THE RELATIONSHIP BETWEEN COLLEGIATE BAND MEMBERS’ PREFERENCES
OF TEACHER INTERPERSONAL BEHAVIOR AND PERCEIVED SELF-EFFICACY

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The first purpose of this study was to describe collegiate band members’ preferred teacher interpersonal behaviors and perceptions of self-efficacy based on the gender, year in college, instrument, and major. The second purpose of the study was to measure the relationship between preferences of interpersonal teacher behavior and self-efficacy scores. The nonprobability purposive sample ($N = 1020$) was composed of band members representing 12 universities from different regions of the United States. There were 4 large public, 4 small public, and 4 private universities that participated in the study. Participants completed 2 questionnaires, the Teacher Interaction Preference Questionnaire (TIPQ) and the Self-Efficacy Questionnaire (SEQ). Descriptive statistics were calculated for each of the questionnaires. Results for the TIPQ showed that all sub-groups most preferred the dominant-cooperative behaviors, followed by submissive-cooperative behaviors, and least preferred the dominant-oppositional behaviors. Results for the SEQ showed subtle variations for all subgroups. Three Pearson product-moment correlation coefficients were calculated to measure the relationship between the three teacher interaction styles (dominant-cooperative, submissive-cooperative, dominant-oppositional) and students’ perceived self-efficacy. Due to the possible over-use of the data with multiple correlations, a Bonferroni adjustment was made to avoid a Type I error (.05/3 = .016). A significant positive relationship was found between self-efficacy and dominant-cooperative with 22% shared variance. A significant positive relationship was found between self-efficacy and submissive-cooperative with 7% shared variance. Finally, a significant positive relationship was found between self-efficacy and dominant-oppositional with 5% shared
variance. This study’s results indicate that it may be beneficial for band directors to measure students’ preferences and perceptions of teacher interpersonal teacher behavior in order to find ways to interact better with the students. In addition, due to the relationship between students’ preferences of teacher interpersonal behavior and perceived self-efficacy, collegiate band directors may wish to examine their own behaviors to determine how they align with the students’ preferences.
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CHAPTER 1
INTRODUCTION

The manner in which teachers and students interact has always been an important aspect of the learning environment. “Historically, learning was based on a personal relationship between the teacher and the learner” (Hayes, Ryan, & Zseller, 1994, p. 2). In ancient Greece and the Middle Ages teachers often lived with their students in order to develop strong personal relationships (Noddings & Shore, 1984). The interactions that took place between the teachers and students formed the basis for these relationships.

Schools in the 21st century are very different. Large classes, short class periods, budget constraints, high stakes testing, and the proliferation of technology have created an impersonal atmosphere in most schools (Waldrop, 2006). While less emphasis may be placed on teacher-student relationships, interactions occur constantly. According to Jackson (as cited in Good & Brophy, 1984), a teacher may engage in more than 1000 interpersonal exchanges with students in a single day.

Prominent educational philosophers and psychologists have also advocated the importance of teacher-student interactions. John Dewey supported a close relationship between students and their teachers in the process he referred to as shared inquiry (Dewey, 1933). He also referred to teacher-student interaction as the defining component of the educational process (Dewey, 1916). Educational psychologist Lev Vygotsky developed a Sociocultural Theory that was based upon the premise that social interaction is fundamentally involved in the development of cognition. His theory states that it is through the social interaction between the teacher and student that children learn everything from play activities, language, and social skills to problem solving, reasoning, and critical thinking (Wertsch, 1985). This theory has many similarities to
Bandura’s Social Cognitive Theory that is also based on the premise of social interaction in learning. According to Bandura, students learn from their teachers largely through observation and modeling. Through these means, they acquire knowledge, rules, skills, strategies, beliefs and attitudes as well as appropriate behaviors and consequences for misbehaviors (Schunk, 2004).

Another aspect of Bandura’s Social Cognitive Theory that has been influential in education is self-efficacy. These are the beliefs that people have regarding their own abilities. These beliefs can greatly affect outcomes, motivation, and perseverance. According to Bandura (1986) "People who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it" (n.d., Quotes section, ¶ 14). Because perceptions of self-efficacy can greatly influence the success of students, they may be an important factor in education. Researchers examining teacher expectancies and student achievement have also found that there is a link between teachers’ interpersonal behavior and the students’ self-efficacy; in addition, the students’ perceptions of the teachers’ behavior were more closely related to the students’ self-efficacy than the actual frequencies of teacher behaviors documented by observers (Cooper, 1985; Cooper & Good, 1983). In discussing this research, Wigfield and Harold (1992) stated, “it is not just what teachers do but how students’ view teachers’ behaviors that relate to the students’ own sense of efficacy and their school performance” (p. 98).

Need for the Study

Interpersonal teacher behavior has been considered important to the classroom environment for hundreds of years and has been the subject of much educational research. In the early 1980s, researchers began to look for ways in which to help pre-service and first-year teachers develop better teacher-student interactions, classroom control, and academic success.
The result was a series of studies, conducted in The Netherlands, that led to the development of the Questionnaire on Teacher Interaction (QTI) and the accompanying model of interpersonal teacher behavior (MITB). The QTI measures students’ and teachers’ perceptions of teacher interpersonal behavior and created profiles based upon these perceptions (Wubbels & Levy, 1993). Eight interaction types were identified through these studies: 1) leadership, 2) helping/friendly, 3) understanding, 4) student responsibility/freedom, 5) uncertain, 6) dissatisfied, 7) admonishing, and 8) strict (Wubbels, Creton, & Hooymayers, 1985). The findings in these studies were used in the preparation of pre-service teachers, professional development for in-service teachers, and to compare teachers across geography, academic discipline, and teaching career.

Many differences were found in the comparisons of the teachers’ interpersonal behavior. In general, teachers were rated high on leadership, helpful/friendly, and understanding behavior and low on uncertainty, dissatisfaction, and admonishing (Fisher, Fraser, & Wubbels, 1992; Wubbels et al., 1985; Wubbels & Levy, 1993). However, there were exceptions. Teachers in Norway tended to be stricter, teachers in Wales tended to give more freedom (van Oord & den Brok, 2004) while teachers in Poland fit the aforementioned profile and tended to be high on leadership and understanding (Sztejnberg, den Brok, & Hurek, 2004). In addition, social studies teachers tended to be less dominant while foreign language and mathematics teachers were more dominant (Levy, Creton, & Wubbels, 1993). Foreign language teachers (Levy et al., 2003) and music teachers (Hunter, 2004) tended to be perceived as high on strict behaviors and low on student responsibility and freedom. Also, inexperienced teachers tended to be rated low on leadership and helpful/friendly and rated high on uncertain (Nijveldt, Beijaard, Brekelmans, Verlopp, & Wubbels, 2005), while teachers with more than 25 years of experience tended to be
rated high on dissatisfied and admonishing and low on helpful/friendly and understanding (Nijveldt et al., 2005).

The studies comparing teacher profiles led researchers to also measure and compare students’ preferences of their ideal teacher (Dweck, Davidson, Nelson, & Enna, 1978; Etaugh & Harlow, 1975; Goh & Fraser, 1998; Hunus, Fraser, & Rickards, 1997; Levy, Creton, & Wubbels, 1993; Lourdusamy & Khine, 2001; Minuchin & Shapiro, 1983; Sztejnberg et al., 2004; van Oord & den Brok, 2004; Waldrip, Fisher, & Chuarch, 2003). The studies found mixed results for gender on students’ preferences of interpersonal teacher behavior particularly in the amount and manner of interaction. Girls tended to prefer more positive teacher interpersonal behaviors (Goh & Fraser, 1998) while boys tended to prefer teachers to be more strict, dissatisfied, and admonishing (van Oord & den Brok, 2004). In rating teachers, the girls tended to rate their teachers as good leaders, helpful, and friendly while the boys tended to rate their teachers as more uncertain (Hunus et al., 1997). However, other studies showed that boys responded better to teacher praise than criticism (Dweck et al., 1978), and that boys tended to receive more negative feedback than girls (Etaugh & Harlow, 1975; Minuchin & Shapiro, 1983). A study of preferences of teacher interpersonal behavior of students of different ages found significant differences with older students preferring significantly higher levels of leadership and understanding from their teachers than did younger students (Szteijnberg et al., 2004). A study of students in different academic areas found no significant differences in preferences of teacher interpersonal behavior (Lourdusamy & Khine, 2001). Due to the limited amount of research that has been conducted, additional studies are needed on students’ preferences of interpersonal teacher behavior based on gender, age, and academic area in order to confirm the initial findings.
Results in music research have been similar to those in general education in the areas of teacher interactions (Schmidt, 1995), intensity (Byo, 1990; Standley & Madsen, 1987), and teacher style (Gumm, 1993), with most teachers, regardless of academic subject, tending to behave and interact in a similar manner. However, there has been little or no research in music on students’ preferences of interpersonal behavior. There is also a need for research in music to examine students’ preferences of teacher interpersonal teacher behavior based on students’ gender, age, academic major, and instrument.

Much like teacher interpersonal behavior, a significant number of research studies have been conducted on student self-efficacy in education. The research has shown there to be positive relationships between student self-efficacy and goal-setting (Locke & Latham, 1990), student motivation (Ames, 1992; Bandura, 1986, 1989), and student achievement (Bandura, 1991; Bandura & Jourdan, 1991; Pajares, 2002; Pajares & Schunk, 2001; Schunk, 1989; Schunk & Pajares, 2001; Zimmerman, 1995, 2000; Zimmerman & Bandura, 1994). Research in music has shown positive relationships between self-efficacy and performance (Maehr, Pintrich, & Linnenbrink, 2002; McPherson & McCormick, 2003, 2006; McPherson & Zimmerman 2002), music practice (Hallam, 2001; McPherson & McCormick, 1999; Nielson, 2004), jazz performance (Wehr-Flowers, 2008), and improvisation (Ciorba, 2007; Davison, 2006; Watson, 2005).

Although there has been a significant amount of research on self-efficacy in music in relation to such topics as performance, stage-fright, and practice, studies related to student gender, age, major, and instrument is limited. The small numbers of studies that have been conducted have revealed that males tend to have higher musical performance self-efficacy than females (Nielson, 2004; Sinden, 1999; Wehr-Flowers, 2008). In other studies, no significant
differences were found in jazz self-efficacy for age or instrument (Wehr-Flowers, 2008) or in music self-efficacy for instrument or degree program (Nielsen, 2004). Nielsen (2004) did find there to be a significant interaction between gender, degree, and self-efficacy with male music performance and church music majors having higher self-efficacy than females in these majors and male music education majors having lower self-efficacy than the females. Due to the limited number of research studies in this area, additional research is needed to examine the gender, age, major, and instrument in terms of self-efficacy in music.

While much research has been conducted on teacher interpersonal behavior and student self-efficacy independently, there has been little research on the possible relationship between the two. Some research was conducted in the late 1970s and early 1980s that examined teacher expectancies, student perceptions of teacher behaviors, and their relationship to student achievement and self-efficacy. The results led the researchers to theorize that teacher behavior, real and perceived, may be related to student self-efficacy. In an effort to continue this line of investigation, this study will examine college band students’ preferences of interpersonal teacher behavior and perceived self-efficacy to investigate the relationship between interpersonal behavior and self-efficacy.

Purpose

The first purpose of this study was to describe collegiate band members’ preferred teacher interpersonal behaviors and perceptions of music self-efficacy based on their major, year in school, gender, and instrument. The second purpose was to measure the relationship between preferences of interpersonal teacher behaviors and self-efficacy scores. The specific research questions were:
1. What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of the following demographic characteristics?
   a. Gender
   b. Year in college
   c. Major
   d. Instrument

2. What were the students’ scores of self-efficacy in terms of the following demographic characteristics?
   a. Gender
   b. Year in college
   c. Major
   d. Instrument

3. What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy?

Definitions

For the purposes of this study, operational definitions of the terminology are provided.

Self-efficacy is the set of beliefs a person holds regarding his or her own capabilities to produce desired outcomes and influence events that affect his or her life (Bandura, 1986).

Teacher interpersonal behavior is the manner in which a teacher interacts with students in general. These patterns of actions for an individual teacher are consistent across classes, situations, and students (Wubbels & Levy, 1993). The two dimensions of the teacher interpersonal behavior are proximity and influence.
Proximity dimension is one of two dimensions created to categorize teacher interpersonal behavior and describes the degree of cooperation between the teacher and student. The extreme ends of the dimension are labeled cooperative and oppositional (Wubbels & Levy, 1993).

Influence dimension is one of two dimensions created to categorize teacher interpersonal behavior and describes how the teacher controls communication with students. The extreme ends of the dimension are labeled dominant and submissive (Wubbels & Levy, 1993).

Dominant-cooperative is the upper right quadrant on the proximity-influence matrix. The quadrant includes the categories of leadership and helpful/friendly (Wubbels & Levy, 1993).

