine and less eager to experience new things. These directors may also permit themselves to be swept away by the passion and emotional elements of music making, which may represent itself in other aspects of life outside the classroom such as indulging in personal pleasures.

It is noteworthy that there are no concert-oriented directors; this itself suggests some important possibilities. It may be that marching band is enjoyable and exciting enough for band directors so even those who prefer concert band still put forth equal effort in that domain. It may also be that band directors don't see concert band as something to focus on to the exclusion of other professional responsibilities. However, the data suggest a more likely situation is that those who succeed at concert band activities and focus on skills and knowledge pertinent to the concert band also succeed with their marching bands. The data reveal marching-oriented directors have the same mean score at marching as balanced directors, and the small amount by which marching-oriented directors surpass balanced directors at marching competitions is not significant.

To be classified as marching-oriented a director must score .5 points higher with marching band than concert band, attend at least one marching competition annually, and not participate in state concert band festival. This definition was meant to outline what might be considered a “marching band specialist.” The problem is the “marching band specialist” is not a marching band specialist at all, but simply a director who attends significantly more marching competitions and is significantly less successful at concert band.

While the regression models which explain the variance in ratings for the criterion variables are all significant, none of them explains a great deal of variance. Combinations of teaching styles and personality facets explain just over 20% of the variance in concert band ratings, marching band ratings, and attendance at state concert band festival, and only 11% of the variance in attendance at marching band competitions. This indicates there is a great deal more which influences band ratings than band director teaching style and personality. The literature indicates aspects of the school, students, administration, band instruments, literature being performed, and numerous other variables influence band ratings as well. However, as many of these are outside the immediate control of the band director, it is important to understand the potential influence of these aspects of the educational situation which the director *can* directly influence (teaching style and personality).

Implications

One of the most important implications of this research is personality and teaching style are significantly related to band ratings, and consequently it is of value to be aware of one’s own personality type and teaching styles. Teacher educators may help

future educators by spending time administering these or similar inventories so that educators are aware of their current tendencies. From this point, discussions and self-reflection on how these affect teaching may lead to improved teaching.

Specific implications for band directors include the need to focus on those teaching styles which indicate significant correlations with success. Large ensemble rehearsals need to be run smoothly and efficiently, and it is in the interest of directors and students to make the most of this time. Likewise, developing skills to teach music and music concepts and focusing on performing musically and artistically with good tone and a mental image of what the sound should be may be important factors of success as well.

Another important personality facet is Self-Efficacy. This implies a band director ought to develop a value for a sense of confidence in his or her competence as a music educator. If a director does not feel confident in his or her competence but still values it, this may drive that director to seek out ways to improve his or her approach to teaching.

An important note is while several teaching styles are highly correlated with success in marching or concert band, relatively few of the personality facets are. This may be good news, as it seems likely that it would be easier for a person to alter or improve the way they teach with an understanding of what is effective when compared to personality. Personality, while not immutable, is an aspect of a person which is perhaps less likely to fluctuate much over time, especially when a person has reached adulthood (McCrae & Costa, 2003). If a person finds that he or she has low levels of a personality facet that seems to be an important part of success in being a band director, it is not necessary to despair and give up the profession, but at least be aware that this is a

personality aspect which may need to be altered, or at least controlled for while in a professional setting.

Perhaps one of the most important implications for high school band directors is the need to focus on the concert band as the center of the band program, based on the findings that balanced directors are more successful at concert band festivals and equally successful at marching events compared to marching-oriented directors. In the Florida Bandmasters Association, marching band ratings are weighted to favor musicianship over all other aspects. Even if a band earns ratings one division lower in marching and general effect than they do in both music captions, the rating will go in favor of what was earned in the music captions. The data here indicate those who balance concert band and marching band do just as well in marching band (competitive and otherwise) as marching-oriented subjects, but are much more successful in concert band. This reflects Rickels' (2008) finding that marching bands scored higher when they began working on concert band music earlier in the school year. This might imply that a high school band director should concentrate on the field show during summer band camp, but when the school year begins band class should focus on concert music and developing music fundamentals while the marching activities are relegated to after-school rehearsals. This would also ensure that students are learning a wider variety of literature during the year rather than spending the months of August through mid-November only studying a seven-minute marching band show and perhaps a handful of stand tunes. Playing a wider variety of literature may also give students more opportunities to develop music-reading skills and be able to interpret and be expressive in a wider variety of literature.

Recommendations for Further Research

There are a number of directions research could take from this study. Some of these directions include replication of the study under different circumstances. This study could be reproduced in other states or countries where similar band programs exist. Results from different geographical locations and different cultural climates may offer worthwhile insights. It may also be useful to replicate this study with other educational levels and other areas within the music education profession.

The literature review indicated there are many differences in personality between elementary and secondary music education majors, and this may yield important findings both in determining a prototypical model of an elementary general music specialist's personality or teaching style (or middle school choir director or high school orchestra teacher, etc.) but also in determining which of these elements correlate significantly with various measures of success in these fields.

Another important direction might be to examine high school band directors' teaching styles and personalities when compared with different measures of success, such as student recruitment and retention, student reports of satisfaction with the band program, percentage of students who continue to be active in music after graduating from high school, and other measures as may be deemed worthy of investigation.

A longitudinal study which examines how successfully teaching style and personality predictors predict success in marching and concert band might reveal useful information. If music education majors took the MTSI and IPIP-NEO during their student teaching experiences, results could be examined and the ratings these teachers achieved

over the next several years could be examined to determine how accurate the predictions were.

It is clear some of the predictor variables show significant relationships with criterion variables, but the other predictors should not therefore be considered as being without value. Many predictors might have a strong relationship with different aspects of band directors or music educators in general, such as elementary music teachers' success at getting students to improvise a rhythm over a rhythmic ostinato, or the ability of orchestra directors to recruit students from a feeder program. It may be very beneficial to explore which teaching styles or personality facets correlate strongest with different measures of professional success in different professional roles within music education.

It may be beneficial to examine personality traits and teaching styles of high school band directors in relation to why college freshmen choose to continue or discontinue musical studies. There may be a relationship which is more likely to generate a degree of "burnout" in graduating seniors.

As suggested by the findings to research question 4, there may be director-related factors other than personality and teaching style which influence frequency of attendance at marching competitions, and possibly other factors such as band ratings as well. These "other factors" may be related to the director's background, professional experiences, training, philosophy, or even a more global conception or *Gestalt* of the director.

The exploratory construct included in this study, balance, seems to have effectively identified band directors who balanced effort and success with both the concert and marching band responsibilities of their jobs, and differentiated them from those who are marching-oriented. It may be beneficial to further explore the implications

of this variable in other geographical locations. It may be interesting to determine typical characteristics of balanced and marching-oriented subjects in ways outside of personality and teaching style, such as student opinions of satisfaction, proportions of students who continue with instrumental music after graduation, rate of professional burnout, and other factors which may shed further light on this phenomenon.

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Appendices

Appendix A

Descriptive Statistics for Criterion Variables by Gender

Criterion Variable	gender	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Marching	male	139	1.40	.47	1.38	1.67
	female	24	1.76	.64	.69	-.26
Concert	male	139	1.70	.53	.73	-.24
	female	26	2.07	.77	1.46	1.90
FMBC attend	male	148	1.43	1.34	.63	-.82
	female	27	.87	1.02	.95	.02
FMBC score	male	109	72.80	9.51	-.18	-.94
	female	15	67.00	7.74	.24	-.94
State conc. attend	male	127	.36	.40	.56	-1.32
	female	22	.18	.34	1.69	1.56
State conc. score	male	64	1.73	.61	1.15	2.01
	female	6	1.78	.34	.64	.57