Leadership is one of the categories within the model of interpersonal teacher behavior. This category is dominant on the Influence dimension and cooperative on the proximity dimension with the dominant prevailing over the cooperative. The following behaviors may be associated with a leadership profile: notice what is happening, set tasks, organizes, give orders, explain, and hold the attention (Wubbels & Levy, 1993).

Helpful/friendly is one of the categories within the model of interpersonal teacher behavior. This category is dominant on the influence dimension and cooperative on the proximity dimension with the cooperative dimension prevailing over the dominant. The following behaviors may be associated with a helpful/friendly profile: assist, show interest, be able to make a joke, inspire confidence and trust (Wubbels & Levy, 1993).

Dominant-oppositional is the upper left quadrant on the proximity-influence matrix. The quadrant includes the categories of strict and admonishing (Wubbels & Levy, 1993).

Admonishing is one of the categories within the model of interpersonal teacher behavior. This category is dominant on the influence dimension and oppositional on the proximity dimension with the oppositional dimension prevailing over the dominant. The following
behaviors may be associated with an admonishing profile: get angry, correct, forbid, and punish (Wubbels & Levy, 1993).

Strict is one of the categories within the model of interpersonal teacher behavior. This category is dominant on the influence dimension and oppositional on the proximity dimension with the dominant dimension prevailing over the oppositional. The following behaviors may be associated with a strict profile: keep class silent, set rules, judge, maintain tight control (Wubbels & Levy, 1993).

Submissive-cooperative is the lower right quadrant on the proximity-influence matrix. The quadrant includes the categories of understanding and student responsibility/freedom (Wubbels & Levy, 1993).

Understanding is one of the categories within the model of interpersonal teacher behavior. This category is submissive on the influence dimension and cooperative on the proximity dimension with the cooperative dimension prevailing over the submissive. The following behaviors may be associated with an understanding profile: listen with interest, show confidence and understanding, empathize, be patient, and accept apologies (Wubbels & Levy, 1993).

Student responsibility/freedom is one of the categories within the model of interpersonal teacher behavior. This category is submissive on the influence dimension and cooperative on the proximity dimension with the submissive dimension prevailing over the cooperative. The following behaviors may be associated with a student responsibility/freedom profile: give opportunity for independent work, give freedom, give students a say in class activities (Wubbels & Levy, 1993).
Submissive-oppositional is the lower left quadrant on the proximity-influence matrix. The quadrant includes the categories of uncertain and dissatisfied (Wubbels & Levy, 1993).

Limitations

The results and conclusions of this study should not be generalized beyond the sample and the universities used in this study. Although the sample includes university band members enrolled in public and private universities located in various parts of the United States, the sample is a very small percentage of the overall population and may not be representative of all university band members. In addition, participants in this study were volunteers and therefore may have different opinions than those who chose not to volunteer to participate in the study.
CHAPTER 2
REVIEW OF THE LITERATURE

This chapter is a review of the research literature related to the variables that are examined in this study. The two main sections include research pertaining to teacher interpersonal behavior and to self-efficacy. Each of the two primary sections includes three sections: 1) background information, 2) research in education, and 3) research in music. In addition, the variables of gender, year in school, academic major, and instrument are addressed within each topic area.

Teacher Interpersonal Behavior

During the early 1980s, researchers at Utrecht University in the Netherlands were studying the experience of beginning teachers in an effort to improve the university’s teacher education program. As a result, an induction program was created in which guidance and support were provided to new teachers by the university personnel. During this program, the university mentors focused upon the teachers’ behaviors rather than outside factors (Wubbels & Levy, 1993). After “extensive observations, interviews, analyses of supervision conferences and action research activities we arrived at the idea that interpersonal behavior was a key factor in the discipline problems of new teachers” (Wubbels & Levy, 1993, p. xv). From this study, a line of research was developed in which teaching was analyzed from an interpersonal perspective that examined the teacher-student relationship (Wubbels & Brekelmans, 2005).

Since that time, research has been conducted on teacher interpersonal behavior (den Brok, Brekelmans, & Wubbels, 2004; Moos, 1979; van Petegem, Creemers, Rosseel, & Aelterman, 2005; Waxman & Eash, 1983; Wubbels & Brekelmans, 2005; Wubbels & Levy, 1993). These researchers have described teacher interpersonal behavior as actions by the teacher that create and maintain a positive, warm classroom atmosphere, conducive to learning
The primary focus of the research has centered on the relationship between the teacher and students which has been considered to be one of the most important dimensions of class climate (Moos, 1979).

Teacher interpersonal behavior has been studied in many contexts. Teacher and student perceptions of actual and ideal teacher interpersonal behaviors have also been measured and compared (Kyriakides & Muijs, 2005; Levy et al., 1993). These perceptions have been used to formulate profiles of actual and ideal teacher interpersonal behaviors (Brekelsmans, Levy, & Rodriguez, 1993; Brekelmans, Wubbels, & van Tartwijk, 2005; Fisher, Rickards, & Newby, 2001; Fraser & O’Brien, 1985; Lourdusamy & Khine, 2001). Researchers have also studied the relationship of teacher interpersonal behavior to student achievement (den Brok, Brekelmans, & Wubbels, 2004; Kalu & Ali, 2004; Nesmith, 2003; Waxman & Eash, 1983). Differences in perceptions were found based on gender (den Brok et al., 2004; den Brok, Levy, Brekelmans, & Wubbels, 2005; Lourdusamy & Khine, 2001; Onwumere, 2003; Waldrop, 2006), and on age and ethnicity (Rodriguez, 1999; Smith, 1997; Waxman & Eash, 2001). Relevant findings from these studies are discussed in the following pages.

From the initial study, the Utrecht teacher education faculty developed a belief that effective teachers must be excellent communicators as well as fine technicians (Wubbels & Levy, 1993). In order to assist new teachers in developing interpersonal behaviors, further research was conducted utilizing a systems approach to communication (den Brok et al., 2004; Newby, Rickards, & Fisher, 2001; Wubbels & Brekelmans, 2005; Wubbels & Levy, 1993). This systems approach was developed and has been used extensively in family therapy (Haley, 1963; Watzlawick, Beavin, & Jackson, 1967). According to Wubbels, Creton, and Holvast (1988), the theory could be effectively adapted and utilized in the educational environment.
The systems perspective on communication assumes that the behaviors of participants influence each other (Haley, 1963). According to Watzlawick, Beavin, and Jackson (1967), every behavior that someone displays is communication. Based upon this theory, “one cannot not communicate when in the presence of someone else, whatever a person’s intentions are; others will infer meaning from that behavior” (Wubbels & Brekelmans, 2005, p. 7). The systems theory also assumes that circular communication processes develop that not only consist of behavior, but determine behavior as well. The behavior of the teacher is influenced by the behavior of the students and in turn influences student behavior (Waldrip & Fisher, 2002).

Using the systems theory as a theoretical framework, Wubbels, Creton, and Hooymayers (1985) developed a model to map teacher interpersonal behavior. This model was called the model for interpersonal teacher behavior (MITB) and was based on Leary’s research on the interpersonal diagnosis of personality (1957). Leary and his co-workers analyzed hundreds of patient-therapist dialogues and group discussions in clinical and other situations. The Leary model has been utilized extensively in clinical psychology and psychotherapeutic settings and has been shown to be effective in describing human interaction (Lonner, 1980).

The model of interpersonal teacher behavior (MITB) is the only model based on the research using the Questionnaire on Teacher Interaction (QTI) and has been used extensively in teacher interpersonal behavior research. It was designed to measure the manner in which the teacher and students interact. The researchers made a distinction between the study of interpersonal behavior and teacher personality. In their theory, personality tends to refer to stable, unchangeable traits. Behaviors, however, can be learned and altered as well as influenced by relationships and interactions with others. This is not, however, the only way that the teacher can behave (Wubbels & Levy, 1993).
The model for interpersonal teacher behavior (MITB) maps interpersonal behavior on two dimensions, influence and proximity. *Influence* is the dimension describing who is controlling the communication and the frequency. It consists of dominance and its opposite, submission. The *proximity* dimension describes the degree of cooperation of the teacher and consists of cooperation and its inverse, opposition.

![Figure 1. The coordinate system of the Leary model. (Wubbels, Creton, Levy, & Hooymayers, 1993)](image)

These dimensions were represented in a coordinate system divided into eight equal sections which were identified by a specific teacher characteristic. These are: 1) leadership, 2) helping/friendly, 3) understanding, 4) student responsibility/freedom, 5) uncertain, 6) dissatisfied, 7) admonishing, and 8) strict (Wubbels, Brekelmans, & Hooymayers, 1993).
Students’ perceptions of the learning environment have been commonly investigated in educational research studies (Ehman, 1970; Fraser, 1986; Peck, Olsson, & Green, 1978; Stallings, Needels, & Stayrook, 1978; Steele, House, & Kernins, 1971; Waxman & Eash, 1983). Research has shown that the feedback given by students tends to be reliable (Ehman, 1970; Fraser, 1986; Peck et al., 1978; Stallings et al., 1978; Waxman & Eash, 1983). It has also been found that students tend to agree with outside observers, such as supervisors and principals, when rating teacher behavior (Peck, Blattstein, & Fox, 1978; Peck et al., 1978; Stallings et al., 1979; Waxman & Eash, 1983). In comparisons of teachers’, students’, and observers’ perceptions of teacher behavior, students and observers have been found to agree, but they have
been found to be different than the teachers' own perceptions, with the teachers’ self-perceptions tending to be more positive (Ehman, 1970; Hook & Rosenshine, 1979; Steele et al., 1971).

The Questionnaire on Teacher Interaction (QTI) was initially designed to measure student perceptions of teacher interpersonal behavior. The first studies utilizing the QTI measured teachers’ and secondary students’ perceptions of interpersonal teacher behavior and created profiles based on the model of interpersonal behavior (MITB) (Brekelmans, 1989; Creton & Wubbles, 1984; Fisher et al., 1992; Wubbels, Brekelmans, & Hermans, 1987; Wubbels et al., 1985; Wubbels & Levy, 1991). The studies were conducted in The Netherlands, Australia, and the United States with large samples. Studies found that the teachers and students perceived the teachers as high on leadership, helpful/friendly, and understanding behavior and low on uncertainty, dissatisfaction, and admonishment. These studies were used to create teacher profiles; the perceptions of the teachers and students were not compared.

Studies comparing teachers’ and students’ perceptions of teacher interpersonal behavior using the Questionnaire on Teacher Interaction (QTI) have found consistent results to previous research. Significant differences were found between students’ and teachers’ perceptions, with teachers generally having a more positive impression of their interpersonal behavior than did their students (Brekelmans & Wubbels, 1991; den Brok, Levy, Rodriguez, & Wubbels, 2002; Fisher, Fraser, & Wubbels, 1993; Levy, Wubbels, & Brekelmans, 1992; Wubbels, 1993; Wubbels, Brekelmans, & Hooymayers, 1993). Wubbels, Brekelmans, and Hermans (1987) found that students and their teachers agreed most about the level of the teacher’s leadership and strict behavior and least about understanding and friendly behavior. Wubbels, Brekelmans, and Hooymayers (1991) found that students’ and teachers’ scores differed on five scales, with teachers’ scores tending to be higher on helpful/friendly and understanding scales and lower on
uncertain, dissatisfied and admonishing scales than the students’ scores. Levy, Wubbels, and Brekelmans (1992) found that all teachers saw themselves as significantly higher on the dominant and cooperative dimensions than their students perceived them to be.

In addition to studying students’ and teachers’ perceptions of actual teacher behavior, researchers have also measured teachers’ perceptions of ideal behavior and found these perceptions to be different than perceptions of actual behavior (Brekelmans & Wubbels, 1992; Holvast, Wubbels, & Brekelmans, 1988; Wubbels, 1993; Wubbels, Brekelmans, & Hooymayers, 1993). To compare perceptions of actual and ideal teacher interpersonal behavior, teachers filled out two forms of the QTI: one representing their actual behavior and one representing ideal behaviors. For most teachers, the scores for the ideal were higher than the scores for the teachers’ self-perceptions, which were higher than the students’ perceptions. Overall, teachers tended to see their own behaviors more like their ideal than did the students, which is consistent with studies of learning environments where teachers rated themselves more positively than their students rated them (Fraser & O’Brien, 1985; Nisbett & Ross, 1980).