Appendix B

Descriptive Statistics for Criterion Variables by Academic Degree

Criterion Variable	degree	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Marching	Bachelors	90	1.53	.55	1.19	.86
	Masters	67	1.37	.46	1.31	1.48
	Specialist	4	1.10	.16	1.66	2.62
Concert	Bachelors	89	1.83	.57	.99	.92
	Masters	70	1.68	.61	1.43	3.33
	Specialist	4	1.33	.12	-1.30	.98
FMBC attend	Bachelors	95	1.35	1.35	.82	-.52
	Masters	73	1.30	1.26	.64	-.72
	Specialist	4	2.75	.74	1.72	3.27
FMBC score	Bachelors	69	71.30	9.90	.09	-.99
	Masters	50	72.83	9.12	-.30	-.93
	Specialist	4	76.88	7.09	-.02	-4.65
State conc. attend	Bachelors	81	.28	.37	.90	-.71
	Masters	62	.40	.44	.41	-1.62
	Specialist	4	.33	.27	.06	1.50
State conc. score	Bachelors	34	1.82	.65	1.37	2.80
	Masters	32	1.63	.55	.68	-.32
	Specialist	3	1.67	.00	-1.73	*

*unable to calculate

Appendix C

Descriptive Statistics for Criterion Variables by Instrument

Criterion Variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Marching	Flute	2	1.75	.12	*	*
	Bassoon	5	1.40	.65	1.71	2.67
	Clarinet	15	1.43	.50	1.04	-.15
	Saxophone	21	1.44	.46	1.23	1.82
	Trumpet	49	1.38	.53	1.75	2.67
	Horn	10	1.63	.69	1.05	.02
	Trombone	20	1.54	.56	.95	.68
	Euphonium	11	1.62	.56	1.53	2.98
	Tuba	8	1.48	.31	-.42	-.52
	Percussion	16	1.34	.42	1.45	1.56
	Piano/Keybd.	2	1.38	.53	*	*
	Concert	Flute	3	2.64	1.41	1.62
Bassoon		5	1.41	.35	.29	-1.31
Clarinet		16	1.63	.60	1.42	2.08
Saxophone		22	1.64	.50	.81	.03
Trumpet		48	1.69	.58	1.03	.55
Horn		10	1.89	.67	.46	-.38
Trombone		19	1.88	.44	.73	-.24
Euphonium		11	1.82	.75	1.87	4.23
Tuba		9	1.93	.56	-.12	-.39
Percussion		16	1.76	.53	.48	-1.34
Piano/Keybd.		2	1.52	.32	*	*
FMBC attend		Flute	3	.44	.77	1.73
	Bassoon	5	1.27	.72	-.07	-1.82
	Clarinet	15	.97	1.20	1.19	-.02
	Saxophone	23	1.46	1.43	.42	-1.47
	Trumpet	51	1.37	1.27	.60	-.82
	Horn	11	1.09	1.16	.42	-1.36
	Trombone	20	1.27	1.06	.58	-.77
	Euphonium	11	1.68	1.74	.51	-1.23
	Tuba	9	.93	.13	2.56	7.08
	Percussion	18	2.02	1.40	.06	-1.39
	Piano/Keybd.	3	.22	.38	1.73	*

Appendix C: (Continued)

Descriptive Statistics for Criterion Variables by Instrument (continued)

Criterion Variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
FMBC score	Flute	1	*	*	*	*
	Bassoon	5	70.10	5.75	-.12	-2.79
	Clarinet	10	66.80	10.63	.36	-.87
	Saxophone	16	75.13	9.72	-.38	-1.32
	Trumpet	36	73.39	9.06	-.20	-.74
	Horn	6	75.36	4.36	.13	-1.05
	Trombone	16	68.50	11.60	.39	-.88
	Euphonium	7	74.61	9.48	-.62	-1.43
	Tuba	7	67.99	7.62	1.50	2.90
	Percussion	16	71.84	9.16	.17	-1.27
State Concert attend	Flute	2	.17	.23	*	*
	Bassoon	3	.78	.39	-1.73	*
	Clarinet	14	.52	.43	-.06	1.15
	Saxophone	20	.32	.36	.62	-1.04
	Trumpet	44	.36	.41	.59	-1.33
	Horn	8	.19	.27	1.04	-.64
	Trombone	18	.24	.39	1.34	.16
	Euphonium	10	.13	.32	2.67	7.24
	Tuba	8	.29	.42	.89	-1.16
	Percussion	16	.40	.44	.49	-1.78
State Concert score	Piano/Keybd.	2	.34	.47	*	*
	Flute	1	*	*	*	*
	Bassoon	3	1.26	.13	-1.73	*
	Clarinet	10	1.61	.58	1.63	3.20
	Saxophone	10	1.51	.47	.32	-1.05
	Trumpet	22	1.83	.73	1.54	2.73
	Horn	3	1.83	.76	-.94	*
	Trombone	6	1.71	.56	1.06	.99
	Euphonium	2	1.67	.47	*	*
	Tuba	3	2.30	.18	1.56	*
Percussion	8	1.63	.39	-.51	-.80	

*unable to calculate

Appendix D

Descriptive Statistics for Predictor Variables by Gender

Predictor variable	gender	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Assertive Teaching	male	148	3.97	.54	-.08	-.48
	female	28	4.11	.44	-.03	-1.02
Nonverbal Motivation	male	148	3.88	.48	.07	.01
	female	28	3.96	.43	-.53	.29
Time Efficiency	male	148	4.23	.46	-.31	-.60
	female	28	4.15	.45	-.46	-.70
Positive Learning Environ.	male	148	4.20	.49	-.41	.25
	female	28	4.32	.42	-.22	-.31
Group Dynamics	male	148	3.27	.55	.21	.34
	female	28	3.30	.56	-.73	-.25
Music Concept Learning	male	148	3.76	.52	-.48	1.20
	female	28	3.68	.49	-.41	.11
Artistic Music Performance	male	148	3.53	.56	-.13	.25
	female	28	3.47	.56	-.40	.97
Student Independence	male	148	3.44	.63	.02	-.13
	female	28	3.40	.52	1.01	1.56
Neuroticism	male	131	2.59	.59	.60	1.06
	female	26	2.70	.69	-.31	-.81
Extraversion	male	131	3.60	.49	-.37	.36
	female	26	3.57	.66	-.61	-.60
Openness to Experience	male	131	3.46	.48	.08	.35
	female	26	3.52	.43	.29	.85
Agreeableness	male	131	3.81	.46	-.32	-.04
	female	26	3.98	.36	.01	-1.02
Conscientiousness	male	131	4.05	.45	-.22	-.50
	female	26	4.21	.43	-.40	-.33

Appendix E

Descriptive Statistics for Predictor Variables by Academic Degree

Predictor variable	Degree	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Assertive Teaching	Bachelors	96	4.00	.54	-.23	-.18
	Masters	73	3.98	.51	.13	-.85
	Specialist	4	4.05	.61	-1.94	3.82
Nonverbal Motivation	Bachelors	96	3.89	.45	.25	.15
	Masters	73	3.89	.50	-.22	.07
	Specialist	4	4.18	.39	-.32	-3.03
Time Efficiency	Bachelors	96	4.16	.50	-.26	-.88
	Masters	73	4.28	.38	-.13	-.28
	Specialist	4	4.79	.25	-1.54	2.89
Positive Learning Environ.	Bachelors	96	4.23	.48	-.58	.14
	Masters	73	4.19	.48	-.21	-.61
	Specialist	4	4.29	.42	.94	1.50
Group Dynamics	Bachelors	96	3.23	.56	.05	.12
	Masters	73	3.30	.51	-.02	.04
	Specialist	4	3.71	.26	.00	-3.30
Music Concept Learning	Bachelors	96	3.71	.61	-.51	.57
	Masters	73	3.78	.51	-.54	1.70
	Specialist	4	3.89	.41	-1.85	3.41
Artistic Music Performance	Bachelors	96	3.46	.52	-.17	-.12
	Masters	73	3.61	.54	.07	-.67
	Specialist	4	3.32	1.26	-1.24	1.25
Student Independence	Bachelors	96	3.42	.61	.28	-.10
	Masters	73	3.43	.62	.03	.40
	Specialist	4	3.36	1.05	-.24	-3.15
Neuroticism	Bachelors	86	2.60	.55	.03	-.58
	Masters	67	2.65	.66	.69	1.10
	Specialist	4	2.22	.74	1.19	2.30
Extraversion	Bachelors	86	3.56	.52	-.69	.29
	Masters	67	3.63	.53	-.14	-.09
	Specialist	4	3.90	.35	-1.09	2.04
Openness to Experience	Bachelors	86	3.43	.46	-.22	.03
	Masters	67	3.49	.46	.44	.96
	Specialist	4	4.18	.34	1.45	2.51
Agreeableness	Bachelors	86	3.87	.43	-.75	.55
	Masters	67	3.79	.46	.08	-.05
	Specialist	4	3.98	.83	-.97	-.26
Conscientiousness	Bachelors	86	4.10	.43	-.11	-.68
	Masters	67	4.04	.47	-.33	-.30
	Specialist	4	4.30	.54	-1.85	3.51