Research has also compared teachers’ perceptions of their ideal behavior with students’ ratings of their best and worst teachers (Levy et al., 1993). The researchers asked students in The Netherlands, Australia, and the United States to rate their best and worst teachers on the QTI. They found: “In general, the teachers neither reach their ideal nor match the behavior of the best teachers” (Levy et al., 1993, p. 34). Students described their best teachers as friendly, understanding, and as strong leaders. Best teachers also tended to provide students with responsibility and freedom and were less uncertain, dissatisfied, and admonishing. Consistent with earlier findings, they found that teachers’ ratings of ideal teacher interpersonal behaviors were higher than the students’ descriptions of their best teachers.
Research on teacher-student relationships over the span of the teaching career has revealed differences based upon teacher experience levels (Brekelmans, Wubbels, & van Tartwijk, 2005; Nijveldt et al., 2005). In these studies, the researchers described the teacher-student relationships of multiple teachers with various amounts of teaching experience, as well as through longitudinal data to determine changes of individual teachers’ behavior over time. Beginning teachers were seen as very low on the influence trait of the model of interpersonal teacher behavior (MITB), indicating that they had less control of the communication in the classroom than more experienced teachers. However, the students’ ratings of the teacher on the influence dimension increased significantly each year for the first three years (Nijveldt et al., 2005). Starting the fourth year, differences were smaller with each successive year. The proximity dimension of the model of interpersonal teacher behavior (MITB), which includes the teachers’ cooperation or opposition, was strongest at the beginning of the career and the lowest after 25 years of experience. Late in the career, teachers tended to be labeled as repressive, receiving high scores on control of classroom communication (influence) and low scores on cooperation (proximity) (Wubbels & Brekelmans, 2006). The teachers’ ideal perceptions of teacher-student relationships remained stable throughout their own careers (Brekelmans et al., 2005).

The Questionnaire on Teacher Interaction (QTI) has been used as a valuable tool in designing professional development (Newby et al., 2001; Rickards & Fisher, 2000; Smith, 1997; Wubbels & Brekelmans, 2005). It has been shown that the way a teacher perceives ideal classroom interaction affects the way the teacher perceives the actual classroom interaction (Rickards & Fisher, 2000). This study also found that teachers’ perceptions of the actual classroom interactions may also influence the students’ perceptions and the students’ perceptions
may influence the teachers’ perceptions. “If teachers modify the way in which they interact with students in response to students’ perceptions of the classroom interaction, then this should have a positive effect on those perceptions which in turn should affect the teachers’ perception of the classroom interaction” (Newby et al., 2001, p. 11).

Teacher interpersonal behavior has also been shown to positively affect students’ subject-specific motivation (Brekelmans, 1989; den Brok & Levy, 2005; den, Brok et al., 2004; den Brok, Levy, Brekelmans, & Wubbels, 2005). In studies conducted in Dutch secondary schools, researchers found that teacher proximity had a much larger effect on student motivation than did influence. Teacher proximity also had the most effect on student effort and confidence. “The outcomes of this study thus show that teachers can affect internally as well as externally-related factors of motivation” (den Brok et al., 2005, p. 29).

In addition to motivation, student perceptions of teacher interpersonal behavior have been found to influence cognitive (thought processes, academic work) and affective (aesthetic, emotional) outcomes in secondary classes. Studies have shown that a considerable amount of variance in student outcomes can be explained by teacher-student relationships (Brekelmans, Wubbels, & Levy, 1993). Significant differences were found between the interpersonal teaching styles and both cognitive and affective learning outcomes (Brekelmans, Wubbels, & Creton, 1990; den Brok, 2001; den Brok et al., 2004; Fisher, Henderson, & Fraser, 1995; Fisher et al., 2001; Fraser, 1998; Kim, Fisher, & Fraser, 2000; Kyriakides, 2005; Nesmith, 2003; Onwumere, 2003; Smith, 1999; Wubbels, 1993; Wubbels & Brekelmans, 1998; Wubbels et al., 1991). Students with higher cognitive outcome scores tended to have teachers higher on strict, leadership and helpful/friendly behaviors, and to a lesser degree, student responsibility and freedom (Brekelmans et al., 1990; den Brok et al., 2004; Evans, 1998; Goh, 1994; Goh & Fraser,
Uncertain and dissatisfied teacher behaviors were found to be negatively related to achievement. Higher student affective outcome scores were also found when teachers scored high on student responsibility and freedom, understanding, helping/friendly and leadership behaviors (Brekelmans et al., 1990; den Brok et al., 2004; Evans, 1998; Goh, 1994; Rawnsley, 1997).

A limited number of studies using the model of interpersonal teacher behavior (MITB) and the Questionnaire on Teacher Interaction (QTI) have been conducted in higher education settings as well as in primary and secondary schools (Hunter, 2004; Smith, 1997; Sztejnberg et al., 2004). Smith (1997) altered the original QTI to create the Professor Interpersonal Teaching Behavior Instrument (PITBI) in order to study college students’ perceptions of actual and ideal teacher interpersonal behavior. The PITBI was a modification of the 64-item American version of the QTI. After the validity and reliability studies, the PITBI was reduced to 20 questions that grouped into four factors: 1) leadership, 2) uncertainty, 3) helpfulness, and 4) temperament. The instrument was found to be reliable; however, use has been limited.

Research studies on students’ preferences of interpersonal teacher behavior have shown significant differences in the ways students want teachers to interact with them in the classroom. Waldrip, Fisher, and Chuarch (2003) studied the perceptions of primary education students concerning desirable interpersonal teacher behaviors. Students used the Questionnaire on Teacher Interaction (QTI) to rate their teachers. The researchers then selected the best and worst teachers based on scores given by students who were one standard deviation above or below the average from the students’ ratings. These teachers were then interviewed to gain a more complete view of the teachers’ behaviors in class. The interviews “indicated that exemplary
teachers provided clear instructions, viewed students as capable, had a caring attitude and engaged them actively in the classroom” (Waldrip et al., 2003, p. 36).

Differences in students’ perceptions of preferred teacher-student interpersonal behavior in secondary international schools have been found in two different countries (van Oord & den Brok, 2004). This study showed cultural differences, with students from Norway preferring teachers to be stricter and students in Wales preferring more freedom. Sztejnberg, den Brok, and Hurek (2004) studied the preferred teacher interpersonal behavior of Polish higher education and primary school students. Students were asked to rate their ideal teacher using a translation of the 64-item American version of the QTI. According to the Polish students, “good interpersonal teachers display leadership, helpful/friendly and understanding behavior, provide considerable amounts of student freedom, are hardly uncertain, dissatisfied or admonishing and moderately strict” (Sztejnberg et al., 2004, p. 38). The university level students rated their ideal teachers extremely high on the QTI quadrants of leadership and understanding and extremely low on admonishing and uncertain.

Students’ and teachers’ gender has been found to be a significant factor in student-teacher interactions. In general education, the perceptions of male and female teachers of their own interpersonal teacher behavior have tended to differ. The research has shown that male teachers tended to perceive themselves as higher on leadership and helpful/friendly behaviors, while female teachers tended to perceive themselves to be more uncertain and admonishing (Lourduamy & Khine, 2001).

Significant differences were also found between male and female students’ perceptions and preferences of teacher interpersonal behavior (den Brok et al., 2004; den Brok et al., 2005; Goh & Fraser, 1998; Hunus et al., 1997; Lourduamy & Khine, 2001; Onwumere, 2003;
In general, girls have been found to prefer a greater degree of interpersonal teacher behavior than boys (Goh & Fraser, 1998). In addition, girls were more likely to perceive their teachers as good leaders, helpful and friendly. The boys felt that the teachers were more uncertain and gave the students more responsibility and freedom than the girls did (Hunus et al., 1997). Van Oord and den Brok (2004) also found that male students prefer different teacher behavior than females, with the males preferring more strictness, dissatisfaction and admonishing behavior.

In contrast to the previously mentioned studies, Dweck, Davidson, Nelson, and Enna (1978) found that boys tended to pay attention to teacher praise but dismiss criticism. However, the boys tended to receive more evaluative (Minuchin & Shapiro, 1983) and more negative (Etaugh & Harlow, 1975) feedback than the girls. Boys also tended to attribute success to ability and failure to external sources such as the teacher. Girls tended not to be encouraged by teacher praise and were discouraged by criticism (Dweck et al., 1978). This study also found that girls tended to attribute success to both internal and external factors but attributed failure internally.

Research studies have found differences in the teacher interpersonal behavior of teachers from different academic areas. These studies involving perceptions of teachers have been conducted in many academic areas including science (Fisher, Rickards, Goh, & Wong, 1997; Kim et al., 2000; Newby et al., 2001; Onwumere, 2003; Rickards & Fisher, 1998, 2000; Waldrop, 2006), biology (Smith, 1999), chemistry (Hunus et al., 1997), physics (Kalu & Ali, 2004), English as a second language (den, Brok et al., 2004; den Brok et al., 2005), mathematics (Goh & Fraser, 1998), teacher education (Lourdusamy & Khine, 2001), and music (Hunter, 2004). Generally, teachers tended to be highest on the dominance and cooperation domains with
the highest scores in the understanding and helpful/friendly sectors followed closely by the leadership and strict sectors (Wubbels et al., 1993). The research has found that social studies teachers were perceived as the least dominant and foreign language and mathematics teachers were perceived as the most dominant (Levy et al., 1993). In addition, foreign language teachers (Levy et al., 1993) and music teachers (Hunter, 2004) tended to be perceived as the most strict and the lowest on the student responsibility/freedom domain.

Limited research has been conducted on the differences of students’ perceptions of teacher interpersonal behavior based on college students’ major. Lourdusamy and Khine (2001) conducted a study in which arts, science, and mathematics majors’ perceptions and preferences of teacher interpersonal behaviors were measured. The study found no significant differences between the perceptions and preferences of the three academic majors.

Interpersonal Teacher Behavior Research in Music

Research studies on teacher-student interactions in music have examined teachers’ personality traits, intensity, feedback behaviors, teaching style, and interpersonal teacher behavior. Studies have been conducted at all levels, from elementary through higher education. Many studies regarding music teacher style and behavior as well as student perceptions and preferences have documented traits in music teachers that tend to differ from those in general education.

Personality traits of music teachers have been studied to determine common trends (Holland, 1977; Teachout, 2001; Teachout & Hamann, 1997). Researchers have used various psychological personality inventory instruments to measure personality traits (Kramer & Conoley, 1989; Krueger, 1974; Schmidt, 1989; Slack, 1977; Stevens, 1994; Teachout, 2001; Wubbenhorst, 1994). These instruments include the Personality Factor Questionnaire (Krueger,
1974), Minnesota Multiphasic Personality Inventory (Slack, 1977), the Myers-Briggs Personality Type Indicator (Schmidt, 1989; Wubbenhorst, 1994), the Vocational Preference Inventory (Teachout, 2001), and Jung’s theory of personality types (Kramer & Conoley, 1989; Stevens, 1994). Research has found significant positive relationships between extroverted personality ratings and teacher approval behavior, reinforcement rates, and interactive teaching behaviors (Schmidt, 1989). This finding suggests that “personality variables may be important factors underlying music teaching behaviors” (Schmidt, 1989, p. 266).

Varied personality traits common in music teachers have been measured and identified through the use of student perceptions and preferences. Studies have shown that students perceive that teachers generally tend to be cooperative, conscientious, gregarious, self-disciplined, trusting, and gentle (Hendel, 1995; Krueger, 1974; Slack, 1977; Yarbrough, 1975). However, Slack (1977) noted that teachers also tended to be self-repressive, defensive, and unable to admit weaknesses. When comparing teachers who were rated as successful and unsuccessful by their students, it was found that successful teachers tended to be more emotionally stable, more imaginative, and independent. In addition, primary teachers were found to be more strict and rigid than secondary teachers (Slack, 1977).

Teacher personality variables have also been documented in applied music teaching (Schmidt, 1989). Research has found significant relationships between student interest and achievement and teacher interaction and positive reinforcement (Abeles, 1975; Duke, 1999; Duke & Prickett, 1987; Kostka, 1984; Schmidt, 1989; Speer, 1994). In Speer’s (1994) study of applied teacher behavior, significant age differences were found in presentation of musical information, teacher talk, teacher coaching, and student participation. The teachers with more than 18 years of experience were more disapproving to students and less specific with approvals.
In addition, the students perceived as "average" by teachers received significantly more directive comments than "better" students.

In contrast, research conducted in ensemble settings has found that expert teachers tended to give more feedback than less experienced teachers (Buckner, 1998; Cavitt, 1998; Younger, 1998). Experienced teachers also tended to give more specific positive feedback (Buckner, 1998; Goolsby, 1997; Siebenaler, 1997) and more negative feedback (Buckner, 1998; Carpenter, 1988; Siebenaler, 1997). Different results have also been found regarding teacher feedback and the age of students. Kostka (1984) found that teachers of all levels tended to give more positive feedback to younger students than to older students. However, Speer (1994) found different results with teachers having less than 18 years of experience as being more approving with the more experienced students and more disapproving with younger students.

Teacher personality traits have been shown to positively influence student motivation (Kvet & Watkins, 1993) as well as achievement and musicianship (Davidson, Moore, Sloboda, & Howe, 1998; Hendel, 1995; Howe & Sloboda, 1991; Yarbrough, 1975). Research has shown that teachers of high achieving music students tended to be rated as warm, friendly, relaxed and encouraging (Davidson et al., 1998; Sloboda & Howe, 1992; Sosniak, 1985). According to Smith (1971), “teaching behavior is so much an expression of the teachers’ personality that the skills he will use, how he will use them, and their effects on pupils’ achievement are in a large measure dependent upon his personality” (p. 7).