Appendix F

Descriptive Statistics for Predictor Variables by Instrument

Predictor variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Assertive Teaching	Flute	4	3.82	.51	1.70	3.01
	Bassoon	5	3.83	.53	.21	.49
	Clarinet	16	3.91	.44	.10	-1.05
	Saxophone	23	4.18	.43	.67	-.83
	Trumpet 51	3.91	.59	-.20	-.30	
	Horn	11	3.74	.44	.19	-1.68
	Trombone	20	4.11	.51	-.20	-.42
	Euphonium	11	3.88	.48	-.02	-.71
	Tuba	9	3.90	.38	-.26	-1.20
	Percussion	18	4.09	.56	-.09	-.49
	Piano/Keybd.	3	4.14	.99	-1.57	*
Nonverbal Motivation	Flute	4	3.81	.72	-.95	-.54
	Bassoon	5	3.80	.42	-.31	-2.27
	Clarinet	16	3.87	.56	-1.18	1.55
	Saxophone	23	3.96	.55	-.13	.11
	Trumpet 51	3.89	.39	.24	-.19	
	Horn	11	4.04	.55	.20	-1.64
	Trombone	20	3.90	.48	.33	-.36
	Euphonium	11	3.67	.24	-.65	-.66
	Tuba	9	3.92	.45	.25	-.24
	Percussion	18	3.89	.54	.38	.32
	Piano/Keybd.	3	3.95	.58	.72	*
Time Efficiency	Flute	4	3.93	.59	.71	1.79
	Bassoon	5	4.20	.37	.54	-1.49
	Clarinet	16	4.18	.39	-.59	-.38
	Saxophone	23	4.22	.41	-.05	.21
	Trumpet 51	4.22	.51	-.38	-.82	
	Horn	11	4.19	.58	-.26	-1.50
	Trombone	20	4.35	.41	-.78	.95
	Euphonium	11	3.94	.35	-.53	-.43
	Tuba	9	3.97	.42	-.65	-1.68
	Percussion	18	4.44	.34	.08	-.91
	Piano/Keybd.	3	4.62	.54	-1.60	*
Positive Learning Environ.	Flute	4	4.29	.42	.94	1.50
	Bassoon	5	4.17	.49	1.65	3.33
	Clarinet	16	4.35	.56	-1.14	.34
	Saxophone	23	4.23	.46	.27	-1.12
	Trumpet	51	4.20	.55	-.44	-.78
	Horn	11	4.18	.46	-.86	-.23
	Trombone	20	4.29	.41	-.58	.55
	Euphonium	11	4.12	.35	-.71	-.41
	Tuba	9	3.97	.61	-.88	1.78
	Percussion	18	4.25	.37	.51	-.55
	Piano/Keybd.	3	4.10	.46	-1.55	*

Appendix F: (Continued)

Descriptive Statistics for Predictor Variables by Instrument (continued)