High levels of music teacher intensity have also been found to influence positive perceptions of teacher effectiveness (Byo, 1990; Cassidy, 1990; Madsen, 1988, 2003; Madsen & Geringer, 1989; Madsen, Standley, Byo, & Cassidy, 1992; Madsen, Standley, & Cassidy, 1989; Wang & Sogin, 1997). Madsen and Geringer (1989) defined teacher intensity as “sustained
control of the teacher/student interaction evidenced by efficient, accurate presentation and correction of the subject matter with enthusiastic affect and effective pacing” (p. 90). The studies of music teacher intensity have primarily involved pre-service teachers (Byo, 1990; Cassidy, 1990; Hancock, 2003; Madsen, 1988; Madsen et al., 1989) and found that teacher intensity can effectively be taught (Cassidy, 1990, 1993; Colwell, 1995; Madsen et al., 1989).

Studies on the effect of gender on student-teacher interaction in music have resulted in mixed results when compared to those conducted in general education. Legette (1998) found that females, in music, perceived ability and effort as being more important than males, contradicting the general education findings (Dweck et al., 1978). In addition, music studies have shown that boys tended to be more influenced by peer praise than teacher praise, where girls were more influenced by praise from teachers than peers (Schmidt, 1995), which is consistent with the general education research. Girls have also been shown to perceive higher rates of approvals while boys have been shown to perceive higher rates of disapprovals (Schmidt, 1995) in both fields.

Mixed results have been found in the limited research that has been conducted in music on students’ perceptions of teacher intensity based on academic major (Byo, 1990; Standley & Madsen, 1987). Standley and Madsen (1987) measured the teacher intensity of college students teaching a preschool music lesson. The study used music education and music therapy students as teachers. No significant difference was found between the groups. Byo (1990) measured students’ abilities to recognize teacher intensity contrasts. High school students, university non-music majors, music majors, and graduate students were asked to identify intensity contrasts. The university level non-music majors were the least capable of identifying the contrasts.
Studies in music comparing students’ perceptions of teacher intensity (Madsen et al., 1989; Standley & Madsen, 1987) and teacher effectiveness (Madsen, 2003) based on age have found significance differences. Madsen, Standley, and Cassidy (1989) measured freshman, senior, and graduate music education majors on teacher intensity while teaching a short self-selected music lesson. They determined that students displayed progressively more teacher intensity with age. In a similar study, Standley and Madsen (1987) compared the teacher intensity of freshmen and senior music education majors while teaching a preschool music lesson and found that the seniors displayed significantly more teacher intensity than the freshman. Madsen (2003) conducted a study measuring students’ perceptions of teacher effectiveness using four groups: grades 6-8, grades 9-12, undergraduate, and experienced teachers. She found secondary students tended to rate the teacher relatively high even when the teacher gave inaccurate information but demonstrated high delivery with an attentive class. Experienced teachers attended to the accuracy of instruction more than the other groups, and the middle school group noticed student attentiveness more.

In addition to personality factors and intensity, teacher style may be an important variable in music teaching and learning. Teaching style in music education has been extensively researched, although the term, teaching style, has been interpreted in many ways. While the manner in which a teacher uses particular instructional techniques has been referred to as the teacher's style, according to Gumm (1993), teaching style “is a consistent pattern of teaching behaviors” (p. 182). These behaviors are not influenced by situation or subject matter, but are consistently performed by an individual teacher in any circumstance.

Research on teaching style in music education has focused on various teaching behaviors and techniques. Some of the styles that have been applied in these studies have included direct
versus indirect (Flanders, 1970), formal versus informal (Bennett, 1976), and supportive versus non-supportive (Erbes, 1978). However, according to Gumm (1993), these topics focus only on behavioral aspects of teaching, not teaching style. Based on the definition of teaching style as a “consistent pattern of teaching behaviors” (p. 182), Gumm (1993) developed a model of choral music teaching style. He surveyed choral teachers across the United States on eight factors including student independence, teacher authority, positive learning environment, time efficiency, nonverbal motivation, aesthetic music performance, group dynamics, and music concept learning.

The teaching styles of music educators have been found to differ from the style of teachers in other academic areas. Research on music educators’ teaching styles utilizing observational ratings have shown that “music teachers tend to be more direct in their teaching style than has been considered desirable for teachers in fields other than music" (Froehlich, 1977, p. 116). Students in music classes were also found to be more on-task compared to involvement in other academic work (Sims, 1986; Spradling, 1985). However, a cause and effect relationship cannot be established.

Priorities of teaching style have been found to differ between elementary music students and their teachers. In a study by Wolfe and Jellison (1990), elementary music students and teachers rated the importance of specific teaching behaviors associated with teaching style. Students preferred, in order: 1) student participation, 2) reinforcement, 3) sincerity, 4) organization, 5) communication with students, and 6) clarity of presentation. Teachers preferred, in order: ratings were 1) organization, 2) clarity of presentation, 3) teacher sincerity, 4) communication with students, 5) reinforcement, and 6) student participation. These findings are
consistent with earlier findings that show differences in teachers’ and students’ preferences of personality traits, intensity, and interpersonal teacher behavior.

Hamann, Mills, Bell, Daugherty, and Koozer (1990) studied high school band and choir students’ perceptions and found student achievement to be strongly related to teacher involvement, support, order and organization, and rule clarity. Student achievement in music ensembles has also been shown to be positively affected by teacher behaviors such as maintaining eye contact and use of facial expression (Yarbrough, 1975) and moving throughout the ensemble while rehearsing (Hendel, 1995). In addition, studies of high school band, orchestra, and choir rehearsals have found that teacher interpersonal behavior can strongly affect students’ attention and on-task behavior (Price, 1983; Yarbrough & Madsen, 1998; Yarbrough & Price, 1981).

Research on interpersonal teacher behavior in music is limited. Hunter (2004) examined ensemble members’ perceptions of student conductors’ teacher interpersonal behaviors, teaching effectiveness, and conducting/rehearsal techniques. Thirty undergraduate music education majors who had taken at least one semester of conducting were recorded on three different occasions to measure conducting skill and teaching effectiveness. Ensemble members rated the conductor using the Questionnaire on Teacher Interaction (QTI), and three judges rated the conductors on teaching effectiveness and rehearsal/conducting technique. A two-way mixed analysis of variance was used to look for differences between assigned interpersonal teaching behavior profile label (independent variable) on conducting/rehearsal effectiveness and teaching effectiveness in repeated conducting performances (dependent variables). On the QTI, 11 conductors were identified as helpful/friendly, 11 conductors were identified as understanding, and 8 conductors were identified as strict.
Significant differences were found between scores of teaching effectiveness by interpersonal behavior category. Conductors in the strict category had the highest overall mean score for teaching effectiveness, and helpful/friendly conductors had the lowest overall mean score. However, those in the understanding category scored highest overall for the first rehearsal, and the understanding category had the greatest increase in score between the first and third rehearsal and a slightly higher mean score on the third rehearsal. The conductors in the strict category in this study received the highest overall means for teaching and conducting effectiveness. No significant differences were found on the conducting effectiveness scores across the three style profile categories.

Self-Efficacy

As previously discussed, the manner in which students perceive their teachers’ interpersonal behavior has been shown to be related to student achievement, motivation, and affects. These perceptions may also be related to student personal self-efficacy. According to Wigfield and Harold (1992), “it is not just what the teachers do but how students view teachers’ behaviour that relate both to students’ own sense of efficacy and their school performance (p. 98).

According to Bandura (1986), self-efficacy is the set of beliefs a person holds regarding his or her own capabilities to produce desired outcomes and influence events that affect his or her life. Bandura (1977) believed that individuals create and develop self-perceptions of capability that become instrumental to the goals they pursue and to the control they are able to exercise over their environments. These beliefs can affect how people think and behave, the choices they make, goals they set and courses of action they pursue. Self-efficacy beliefs may influence self-motivation, expenditure of effort on an activity, and the level of perseverance
when faced with difficulties or obstacles. Perceived self-efficacy can determine levels of confidence and emotional health as well as how success and failure are attributed (Bandura, 1986, 1994, 1997).

According to Bandura’s theory and research, self-efficacy makes a difference in how people feel, think and act (Bandura, 1995). In terms of feeling, Bandura believed that a low sense of self-efficacy is associated with depression, anxiety, and helplessness. Low self-efficacious individuals often have low self-esteem and pessimistic thoughts about their accomplishments and personal development. In terms of thinking, high self-efficacy is often associated with good decision-making and high academic achievement. Self-efficacy can also be a major component of the motivation process and can enhance or impede motivation. People with high self-efficacy often choose to perform more challenging tasks (Bandura, 1995) as well as set higher goals and stick to them. According to Bandura (1995) actions are pre-shaped in thought, and people tend to anticipate either optimistic or pessimistic scenarios in line with their levels of self-efficacy. Once an action has been taken, high self-efficacious persons tend to invest more effort and persist longer than those who are low in self-efficacy. When setbacks occur, they tend to recover more quickly and maintain the commitment to their goals.

People’s beliefs about self-efficacy tend to develop from four primary sources: mastery experiences, vicarious learning, social persuasion, and physiological or emotional states. The first and most influential source of self-efficacy is through mastery experiences (Bandura, 1977, 1986, 1994, 1997), which serve as indicators of capability. Success may then build belief in one’s capabilities and may raise self-efficacy. In order to cultivate a strong sense of self-efficacy, Bandura (1986) stated that individuals must have positive experiences in overcoming obstacles. These experiences teach that success usually requires hard work and perseverance. Once people
believe they can be successful, they will be more likely to persist in the face of difficulty and quickly recover from obstacles.

Vicarious or observational learning is the second mode of developing and strengthening self-efficacy. People assess their abilities in relation to the accomplishments of others (Bandura, 1986). The impact made on an individual’s self-efficacy through modeling may depend largely on the perceived likeness to the model – the greater the perceived similarity, the greater the influence on efficacy beliefs. Seeing or visualizing similar people performing successfully can raise self-efficacy in the observers, believing that they, too, possess the abilities to master similar activities (Bandura, Adams, Hardy, & Howells, 1980). Vicarious experiences are generally weaker than mastery experiences; however, “they can produce significant, enduring changes through their effects on performance” (Bandura, 1986, p. 400).

The third means of increasing self-efficacy is through social persuasion, which is a means of increasing people’s beliefs that they possess the capabilities to accomplish their goals. According to Bandura (1977), “People are led, through suggestion, into believing they can cope successfully with what has overwhelmed them in the past” (p. 198). As a result, people can be convinced to try harder to succeed, and therefore, can enable skill attainment and successful performance that may result in heightened efficacy beliefs. Efficacy expectations created through social persuasion may be weaker than from mastery experiences because they do not originate from actual accomplishments.

Self-efficacy beliefs may also be derived from physiological and emotional states. People may rely on information conveyed through physiological and emotional states to judge their capabilities. Extreme emotional or physiological reactions can be debilitating and often indicate to people a lack of ability or an indicator of poor performance. Self-efficacy may be able to be
raised through reducing stress reactions and misinterpretations of physical reactions. For example, a musician preparing to enter the stage for a performance may perspire more than normal. This perspiration is a physical reaction due to heightened energy levels and excitement; however, it may be interpreted negatively by the performer as nervousness and doubt and thus becomes a distraction and hindrance to the performance. It is the interpretation of the emotional or physiological states that is important. Coping strategies can be learned to overcome negative perceptions and raise both performance and efficacy levels (Bandura, 1997).

Self-efficacy beliefs can influence individuals’ motivation and self-regulatory processes. The beliefs can influence the choices people make and the courses of action they pursue. Most people engage in tasks in which they feel competent and confident and avoid those in which they do not. Beliefs of personal competence can help determine how much effort people will expend on an activity, how long they will persevere when confronting obstacles, and how resilient they will prove in the face of adverse situations – the higher the sense of efficacy, the greater the potential effort, persistence, and resilience. Efficacy beliefs may also influence the amount of stress and anxiety individuals experience as they engage in a task, as well as the level of accomplishment they may realize.

Strong self-efficacy beliefs may also enhance personal accomplishment and well-being. People with high self-efficacy tend to approach difficult tasks as challenges to be mastered rather than as dangers to be avoided, tend to have greater intrinsic interest in activities, tend to set challenging goals and maintain a strong commitment to them, tend to heighten their efforts in the face of failure, tend to recover their confidence after failures or setbacks, and tend to attribute failure to insufficient effort or deficient knowledge and skills which they believe they are capable of acquiring. Conversely, people with low self-efficacy may believe that things are tougher than
they really are, a belief that fosters stress, depression, and a narrow vision of how best to solve a problem. As a result of these influences, self-efficacy beliefs can be strong determinants and predictors of the level of accomplishment that individuals attain (Bandura, 1986, 1997).

General self-efficacy refers to a global confidence in one's coping ability across a wide range of demanding or novel situations (Chen, Gully, & Eden, 2001; Schwarzer, 1994; Schwarzer & Jerusalem, 1995; Sherer, Maddux, Mercandante, Dunn, Jacobs, & Rogers, 1982; Zhang & Schwarzer, 1995) and aims at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations (Scherer et al., 1982; Schwarzer, 1994). Researchers have worked to develop reliable and valid scales to measure general self-efficacy (Chen et al., 2001; Scherbaum, Cohen-Charash, & Kern, 2006; Schwarzer & Jerusalem, 1995; Sherer & Adams, 1983). These general self-efficacy scales have found significant positive relationships with physical and mental health (Jerusalem & Schwarzer, 1992; Luszczynska, Mohamed, & Schwarzer, 2005; Luszczynska & Schwarzer, 2005; Schroder & Schwarzer, 2005; Schwarzer, 2001; Schwarzer & Fuchs, 1996; Schwarzer & Renner, 2000; Wang & Liu, 2000).

General efficacy has been studied and found to be an important variable in education. Research has shown that teachers with low general efficacy tend to experience burnout at a higher rate than teachers with high general efficacy (Schwarzer & Schmitz, 1999, 2004). Other studies have found that teachers with high general efficacy tend to use computers and the Internet more often in the classroom than teachers with low general efficacy (Jacobsen, 1999; Schwarzer, Mueller, & Greenglass, 1999). In addition, college students with higher general self-efficacy tend to adjust to college life more easily and quickly (Smith, 2007), have higher personal well-being ratings (Tong & Song, 2004), and a higher sense of student satisfaction than students with lower general efficacy (DeWitz & Walsh, 2001). General self-efficacy scores have
also been used to successfully predict new student academic success with students rating high on self-efficacy tending to attain higher grades during the first year of college than those with lower self-efficacy (Choi, 2005).

*Self-Efficacy Research in Education*

Research studies on students’ self-efficacy beliefs in education have found significant positive relationships with academic motivation (Ames, 1992; Bandura, 1986, 1989; Nicholls & Miller, 1994), attributions (Schunk, 1981), goal-setting (Locke & Latham, 1990), problem-solving (Larson, Piersel, Imao, & Allen, 1990), anxiety (Pajares & Miller, 1994), and self-regulation (Pintrich & Schunk, 1995). Research has also shown there to be a link between students’ self-efficacy beliefs and college majors and career choices (Lent & Hackett, 1987). The majority of the research on self-efficacy in education has focused on academic achievement (Bandura, 1991; Bandura & Jourdan, 1991; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Muton, Brown, & Lent, 1991; Pajares, 2002; Pajares & Schunk, 2001; Pintrich & DeGroot, 1990; Pintrich & Schrauben, 1992; Schunk, 1989; Schunk & Pajares, 2002; Zimmerman, 1995, 2000; Zimmerman & Bandura, 1994; Zimmerman, Bandura, & Martinez-Pons, 1992).

According to Bandura (1986), self-efficacy can have a significant impact on students’ academic achievement. He theorized that although all exterior factors may appear to be the same, students may view themselves very differently. These feelings may compel students to make choices and judgments. Bandura believed that these feelings may also play a significant role in an individual’s future development and success. Research has revealed that children’s perceptions of their ability to master difficult tasks and control their own educational activities can also affect their academic motivation, interest and academic achievement (Bandura, 1993). Pintrich and De Groot (1990) found that self-efficacy played an important role in the process of
cognitive engagement; raising self-efficacy beliefs tended to lead to increased use of cognitive strategies and, thereby, higher performance, and that "students need to have both the 'will' and the 'skill' to be successful in classrooms" (p. 38).

Bandura’s (1997) research found a positive relationship between academic self-efficacy beliefs and the use of strategies for study and learning. Researchers have employed many methods focused on raising self-efficacy, including guided journal entries and utilizing positive, simulated and real-life experiences (Allinder, 1994; Guskey, 1988; Ross, 1992). Collins (1982) identified children of low, middle, and high mathematics ability who had, within each ability level, either high or low mathematics self-efficacy. After instruction, the children were given new problems to solve and an opportunity to rework those problems they missed. Collins reported that ability was related to performance but that, regardless of ability level, children with high self-efficacy completed more problems correctly and reworked more of the ones they missed. Bouffard-Bouchard, Parent, and Larivée (1991) found that students with high self-efficacy engaged in more effective self-regulatory strategies at each level of ability.

Bandura (1997) theorized that self-efficacy beliefs can inspire students to work harder and persist longer when they encounter obstacles. Research has shown that high self-efficacy can enhance students' memory performance by enhancing persistence (Berry, 1987). In studies of college students who pursued science and engineering courses, high self-efficacy was positively related to high academic persistence (Lent, Brown, & Larkin, 1984, 1986).

Research conducted on the self-efficacy of college students, primarily in the field of mathematics, has found that self-efficacy was an important variable in success and participation. Pajares and Miller (1994, 1995) found that mathematics self-efficacy of college undergraduates was more predictive of their mathematics interest and choices of math-related courses and
majors than either their prior math achievement or math outcome expectations. It has also been documented that male undergraduates tend to have higher mathematics self-efficacy and higher participation rates than do female undergraduates (Hackett, 1985; Hackett & Betz, 1989; Lent, Lopez, & Bieschke, 1991; Pajares & Miler, 1994, 1995).

Self-Efficacy Research in Music

According to Bandura (1994), self-efficacy is most successfully studied in a domain specific manner. Accordingly, considerable research has been conducted on self-efficacy in music education and performance. Researchers have found relationships between self-efficacy and musical achievement and performance (Maehr et al., 2002; McCormick & McPherson, 2003; McPherson & McCormick, 2006; McPherson & Zimmerman 2002), practice habits (Hallam, 2001; McPherson & McCormick, 1999; Nielson, 2004), self-regulation (Hallam, 2001), performance anxiety (Mansberger, 1989; Petrovich, 1989; Sinden, 1999), music teaching (Barnes, 1999; Bergee & Grashel, 2002; Quesada 1992), jazz and improvisation (Ciorba, 2007; Davison, 2006; Watson, 2005; Wehr-Flowers, 2008), and student retention (Klinedinst, 1991; Sandene, 1997; Stewart, 2002). Professional musicians with high self-efficacy have been found to demonstrate a large range of practice strategies that could be adapted to their needs, and were found to demonstrate extensive metacognitive skills (Hallam, 2001). Studies have found that student musicians who were highly efficacious were more likely to be cognitively and metacognitively involved in the learning process as compared with students low in efficacy beliefs (Nielson, 2004). Students’ feelings of self-efficacy to learn or perform a task have also been found to be related to the utilization of practice strategies and may be a factor in the success of the practice sessions (Hallam, 2001).
There has also been a noted relationship between self-efficacy beliefs and music performance quality (Maehr et al., 2002; McPherson & McCormick, 2003, 2006; McPherson & Zimmerman 2002). McPherson and McCormick (2003, 2006) studied self-efficacy as a predictor of musical achievement. By investigating self-efficacy scores and grades on a music performance exam, they found a “strong association between self-efficacy and actual performance and the former’s clear superiority as a predictor of actual performance” (McPherson & McCormick, 2003, p. 45). The 2003 study was replicated in 2006 with a revised measurement instrument and performance exam. Again, self-efficacy was found to be a significant predictor of achievement on the performance examination (McCormick & McPherson, 2006).

Self-efficacy has been investigated in the areas of jazz performance and improvisation (Ciorba, 2007; Davison, 2006; Wehr-Flowers, 2008). Davison (2006) investigated the effect of modeling and improvisation instruction on the self-efficacy of middle school students. This study found significant differences in improvisation skill and instrumental music self-efficacy following improvisation instruction. Wehr-Flowers (2008) studied jazz self-efficacy and gender and found that males were significantly more confident and had higher self-efficacy for jazz than the females. The same study found no significant differences in jazz self-efficacy for the variables of age or instrument. Ciorba (2007) found non-significant results when testing the predictive nature of self-efficacy on jazz improvisation achievement.

Nielsen’s (2004) study of self-efficacy and practice habits examined the variables of gender, instrument, and degree program. Consistent with other studies, a significant effect was found for gender, with males having higher self-efficacy than females. The study found no significant difference in self-efficacy for instrument or degree program. However, there was a significant interaction between gender, degree, and self-efficacy:
Male students in the performance and church music programmes were more likely to have higher self-efficacy beliefs than female students in these two programs, while male students in the music education programmes were more likely to have lower self-efficacy beliefs in instrumental practicing than female students. (Nielsen, 2004, p. 425)

Studies on the relationship between self-efficacy and retention have found mixed results (Klinedinst, 1991; Sandene, 1997; Stewart, 2002). According to Bandura (1997), people with high self-efficacy will expend more time and effort on an activity as well as show greater perseverance and resiliency when things go wrong. Klinedinst (1991) and Sandene (1997) found self-efficacy to be a significant factor in the decision to continue in instrumental music. Stewart (2002), however, found no relationship between self-efficacy and student retention. Some of the disparity may be attributable to the age of the participants. The students participating in Klinedinst’s study were in grade 5, those in Sandene’s were in grades 5-8, and those in Stewart’s were all in grade 8.

Research on the relationship between self-efficacy and performance anxiety in musicians has documented significant results. Strong correlations have been found between high self-efficacy scores and low performance anxiety scores (Mansberger, 1989; Petrovich, 1989; Sinden, 1999). In addition, Sinden (1999) found gender differences with women reporting higher levels of performance anxiety, which were attributed to the women's outside influences such as parental expectations and criticism, and men reporting lower levels of performance anxiety, which were attributed to the men’s’ higher ratings on coping skills. Mansberger (1989) found that performance anxiety management training tended to lower anxiety levels and raise self-efficacy scores. Petrovich (1989) also studied performance anxiety in relation to self-efficacy and teacher
behavior. Content analysis was conducted on interviews with the students who scored at the extreme high and low ends of the anxiety scales in order to determine the teacher-pupil relationship. While self-efficacy was found to be closely associated to performance anxiety, there was no relationship found between performance anxiety and teacher behavior.

Research has shown that teachers’ behaviors can influence student self-efficacy. Matthews (2007) studied the effect of conductors’ goal orientation (mastery and performance) and shared performance cues (expressive, interpretive, basic) on instrumentalists’ self-efficacy. In this study, basic performance cues included only aspects of the music that dealt with how to play pitches and rhythms correctly, interpretive performance cues were defined as the basic aspects of the music that dealt with the musical character of the piece such as tempo and style, and expressive performance cues were defined as all of the above plus aspects of the music that dealt with conveying the emotion of the piece such as phrasing. Students who received expressive performance cues had significantly higher self-efficacy than those who received basic or technical performance cues. Those who received interpretive cues had higher self-efficacy scores than the basic group and lower self-efficacy scores than the expressive group; however, significant differences were not found. In addition, students whose conductors used mastery goals had significantly higher self-efficacy than those whose conductors used performance goals.

Conclusion

The research literature has shown that teacher interpersonal behavior is an important variable in educational and that the Questionnaire on Teacher Interaction is an appropriate tool in measuring interpersonal behavior. Research has shown that teacher interpersonal behavior is related to student attitudes and outcomes. High teacher cooperation behaviors, specifically helpful/friendly, understanding, and student responsibility/freedom, tend to be positively related
to student attitude, while high teacher dominance behavior, specifically strict and leadership sectors, tends to be positively related to academic achievement. Limited research has also shown that students tend to prefer teachers to be high on leadership, cooperation, and moderate in strictness. Mixed results have been found when examining the perceptions and preferences of students based on gender, and no significant differences were found in studies of student preferences based on college academic major; however, there have been limited studies conducted in these areas. While there have been a large number of studies conducted in music on teacher personality, feedback behaviors, intensity, and teacher style, little research has been conducted on the interpersonal teacher behavior of music teachers and the interpersonal teacher behavior preferences of music students.

The research on self-efficacy in education has shown relationships to goal-setting, student motivation, and student achievement. Research in music has documented positive relationships between high self-efficacy and performance, music practice, performance anxiety, and jazz and improvisation. The research on self-efficacy and gender in music has generally found males to be more efficacious, while no significant differences were found with the variables of instrument and major. However, this research is limited. Little research has been conducted on self-efficacy and age in music. Limited research has also shown that music teacher behavior was related to student self-efficacy; however, there is a lack of research that has studied the relationship between student preferences of teacher interpersonal behavior and self-efficacy of music students.
CHAPTER 3

METHOD

This chapter discusses the method utilized for the current study. Included are descriptions of the sample and procedures used for both the pilot and the main study. Measurement instruments are also described including their development, validity, and reliability.

Sample

The responding sample for this study included university undergraduate students \( (N = 1020) \) participating in a collegiate band program during the 2008 fall semester. Twelve universities were included in the study representing all regions of the United States: 3 Eastern, 3 Northern, 3 Southern, and 3 Western. These universities included 4 private and 8 public institutions. There were 8 large universities with enrollments over 15,000 students and 4 small universities with enrollments under 15,000.