Predictor variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Group Dynamics	Flute	4	2.89	.62	.83	-.04
	Bassoon	5	2.89	.71	.29	-.41
	Clarinet	16	3.34	.54	.24	1.00
	Saxophone	23	3.34	.48	.25	.49
	Trumpet	51	3.29	.59	-.10	-.07
	Horn	11	3.08	.49	.29	-.22
	Trombone	20	3.25	.63	.25	.69
	Euphonium	11	3.21	.45	.05	-.64
	Tuba	9	3.30	.51	-.63	-1.45
	Percussion	18	3.37	.40	.25	.88
	Piano/Keybd.	3	3.05	.68	-1.39	*
Music Concept Learning	Flute	4	3.50	.55	1.38	2.36
	Bassoon	5	3.51	.41	1.08	-.06
	Clarinet	16	3.80	.50	-.16	-1.24
	Saxophone	23	3.89	.39	.00	-.31
	Trumpet	51	3.85	.51	-.44	.43
	Horn	11	3.55	.45	.33	.15
	Trombone	20	3.66	.61	-.93	1.80
	Euphonium	11	3.64	.40	.08	-1.19
	Tuba	9	3.71	.61	-.34	-.69
	Percussion	18	3.60	.32	.36	.06
	Piano/Keybd.	3	3.37	.99	-1.64	*
Artistic Music Performance	Flute	4	2.93	.64	-1.57	2.42
	Bassoon	5	3.11	.80	1.50	2.04
	Clarinet	16	3.66	.41	-.57	.32
	Saxophone	23	3.67	.71	-.91	2.24
	Trumpet 51	3.56	.52	.07	-.83	
	Horn	11	3.36	.58	.43	-1.24
	Trombone	20	3.58	.51	-.30	-.62
	Euphonium	11	3.49	.31	-.51	.72
	Tuba	9	3.59	.44	.45	1.17
	Percussion	18	3.42	.55	.10	-.10
	Piano/Keybd.	3	3.14	.62	1.63	*
Student Independence	Flute	4	3.21	.50	.00	-5.21
	Bassoon	5	3.03	.74	1.73	3.25
	Clarinet	16	3.48	.61	-.10	-.62
	Saxophone	23	3.65	.69	.17	.22
	Trumpet 51	3.52	.62	.19	-.46	
	Horn	11	3.08	.57	.64	-.75
	Trombone	20	3.34	.63	.21	.95
	Euphonium	11	3.42	.36	.36	-.09
	Tuba	9	3.35	.54	.70	1.16
	Percussion	18	3.41	.53	.43	-.95
	Piano/Keybd.	3	2.81	.99	-.72	*

Appendix F: (Continued)

Descriptive Statistics for Predictor Variables by Instrument (continued)

Predictor variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Neuroticism	Flute	3	2.68	.71	-.68	*
	Bassoon	5	2.87	.71	.34	1.83
	Clarinet	15	2.52	.46	-.04	-.14
	Saxophone	21	2.58	.52	-.24	-1.15
	Trumpet 47	2.65	.68	.96	1.68	
	Horn	10	2.58	.66	.07	-.35
	Trombone	17	2.57	.54	-.20	-1.29
	Euphonium	10	2.62	.66	.05	-.39
	Tuba	8	2.53	.63	.08	-2.37
	Percussion	16	2.75	.60	-.03	-.25
	Piano/Keybd.	3	1.99	.74	1.58	*
	Extraversion	Flute	3	3.54	.61	-1.64
Bassoon		5	3.13	.68	-1.19	2.37
Clarinet		15	3.48	.53	-.51	-.81
Saxophone		21	3.72	.48	-.52	-.60
Trumpet 47		3.63	.48	.17	.13	
Horn		10	3.65	.57	-.34	-.148
Trombone		17	3.49	.57	-.02	-.90
Euphonium		10	3.28	.57	-1.17	2.04
Tuba		8	3.67	.51	-.66	-.03
Percussion		16	3.71	.45	-1.78	6.07
Piano/Keybd.		3	3.92	.55	.67	*
Openness to Experience		Flute	3	3.24	.12	1.73
	Bassoon	5	3.43	.39	-.52	-2.25
	Clarinet	15	3.31	.50	.81	1.40
	Saxophone	21	3.43	.52	-.98	.45
	Trumpet 47	3.58	.53	.30	.16	
	Horn	10	3.67	.39	-.20	-1.92
	Trombone	17	3.34	.46	-.39	-.83
	Euphonium	10	3.50	.25	.91	-.12
	Tuba	8	3.33	.42	1.87	3.40
	Percussion	16	3.46	.44	.03	1.25
	Piano/Keybd.	3	3.54	.43	-1.73	*
	Agreeableness	Flute	3	3.74	.33	.37
Bassoon		5	3.85	.55	-1.70	3.00
Clarinet		15	3.93	.42	-.03	-1.58
Saxophone		21	3.69	.45	-.27	.12
Trumpet 47		3.96	.51	-.54	-.01	
Horn		10	3.65	.20	-.43	-.70
Trombone		17	4.01	.33	-.13	-.98
Euphonium		10	3.72	.29	.42	-1.12
Tuba		8	3.75	.61	-.96	1.52
Percussion		16	3.65	.45	-.55	-.73
Piano/Keybd.		3	4.10	.45	-1.72	*