The first Eastern public university had a total enrollment of 34,000, a band enrollment of 152 and 126 responses (83%). The second Eastern public university had a total enrollment of 7,450, a band enrollment of 49 and 39 responses (80%). The Eastern private university had a total enrollment of 13,457, a band enrollment of 112 and 85 responses (76%). The first Northern public university had a total enrollment of 29,265, a band enrollment of 121 and 99 responses (82%). The second Northern public university had a total enrollment of 10,346, a band enrollment of 85 and 66 responses (78%). The Northern private university had a total enrollment of 2,900, a band enrollment of 65 and 56 responses (86%). The first Southern public university had a total enrollment of 21,000, a band enrollment of 167 and 141 responses (84%). The second Southern public university had a total enrollment of 2,212, a band enrollment of 66 and 50 responses (76%). The Southern private university had a total enrollment of 14,000, a band enrollment of 153 and 124 responses (81%). The first Western public university had a total
enrollment of 26,860, a band enrollment of 148 and 122 responses (82%). The second Western public university had a total enrollment of 3,907, a band enrollment of 68 and 49 responses (72%). The Western private university had a total enrollment of 8,300, a band enrollment of 94 and 63 responses (67%).

A total of 1020 undergraduate students participated in the study by completing the two questionnaires. The responding sample included 22 fifth-plus year students, 167 fourth year students, 169 third year students, 281 second year students, and 381 first year students. There were 530 males, 490 females, 426 brass players, 115 percussion, and 479 woodwind players. There were 53 business majors, 22 computer/technology majors, 58 education majors, 108 engineering majors, 55 fine/performing arts majors, 78 humanities majors, 387 music majors, 30 pre-professional majors, 94 math/science majors, 98 social science majors, and 37 undecided majors.

This study used a nonprobablity, purposive sample of university band members from across the United States. The schools selected for participation were chosen based upon geographical location. Four regions of the United States were represented and divided into Eastern, Western, Northern, or Southern regions, with each region represented equally. Within each geographical region the researcher purposefully selected one large and one small public university and one private university for participation. These procedures were used in order to achieve greater representation of the population by representing all regions of the United States. However, it should be noted that the representativeness of the population cannot be completely ascertained and thus the results cannot be generalized outside the sample. Within each university, a convenience sample was used which was comprised of students who were enrolled members of an intact band at their respective school.
Procedures

A packet was sent to the university band directors at each participating school. Permission was obtained from these directors prior to sending the packets. The packet included a cover letter explaining the research study including instructions to the directors, a DVD video containing a description of the study and instructions to be shown to the band students, and enough copies of the informed consent form, the Questionnaire for Teacher Interaction, and the Self-Efficacy Questionnaire for his/her band. At each of the 12 schools, the director of the ensemble played the instruction video during the final five minutes of the rehearsal. The questionnaires and consent forms were distributed at the conclusion of the video. The questionnaires were completed at the participants’ convenience and collected during the subsequent three ensemble meetings. Together, the two questionnaires required an average of 5 minutes to complete. Out of the 1380 questionnaires that were passed out, 1020 questionnaires were completed and returned (74%). In an effort to try to increase the return rate and increase the diversity of students participating in the study, each band director was asked to give a verbal reminder of the study to his/her ensemble one week after the initial questionnaires were distributed. Because no identities were gathered with the questionnaires, there were limited follow-up possibilities. As a result of the limited follow-up, the return rate may have been lower, leading to a possible restriction of scores. It is possible that the less responsible, lower achieving and perhaps lower efficacious students would not have returned their questionnaires, which would result in a reduced spread of scores with the lower scores omitted.

Measurement Instruments

Two measurement instruments were used in the study: the Teacher Interaction Preference Questionnaire (TIPQ) and the Self-Efficacy Questionnaire (SEQ). The Teacher Interaction
Preference Questionnaire (TIPQ) was used to measure students’ preferences of teacher interpersonal behavior. The instrument includes 30 items measured on a 5-point Likert scale ranging from 0 (never prefer) to 4 (always prefer). Each completed questionnaire produces three summed section scores, one for each of the teacher interaction styles: high on dominance and cooperation, high on submission and cooperation, and high on dominance and opposition. The first two (high on dominance and cooperation, and high on submission and cooperation) include behaviors generally considered to be positive teacher/student interaction behaviors and the final one (high on dominance and opposition) includes behaviors generally considered to be negative teacher/student interaction behaviors. Each section includes 10 statements resulting in section scores ranging from 0 to 40 for each of the three sections. Examples of statements include: “The teacher should know everything that goes on in the classroom” (dominant-cooperative), “The teacher should have a sense of humor” (dominant-cooperative), “The teacher should be patient” (submissive-cooperative), “The students should have input in the class decisions” (submissive-cooperative), “The teacher should be sarcastic” (dominant-oppositional), and “The teacher should be strict” (dominant-oppositional). Since all items are positively scored and one of the sections contains items considered to be negative teacher/student interaction behaviors, there is a possibility of inverse correlation results in this study. The grouping of the questions into sections for the Teacher Interaction Preference Questionnaire (TIPQ) is presented in Table 1. The complete questionnaire can be found in Appendix A.

The second test, the Self-Efficacy Questionnaire (SEQ) was used to measure students’ general sense of perceived self-efficacy in music. The instrument includes 20 items measured on an 11-point Likert scale ranging from 0 (cannot do at all) to 10 (certain I can do). Scores for this scale are summed resulting in a score ranging from 0 to 200. Examples of statements include: “I
Table 1

*Question Grouping for the Teacher Interaction Preference Questionnaire*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>High on Dominance and Cooperation</td>
<td>2, 14, 15, 16, 18, 19, 21, 23, 25, 28</td>
</tr>
<tr>
<td>High on Submission and Cooperation</td>
<td>3, 4, 5, 7, 8, 11, 12, 13, 22, 24</td>
</tr>
<tr>
<td>High on Dominance and Opposition</td>
<td>1, 6, 9, 10, 17, 20, 26, 27, 29, 30</td>
</tr>
</tbody>
</table>

can reach my goals if I try hard enough,” “I can solve most problems if I invest the necessary effort,” and “I keep working on a task even if I am having trouble.” In addition to the 20 items, there were 5 demographic items including the students’ age, year in school, gender, band instrument, and college academic major that were analyzed separately.

Instrument Development

*Teacher Interaction Preference Questionnaire (TIPQ) development.*

There are many instruments used in education to measure teacher interpersonal behavior. The Questionnaire on Teacher Interaction (QTI) was selected as a model test for this study due to its prolific use in educational research (e.g., den Brok et al., 2004; Newby et al., 2001; Wubbels & Brekelmans, 2005; Wubbels & Levy, 1993). The QTI's basic format was used to develop the test for this study: the Teacher Interaction Preference Questionnaire (TIPQ).

The theoretical framework linked to the Questionnaire on Teacher Interaction (QTI) is the model of interpersonal teacher behavior (MITB), and it was originally developed as a means of categorizing the findings for the Questionnaire on Teacher Interaction (QTI). The original eight sectors of the model of interpersonal teacher behavior (MITB) include leadership (DC), helpful/friendly (DC), understanding (SC), student responsibility/freedom (SC), uncertain (SO),
dissatisfied (SO), admonishing (DO), and strict (DO) (Wubbe, Creton, & Hooymayers, 1985). The letters in the parenthesis are the codes assigned to each section by its relationship to the dominant-submissive/opposition-cooperation matrix of the model of interpersonal teacher behavior: dominant-cooperative, submissive-cooperative, dominant-oppositional, and submissive-oppositional. The first three groupings (dominant-cooperative, submissive-cooperative, dominant-oppositional) were used in this study, while the fourth grouping (submissive-oppositional) was deleted due to the negative content that did not align with a survey of preference on teacher behavior.

Each factor is defined by certain characteristics that are descriptions of behaviors to be measured. The dominant-cooperative scale includes the leadership and helpful/friendly subscales and is comprised of: notice what is happening, lead, organize, give orders, set tasks, determine procedure, explain, hold attention, assist, show interest, behave in a considerate manner, able to take a joke, inspire confidence, and trust. The submissive-cooperative scale includes the student responsibility/freedom and understanding subscales and is comprised of: listen with interest, empathize, show confidence and understanding, accept apologies, be patient, be open, give opportunities for independent work, give freedom and responsibility, and approval of student ideas. The dominant-oppositional scale includes the admonishing and strict subscales and is comprised of: anger, take students to task, irritated, quick to correct, punish, keep reigns tight, judge, maintain student silence, be strict, and set rules. The submissive-oppositional scale, which was deleted for the purposes of this test, includes the uncertain and dissatisfied subscales and is comprised of: keep low profile, apologetic, hesitancy, show dissatisfaction, look glum, questioning, and critical.
The TIPQ was developed based on the American version of the Questionnaire on Teacher Interaction (QTI) by Wubbels and Levy (1991). The original QTI was developed in 1984 by Creton and Wubbels in the Netherlands (Creton & Wubbels, 1984) based upon Leary’s Interpersonal Adjective Checklist (Laforge & Suczek, 1955) and revised for use in educational settings (Creton & Wubbels, 1984). The QTI was developed as a measure of secondary students’ and teachers’ perceptions of teacher interpersonal behavior.

The original Dutch QTI contains 77 questions and uses a 5-point Likert scale, which is scored from 0 (never) to 4 (always). The American QTI exists in two forms, the original 64-item instrument and a 48-item short form, in both of which the items are scored from 0 to 4. Each completed questionnaire produces eight section scores, one for each sector of Wubbels and Levy’s (1993) model of interpersonal teacher behavior (MITB).

Since its creation, the Questionnaire on Teacher Interaction (QTI) has been translated into several languages and has been used in The Netherlands, the United States, the United Kingdom, Australia, Canada, Singapore, the Philippines, Israel, Brunei, Hong, Kong, Korea, Fiji, Indonesia, Finland, Sweden, Slovakia, Russia, Spain, Germany, and France (den Brok et al., 2003). Research studies have documented that the theoretical model and measurement instrument can be used cross-culturally (den Brok et al., 2003; Wubbels & Levy, 1991).

Past research has assessed the validity of the test sections through intra-class correlations and structural analyses (Wubbels, Creton, & Hooymayers, 1985). The intra-class correlations were over .80 for each of the eight scales of the Model for Interpersonal Behavior. Structural analyses were conducted on correlations between the scales and the requirements of the model were met. The reliability of the American long version was checked in a study comparing the interpersonal teacher behavior of Dutch and American teachers (Wubbels & Levy, 1991). Thirty-
one American teachers volunteered to give the Questionnaire on Teacher Interaction (QTI) to two or more of their classes as well as complete the questionnaire themselves. A total of 1,606 students in 66 classes and 31 teachers completed the QTI. Alpha coefficients from this sample are presented in Table 2.

Table 2

*Reliability Alpha Coefficients for the QTI*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Student</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership (DO)</td>
<td>.80</td>
<td>.75</td>
</tr>
<tr>
<td>Helpful/friendly (DO)</td>
<td>.88</td>
<td>.74</td>
</tr>
<tr>
<td>Understanding (SC)</td>
<td>.88</td>
<td>.76</td>
</tr>
<tr>
<td>Student resp/freedom (SC)</td>
<td>.76</td>
<td>.82</td>
</tr>
<tr>
<td>Uncertain (SO)</td>
<td>.79</td>
<td>.79</td>
</tr>
<tr>
<td>Dissatisfied (SO)</td>
<td>.83</td>
<td>.75</td>
</tr>
<tr>
<td>Admonishing (DO)</td>
<td>.84</td>
<td>.81</td>
</tr>
<tr>
<td>Strict (DO)</td>
<td>.80</td>
<td>.84</td>
</tr>
</tbody>
</table>

In order to develop the Teacher Interaction Preference Questionnaire (TIPQ) for use in this study, changes were made to the original Questionnaire on Teacher Interaction. The original four quadrants of the model of interpersonal teacher behavior were used as categories rather than the divided subsections. The submissive-oppositional quadrant was eliminated due to the negative content that did not align with a survey of preference on teacher behavior. The original questionnaire contained from 7 to 10 statements for each subsection. Five statements were
retained from each subsection based on content, resulting in 10 questions per category. Items that were appropriate for measuring preferences in teacher interpersonal behavior were kept; items which were not reflective of likely preferences such as “the teacher is uncertain” and “the teacher is unhappy” were removed. In addition, all of the statements were reworded in order to assist the students in identifying generally preferred teacher behaviors rather than the behaviors of a specific teacher. For example, the statement “He/she trusts us” was reworded as “The teacher should trust us.” Like the original questionnaire, the order of statements were arranged in order to inter-mix the statements associated with the six scales and make the scale categories less apparent to the student.

*Self-Efficacy Questionnaire (SEQ) development.*

The Self-Efficacy Questionnaire (SEQ) used for this study was developed based on the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). The General Self-Efficacy Scale was originally developed in 1981 by Schwarzer and Jerusalem (1995). The instrument was initially written in German and has since been translated into 26 different languages. The English version was created in 1993 by the original authors. The instrument was intended for the general adult population, including adolescents (Schwarzer & Jerusalem, 1995).