Appendix F: (Continued)

Descriptive Statistics for Predictor Variables by Instrument (continued)

Predictor variable	Instrument	<i>n</i>	<i>M</i>	<i>SD</i>	skew.	kurt.
Conscientiousness	Flute	3	4.56	.32	1.23	*
	Bassoon	5	3.83	.31	-.60	-3.03
	Clarinet	15	4.35	.41	-.68	-.94
	Saxophone	21	4.08	.44	.16	-1.00
	Trumpet 47	4.07	.49	-.47	-.42	
	Horn	10	3.92	.45	-.28	-.19
	Trombone	17	3.96	.48	.06	-.89
	Euphonium	10	4.02	.42	.20	2.30
	Tuba	8	4.16	.24	-1.81	3.36
	Percussion	16	4.00	.45	.16	.17
	Piano/Keybd.	3	4.32	.20	.68	*

*Unable to calculate

Appendix G

Balance- Frequencies and Percentage by Gender

Gender	Balanced <i>n</i>	%	Marching <i>n</i>	%
Male	109	81.3%	25	18.7%
Female	22	95.7%	1	4.3%
Total	131		26	

Appendix H

Balance- Frequencies and Percentage by Academic Degree

Degree	Balanced <i>n</i>	%	Marching <i>n</i>	%
Bachelors	73	84.9%	13	15.1%
Masters	52	80.0%	13	20.0%
Specialist	4	100.0%	0	0.0%
Total	129		26	

Appendix I

Balance- Frequencies and Percentage by Instrument

Instrument	Balanced <i>n</i>	%	Marching <i>n</i>	%
Flute	2	100.0%	0	0.0%
Oboe	1	100.0%	0	0.0%
Bassoon	4	80.0%	1	20.0%
Clarinet	15	100.0%	0	0.0%
Saxophone	18	85.7%	3	14.3%
Trumpet	36	80.0%	9	20.0%
Horn	8	88.9%	1	11.1%
Trombone	17	89.5%	2	10.5%
Euphonium	9	81.8%	2	19.2%
Tuba	6	75.0%	2	25.0%
Percussion	11	68.8%	5	31.2%
Piano/Keybd.	2	100.0%	0	0.0%
String	0	0.0%	1	100.0%
Total	129		26	

Appendix J

Inter-item correlations for Teaching Styles

MTSI dimension	1	2	3	4	5	6
Assertive Teaching						
Item 2	.35					
Item 3	.34	.37				
Item 4	.42	.32	.40			
Item 5	.41	.33	.24	.29		
Item 6	.28	.22	.40	.43	.15	
Item 7	.27	.35	.15	.29	.25	.22
Nonverbal Motivation						
Item 2	.41					
Item 3	.20	.27				
Item 4	.36	.37	.10			
Item 5	.10	.17	.23	.30		
Item 6	.30	.30	.03	.34	.16	
Item 7	.19	.29	.18	.29	.11	.31
Time Efficiency						
Item 2	.17					
Item 3	.25	.23				
Item 4	.29	.39	.38			
Item 5	.16	.43	.25	.44		
Item 6	.08	.34	.28	.40	.27	
Item 7	.49	.37	.30	.38	.31	.23
Positive Learning Environment						
Item 2	.29					
Item 3	.27	.32				
Item 4	.24	.30	.36			
Item 5	.40	.34	.33	.31		
Item 6	.34	.42	.41	.48	.35	
Item 7	.40	.30	.34	.43	.59	.40
Music Concept Learning						
Item 2	.35					
Item 3	.28	.21				
Item 4	.17	.36	.38			
Item 5	.19	.28	.34	.50		
Item 6	.27	.34	.15	.31	.38	
Item 7	.32	.37	.35	.40	.49	.30

Appendix J: (Continued)

Inter-item correlations for Teaching Styles (continued)

MTSI dimension	1	2	3	4	5	6
Artistic Music Performance						
Item 2	.27					
Item 3	.46	.52				
Item 4	.39	.37	.49			
Item 5	.24	.06	.08	.17		
Item 6	.24	.33	.29	.18	.30	
Item 7	.28	.33	.48	.43	.19	.27
Student Independence						
Item 2	.65					
Item 3	.48	.54				
Item 4	.45	.49	.47			
Item 5	.20	.29	.31	.30		
Item 6	.44	.38	.40	.52	.42	
Item 7	.48	.56	.54	.50	.36	.59

Appendix K

Inter-item correlations for Personality Facets

Facet	Pairs of Items					
	1 & 2	1 & 3	1 & 4	2 & 3	2 & 4	3 & 4
Neuroticism						
Anxiety	.48	.26	.44	.40	.39	.43
Anger	.66	.74	.43	.65	.51	.46
Depression	.43	.74	.46	.66	.55	.57
Self Consciousness	.39	.54	.30	.44	.18	.27
Immoderation	.23	.29	.34	.21	.29	.35
Vulnerability	.60	.30	.36	.41	.39	.35
Extraversion						
Friendliness	.60	.40	.45	.54	.63	.39
Gregariousness	.60	.44	.66	.36	.54	.63
Assertiveness	.49	.62	.55	.48	.36	.50
Activity	.57	.12	.00	.31	.18	.24
Excitement Seeking	.42	.19	.28	.28	.36	.33
Cheerfulness	.37	.34	.46	.36	.42	.57
Openness to Experience						
Imagination	.38	.29	.19	.52	.48	.68
Artistic Interest	.22	.30	.35	.19	.18	.41
Emotion	.16	.25	.07	.12	.21	.17
Adventurousness	.34	.36	.36	.51	.51	.46
Intellect	.13	.29	.20	.34	.63	.49
Liberalism	.40	.90	.34	.38	.20	.34
Agreeableness						
Trust	.54	.67	.76	.60	.56	.65
Morality	.35	.55	.26	.32	.19	.34
Altruism	.58	.17	.46	.38	.41	.28
Cooperation	.34	.31	.25	.56	.34	.42
Modesty	.47	.45	.36	.81	.23	.26
Sympathy	.51	.37	.38	.33	.39	.24
Conscientiousness						
Self Efficacy	.38	.43	.39	.33	.40	.47
Orderliness	.58	.67	.54	.62	.55	.57
Dutifulness	.35	.15	.67	.35	.33	.10
Achievement Striving	.55	.38	.49	.32	.45	.37
Self Discipline	.48	.48	.32	.41	.23	.46
Cautiousness	.62	.61	.66	.71	.77	.74

About the Author

At the time of defense, Timothy J. Groulx is contracted to be Assistant Professor of Music Education at the University of Evansville in Indiana where he will teach instrumental and general music education courses and assist with the university's bands. Prior to this appointment, Mr. Groulx served as a graduate assistant at the University of South Florida where he taught woodwind and brass techniques courses, assisted teaching other music education courses, supervised student teachers, and assisted with the marching and concert bands. After completing Bachelor's and Master's degrees in music education at Oberlin Conservatory in 1999, Mr. Groulx taught 5th-12th band programs for two years in central Ohio followed by five years of high school band in the Tampa Bay area, and beginning band programs in the Tampa Bay area K-8 Catholic schools concurrent with his doctoral studies. Mr. Groulx is a National Board Certified Teacher in Music.