The original General Self-Efficacy Scale was created to assess an overall sense of perceived self-efficacy with the aim of predicting daily hassle coping abilities as well as adaptation after experiencing stressful life events. Highly perceived self-efficacy reflects an optimistic self-belief (Jerusalem & Schwarzer, 1992). This is the belief that one can perform a novel or difficult tasks or cope with adversity in various domains of human functioning. Perceived self-efficacy tends to facilitate goal-setting, effort investment, persistence in the face of barriers and recovery from setbacks (Bandura, 1986). Since its development, the scale has also
been used prolifically in educational research. For this reason, and its broad approach to self-efficacy measurement, the General Self-Efficacy Scale was used as the basis for the Self-Efficacy Questionnaire (SEQ) in this study.

The original General Self-Efficacy Scale has 10 items, scored on a 4-point Likert scale ranging from 1 to 4 (1 = Not at all true, 2 = Hardly true, 3 = Moderately true, 4 = Exactly true). It is usually self-administered and can be used as part of a more comprehensive questionnaire with the 10 items mixed at random into a larger pool of items that have the same response format to address specific content areas (Schwarzer & Jerusalem, 1995). The instrument requires an average of 4 minutes to complete. The responses are summed into a single score ranging from 10 to 40.

Criterion-related validity of the original General Self-Efficacy Scale has been documented. Individuals with high scores of general self-efficacy tended to rate themselves highly on favorable emotions, dispositional optimism, and work satisfaction. Individuals with low scores of general self-efficacy tended to rate themselves highly on depression, anxiety, stress, burnout, and health complaints (Schwarzer & Jerusalem, 1995). Originally, the General Self-Efficacy Scale was intended to predict adaptation to life changes and as an indicator of quality of life (Schwarzer, n.d.). However, the measure has been used internationally for two decades and is considered by the developers to be suitable for research in many topic areas and research designs. Reliability has been estimated using samples from 23 countries (Schwarzer & Jerusalem, 1995). Cronbach’s alphas ranged from .76 to .90, with the majority in the high .80s.

Changes were made to the original questionnaire while developing the instruments for this study. The statement “If someone opposes me, I can find the means and ways to get what I want” was removed from the original General Self-Efficae Scale based on content. The
statement “It is easy for me to stick to my aims and accomplish my goals” was divided into two statements “It is easy for me to stick to my objectives” and “It is easy to reach my goals.” An additional 13 researcher developed questions were also added to the original 10 items.

Validity

A copy of the two questionnaires was sent to three experts to establish content validity. The panel consisted of one expert in interpersonal relations, one expert on self-efficacy, and one college band director. The expert in interpersonal relations has over 20 years experience in corporate and academic settings working in the areas of human and interpersonal relations. The individual has expertise in the areas of instructional delivery and evaluation as well as in adult learning. Her research has involved human relations delivery and strategies. The self-efficacy expert is an Associate Professor of Curriculum and Instruction at a large southern university. This expert has taught for 12 years at the collegiate level and has conducted extensive research in the field of education and self-efficacy including the development of a self-efficacy instrument. This person has published two books, more than five book chapters, and over 26 articles in peer-reviewed journals. The third expert is a college band director who has taught at the collegiate level for 25 years. This individual is an active conductor and clinician throughout the United States as well as a regular contributor to magazines such as The Instrumentalist. These experts were asked to evaluate the items on the questionnaires for 1) clarity in the format and wording of the instructions and the questions, 2) appropriateness to the topic and whether items should be included or eliminated 3) thoroughness and whether any topics needed to be added, and 4) organization and ordering of the items. The responses of each expert were compared.

Based on these responses, the following changes were made to the Teacher Interaction Preference Questionnaire (TIPQ). The scale ratings were changed from “do not prefer,”
“moderately prefer,” and “highly prefer” to “never prefer,” “sometimes prefer,” and “always prefer.” Content validity experts felt that this wording would better capture what the students would find to be important. Question 10 was re-worded from “If the students feel strongly about something, the teacher should be willing to go along” to “The teacher should be willing to go along when the students feel strongly about something” for greater clarity. The word “students” was added in Question 18 after “punish” for clarity. Questions 22 and 33 were deemed unnecessary and removed. All subsequent questions were shifted up and two additional questions were added at the end. The two new questions were “The teacher should make an example of students who cause problems” and “The teacher should have regular procedures for classroom tasks.”

Changes were also made to the Self-Efficacy Questionnaire (SEQ). In Question 8 the word “problems” was replaced with the word “difficulties.” For the demographic question regarding year in school, the words freshman, sophomore, junior, and senior were removed and replaced with the numbers 1, 2, 3, 4, 5+, and graduate with instructions to circle the appropriate answer. Experts believed this was a better measure of year in school since classifications often do not align with year in school. The graduate option was included to ensure that graduate student data were not included in the study. The answer option for the instrument question was also changed from a blank to a list of instruments with instructions to circle the appropriate choice.

Field Test

A field test was conducted in which the initial questionnaires were shown to five university band students. The format, wording, clarity, and construction were discussed individually with each student. Based upon recommendations made by these individuals,
changes were made to improve the clarity and specificity of certain questions. The rating scale descriptors were added to the second page of the Teacher Interaction Preference Questionnaire (TIPQ) and the Self-Efficacy Questionnaire (SEQ). On the TIPQ, the instructions were changed to reflect the altered rating scale. Also within the instructions, the sentence “You can also choose 1, 2, and 3 which are in between” was changed to “You can also choose 1, 2, and 3 for responses that fall in between” for greater understanding of the rating scale. Similar wording changes were also made to the instructions on the SEQ. Within the TIPQ some wording changes were made to increase the clarity of meaning. In Question 6, “the students” was changed to “they,” in Question 10, “to go along” was changed to “be flexible,” and in Question 16, “fool around” was changed to “goof off.”

Pilot Study

The pilot study was conducted during the 2008 fall semester. A convenience sample was used that included undergraduate students who were members of a university band during the fall 2008 semester. The school used in the pilot study was a small, private university located in the southern region of the United States with an enrollment of approximately 6,000 students. There were 59 questionnaires returned from a band enrollment of 82, which resulted in a 72% response rate. The sample included 16 seniors, 9 juniors, 9 sophomores, and 25 freshmen. There were 24 males and 35 females. The students played brass ($n = 19$), percussion ($n = 6$), and woodwind ($n = 34$) instruments in the band. There were 5 music, 3 business, 15 social sciences, 9 humanities, 3 pre-professional, 22 science, and 2 undeclared majors. The average age was 19.83 with a range of 18 to 28 and a standard deviation of 2.13.

For the pilot study, a packet containing an instructional DVD, consent forms, and questionnaires was sent to the band director at the participating school. At the conclusion of a
regularly scheduled rehearsal, participants were shown the instructional DVD. Each student who desired to participate was then given a consent form and questionnaire. These items were completed at the students’ convenience with instructions to return the materials in the next three days. In an effort to increase the return rate, the band director gave a verbal reminder to the students regarding the study after three days. Students were then given one additional day in which to return the completed questionnaire.

Reliability of the measurement instruments was checked using the data collected from the 59 pilot study questionnaires. The internal consistency reliability (Cronbach’s alpha) for the final version of the Self-Efficacy Scale was .96. The internal consistency reliability (Cronbach’s alpha) for each of the three categories of the final version of the Teacher Interaction Questionnaire is presented in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominant-Cooperative</td>
<td>.83</td>
</tr>
<tr>
<td>Submissive-Cooperative</td>
<td>.86</td>
</tr>
<tr>
<td>Dominant-Oppositional</td>
<td>.80</td>
</tr>
</tbody>
</table>

Three low-loading items (3, 20, 22) were removed from the Self-Efficacy Questionnaire (SEQ) raising the reliability from .89 to .96. In addition, four low-loading items were removed from each of the three interpersonal teacher behavior categories of the Teacher Interaction Preference Questionnaire (TIPQ). In the dominant-cooperative category, items 5, 27, 36, and 42 were removed, raising the reliability from .80 to .83. In the submissive-cooperative category,
items 19, 20, 34, and 40 were removed raising the reliability from .82 to .86. Finally, in the Dominant-Oppositional category, items 3, 14, 18, and 35 were removed raising the reliability from .78 to .80. The final version of the TIPQ contains 30 items and the SEQ contains 20 items.

Data Analysis Procedures for Main Study

For the main study, means, standard deviations, and ranges were used to answer research questions one and two, which described students’ preferences for interpersonal behavior and ratings of self-efficacy. Research question three was answered using three Pearson product-moment correlation coefficients, which were calculated between the scores for each of the three preferred teacher interaction styles (dominant-cooperative, submissive-cooperative, dominant-oppositional) and students’ self-efficacy. Due to the possible over-use of the data with multiple correlations, a Bonferroni adjustment was made to avoid a Type I error (.05/3 = .016).

Pilot Study Results

Research Question 1

Means, ranges, and standard deviations were calculated for each of the three categories of the Teacher Interaction Preference Questionnaire (TIPQ) in order to answer the first research question: “What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument?” for the pilot data. These results are presented in Table 4.

Research Question 2

Means, ranges, and standard deviations were calculated for the Self-Efficacy Questionnaire (SEQ) in order to answer the second research question: “What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument?” for the pilot data. These results are presented in Table 5.
Table 4

Means & Standard Deviations for the Pilot Study TIPQ

<table>
<thead>
<tr>
<th></th>
<th>Dominant Cooperative</th>
<th>Submissive Cooperative</th>
<th>Dominant Oppositional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>Mean</td>
<td>$SD$</td>
</tr>
<tr>
<td>Gender: Males</td>
<td>24</td>
<td>32.65</td>
<td>3.07</td>
</tr>
<tr>
<td>Females</td>
<td>35</td>
<td>32.45</td>
<td>3.43</td>
</tr>
<tr>
<td>Inst.: Brass</td>
<td>19</td>
<td>31.00</td>
<td>2.31</td>
</tr>
<tr>
<td>Percussion</td>
<td>6</td>
<td>34.30</td>
<td>3.56</td>
</tr>
<tr>
<td>Woodwind</td>
<td>34</td>
<td>33.15</td>
<td>3.44</td>
</tr>
<tr>
<td>Year: First</td>
<td>25</td>
<td>32.80</td>
<td>4.03</td>
</tr>
<tr>
<td>Second</td>
<td>9</td>
<td>32.22</td>
<td>2.91</td>
</tr>
<tr>
<td>Third</td>
<td>9</td>
<td>31.33</td>
<td>0.87</td>
</tr>
<tr>
<td>Fourth</td>
<td>16</td>
<td>33.13</td>
<td>3.07</td>
</tr>
<tr>
<td>Major: Music</td>
<td>5</td>
<td>33.40</td>
<td>3.51</td>
</tr>
<tr>
<td>Business</td>
<td>3</td>
<td>33.33</td>
<td>2.52</td>
</tr>
<tr>
<td>Social Sci.</td>
<td>15</td>
<td>31.73</td>
<td>3.22</td>
</tr>
<tr>
<td>Humanities</td>
<td>9</td>
<td>33.00</td>
<td>3.94</td>
</tr>
<tr>
<td>Pre-prof</td>
<td>3</td>
<td>29.33</td>
<td>2.08</td>
</tr>
<tr>
<td>Science</td>
<td>22</td>
<td>32.68</td>
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<tr>
<td>Undecided</td>
<td>2</td>
<td>37.50</td>
<td>0.71</td>
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</tbody>
</table>
Table 5

*Means, Standard Deviations, and Ranges for the Pilot Study SEQ*

<table>
<thead>
<tr>
<th></th>
<th>$n$</th>
<th>Mean</th>
<th>$SD$</th>
<th>Range</th>
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<tbody>
<tr>
<td><strong>Self-Efficacy Questionnaire</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>24</td>
<td>180.40</td>
<td>24.23</td>
<td>86</td>
</tr>
<tr>
<td>Females</td>
<td>35</td>
<td>177.72</td>
<td>26.15</td>
<td>98</td>
</tr>
<tr>
<td><strong>Instrument:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brass</td>
<td>19</td>
<td>187.84</td>
<td>15.83</td>
<td>56</td>
</tr>
<tr>
<td>Percussion</td>
<td>6</td>
<td>175.67</td>
<td>30.49</td>
<td>86</td>
</tr>
<tr>
<td>Woodwind</td>
<td>34</td>
<td>174.00</td>
<td>27.89</td>
<td>97</td>
</tr>
<tr>
<td><strong>Year:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>25</td>
<td>175.00</td>
<td>22.92</td>
<td>77</td>
</tr>
<tr>
<td>Second</td>
<td>9</td>
<td>190.67</td>
<td>16.85</td>
<td>46</td>
</tr>
<tr>
<td>Third</td>
<td>9</td>
<td>190.78</td>
<td>14.52</td>
<td>39</td>
</tr>
<tr>
<td>Fourth</td>
<td>16</td>
<td>170.69</td>
<td>33.37</td>
<td>96</td>
</tr>
<tr>
<td><strong>Major:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>5</td>
<td>176.20</td>
<td>35.00</td>
<td>86</td>
</tr>
<tr>
<td>Business</td>
<td>3</td>
<td>181.67</td>
<td>21.08</td>
<td>37</td>
</tr>
<tr>
<td>Social Sci.</td>
<td>15</td>
<td>176.13</td>
<td>31.00</td>
<td>96</td>
</tr>
<tr>
<td>Humanities</td>
<td>9</td>
<td>177.89</td>
<td>19.57</td>
<td>62</td>
</tr>
<tr>
<td>Pre-prof.</td>
<td>3</td>
<td>198.33</td>
<td>4.62</td>
<td>8</td>
</tr>
<tr>
<td>Science</td>
<td>22</td>
<td>178.95</td>
<td>25.08</td>
<td>91</td>
</tr>
<tr>
<td>Undecided</td>
<td>2</td>
<td>169.00</td>
<td>12.73</td>
<td>18</td>
</tr>
</tbody>
</table>
Research Question 3

Pearson product-moment correlation coefficients were calculated in order to answer the third research question: “What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy?” for the pilot data. Prior to calculating the correlations, the assumptions of normality, linearity, and homoscedasticity were checked. The normality assumption was met for self-efficacy ($skewness = -1.06, CI \pm 1.10, kurtosis = .37, CI \pm 1.23$), dominant-cooperative ($skewness = .568, CI \pm .62, kurtosis = -.37, CI \pm 1.22$), submissive-cooperative ($skewness = .08, CI \pm .62, kurtosis = -.88, CI \pm 1.21$), and dominant-oppositional ($skewness = .34, CI \pm .62, kurtosis = .34, CI \pm 1.21$) using the 95% confidence interval multiplied by the standard error of skewness or kurtosis. Linearity and homoscedasticity were checked using scatterplots for the pairing of self-efficacy with each of the teacher behavior categories. Each of the pairings met the assumptions of linearity and homoscedasticity.

Pearson product-moment correlations and coefficients of determination ($r^2$) were calculated between self-efficacy and dominant-cooperative, between self-efficacy and submissive-cooperative, and between self-efficacy and dominant-oppositional. Because three correlations were being performed, a Bonferroni correction was applied to reduce the possibility of a Type I error due to the overuse of the data. As a result, the alpha level of .05 was adjusted to .02 (.05/3). A significant negative relationship was found between self-efficacy and dominant-cooperative ($r = -.63, p = .00000077$). The coefficient of determination ($r^2$), documented the amount of variance explained between self-efficacy and dominant-cooperative to be 40%. A significant positive relationship was found between self-efficacy and dominant-oppositional ($r =$
The coefficient of determination ($r^2$), documented the amount of variance explained between self-efficacy and dominant-oppositional to be 30%. Individuals with high self-efficacy tended not to prefer teachers who demonstrated the dominant-cooperative characteristics including: notice what is happening, lead, organize, give orders, set tasks, determine procedure, explain, hold attention, assist, show interest, able to take a joke, inspire confidence, and trust. These students tended to prefer teachers who demonstrated the dominant-oppositional characteristics such as take students to task, quick to correct, keep reigns tight, maintain student silence, be strict, and set rules. No significant relationship was found between self-efficacy and submissive-cooperative ($r = -.07, p = .61, r^2 = 0.005$).
CHAPTER 4
RESULTS AND DATA ANALYSIS

The results for the current study have been organized into three sections aligning with each of the three research questions. For research question one: “What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument” and research question two, “What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument,” data were analyzed using descriptive statistics including ranges, means, and standard deviations. For research question three, “What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy,” data were analyzed using three Pearson product-moment correlation coefficients.

Research Question 1

In order to answer the first research question, “What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument?” ranges, means, and standard deviations were calculated for each of the three categories of the Teacher Interaction Preference Questionnaire (TIPQ). The categories were labeled as dominant-cooperative (DC), submissive-cooperative (SC), and dominant-oppositional (DO). From a possible score of 40 for each category, the scores for the full sample (n = 1020) for the DC category ranged from 21 to 40 (M = 31.51, SD = 4.44), the SC category ranged from 14 to 39 (M = 28.19, SD = 4.23), and the DO category ranged from 4 to 32 (M = 16.66, SD = 4.77). The TIPQ results for the full sample are presented in Table 6.
Table 6

Descriptives for the Teacher Interactive Preference Questionnaire

<table>
<thead>
<tr>
<th></th>
<th>Dominant Cooperative</th>
<th>Submissive Cooperative</th>
<th>Dominant Oppositional</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Full Sample</td>
<td>1020</td>
<td>31.51</td>
<td>4.44</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for gender for the dominant-cooperative (DC), submissive-cooperative (SC), and dominant-oppositional (DO) scores from the TIPQ. From a possible score of 40 for each category, the females’ \( n = 490 \) scores for the DC category ranged from 21 to 40 \( (M = 31.59, SD = 4.42) \), the SC category ranged from 14 to 39 \( (M = 28.29, SD = 4.09) \), and the DO category ranged from 4 to 29 \( (M = 16.06, SD = 6.60) \). The males’ \( n = 530 \) scores for the DC category ranged from 21 to 40 \( (M = 31.43, SD = 4.47) \), the SC category ranged from 14 to 39 \( (M = 28.09, SD = 4.87) \), and the DO category ranged from 5 to 32 \( (M = 17.22, SD = 4.86) \). The females and males scored the dominant-cooperative category the highest, followed closely by the submissive-cooperative category, and thirdly and more distantly, by the dominant-oppositional category. The females had slightly higher mean scores in the DC and SC categories while the males had slightly higher mean scores in the DO category. The TIPQ results for gender are presented in Table 7.

Ranges, means, and standard deviations were calculated for the students’ year in school (first year, second year, third year, fourth year, and fifth-plus years) for the dominant-cooperative (DC), submissive-cooperative (SC), and dominant-oppositional (DO) scores from the TIPQ.
Table 7

Descriptives for the Teacher Interactive Preference Questionnaire for Gender

<table>
<thead>
<tr>
<th></th>
<th>Dominant Cooperative</th>
<th>Submissive Cooperative</th>
<th>Dominant Oppositional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Males</td>
<td>530</td>
<td>31.43</td>
<td>4.47</td>
</tr>
<tr>
<td>Females</td>
<td>490</td>
<td>31.59</td>
<td>4.42</td>
</tr>
</tbody>
</table>

From a possible score of 40 for each category, the first year students’ \((n = 381)\) scores for the DC category ranged from 21 to 40 \((M = 31.45, SD = 4.44)\), the SC category ranged from 18 to 39 \((M = 28.38, SD = 4.05)\), and the DO category ranged from 5 to 31 \((M = 16.75, SD = 4.78)\). The second year students’ \((n = 281)\) scores for the DC category ranged from 23 to 40 \((M = 31.58, SD = 4.42)\), the SC category ranged from 15 to 38 \((M = 28.24, SD = 4.11)\), and the DO category ranged from 4 to 27 \((M = 16.40, SD = 4.52)\). The third year students’ \((n = 169)\) scores for the DC category ranged from 21 to 40 \((M = 31.50, SD = 4.11)\), the SC category ranged from 14 to 39 \((M = 28.31, SD = 4.23)\), and the DO category ranged from 7 to 32 \((M = 16.96, SD = 5.01)\). The fourth year students’ \((n = 167)\) scores for the DC category ranged from 21 to 40 \((M = 31.43, SD = 4.77)\), the SC category ranged from 14 to 39 \((M = 27.76, SD = 4.62)\), and the DO category ranged from 7 to 28 \((M = 16.77, SD = 4.93)\). The fifth-plus year students’ \((n = 22)\) scores for the DC category ranged from 23 to 40 \((M = 32.31, SD = 4.86)\), the SC category ranged from 17 to 36 \((M = 26.59, SD = 5.54)\), and the DO category ranged from 10 to 23 \((M = 16.00, SD = 4.87)\). All year in school sub-groups scored the dominant-cooperative category the highest, followed closely by the submissive-cooperative category, and thirdly and more distantly, by the dominant-oppositional category. The fifth-plus year students had the highest score in the DC category, the
first year students had the highest score in the SC category, and the third year students had the highest score in the DO category, although it should be noted that the means were similar across all year sub-groups. The TIPQ results for year in school are presented in Table 8.

Table 8

*Descriptives for the Teacher Interactive Preference Questionnaire for Year in School*

<table>
<thead>
<tr>
<th>Year</th>
<th>n</th>
<th>Dominant Cooperative</th>
<th>Submissive Cooperative</th>
<th>Dominant Oppositional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>First Year</td>
<td>381</td>
<td>31.45</td>
<td>4.44</td>
<td>28.38</td>
</tr>
<tr>
<td>Second Year</td>
<td>281</td>
<td>31.58</td>
<td>4.42</td>
<td>28.24</td>
</tr>
<tr>
<td>Third Year</td>
<td>169</td>
<td>31.50</td>
<td>4.11</td>
<td>28.31</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>167</td>
<td>31.43</td>
<td>4.77</td>
<td>27.76</td>
</tr>
<tr>
<td>Fifth + Years</td>
<td>22</td>
<td>32.31</td>
<td>4.86</td>
<td>26.59</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for the students’ instrument (brass, woodwind, and percussion) for the dominant-cooperative (DC), submissive-cooperative (SC), and dominant-oppositional (DO) scores from the TIPQ. From a possible score of 40 for each category, the brass’ (n = 426) scores for the DC category ranged from 22 to 40 ($M = 31.51$, $SD = 4.45$), the SC category ranged from 14 to 39 ($M = 28.19$, $SD = 4.52$), and the DO category ranged from 4 to 32 ($M = 16.50$, $SD = 5.06$). The woodwinds’ (n = 479) scores for the DC category ranged from 21 to 40 ($M = 31.60$, $SD = 4.42$), the SC category ranged from 17 to 38 ($M = 28.13$, $SD = 3.91$), and the DO category ranged from 5 to 29 ($M = 16.58$, $SD = 4.49$). The percussionists’ (n = 115) scores for the DC category ranged from 21 to 39 ($M = 31.15$, $SD = 4.54$), the SC category ranged from 14 to 39 ($M = 28.38$, $SD = 4.48$), and the DO category
ranged from 5 to 29 ($M = 17.60$, $SD = 4.76$). All instrumental sub-groups scored the dominant-cooperative category the highest, followed closely by the submissive-cooperative category, and thirdly and more distantly, by the dominant-oppositional category. The woodwind players had the slightly higher scores for the DC category, and the percussion had slightly higher scores for the SC; the percussion had higher scores for the DO category. The TIPQ results for instrument are presented in Table 9.

Table 9

<table>
<thead>
<tr>
<th></th>
<th>Dominant Cooperative</th>
<th>Submissive Cooperative</th>
<th>Dominant Oppositional</th>
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<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>Mean ($SD$)</td>
<td>Mean ($SD$)</td>
</tr>
<tr>
<td>Brass</td>
<td>426</td>
<td>31.51 ($4.45$)</td>
<td>28.19 ($4.52$)</td>
</tr>
<tr>
<td>Woodwind</td>
<td>479</td>
<td>31.60 ($4.42$)</td>
<td>28.13 ($3.91$)</td>
</tr>
<tr>
<td>Percussion</td>
<td>115</td>
<td>31.15 ($4.54$)</td>
<td>28.38 ($4.48$)</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for the students’ major (business, computer/technology, education, engineering, fine/performing arts, humanities, music, pre-professional, math/science, social sciences, and undecided) for the dominant-cooperative (DC), submissive-cooperative (SC), and dominant-oppositional (DO) scores from the TIPQ. From a possible score of 40 for each category, the business majors’ ($n = 53$) scores for the DC category ranged from 21 to 39 ($M = 30.98$, $SD = 4.87$), the SC category ranged from 15 to 38 ($M = 28.38$, $SD = 4.54$), and the DO category ranged from 7 to 26 ($M = 16.28$, $SD = 4.16$). The computer/technology majors’ ($n = 22$) scores for the DC category ranged from 23 to 39 ($M = 32.32$, $SD = 4.31$), the SC category ranged from 21 to 37 ($M = 29.27$, $SD = 4.83$), and the DO
category ranged from 7 to 24 ($M = 15.50$, $SD = 4.67$). The education majors’ ($n = 58$) scores for the DC category ranged from 24 to 39 ($M = 31.66$, $SD = 5.14$), the SC category ranged from 20 to 39 ($M = 30.19$, $SD = 4.06$), and the DO category ranged from 5 to 25 ($M = 15.02$, $SD = 4.77$). The engineering majors’ ($n = 108$) scores for the DC category ranged from 21 to 39 ($M = 30.36$, $SD = 4.03$), the SC category ranged from 17 to 37 ($M = 27.78$, $SD = 4.05$), and the DO category ranged from 4 to 29 ($M = 16.35$, $SD = 4.55$). The fine/performing arts majors’ ($n = 55$) scores for the DC category ranged from 22 to 40 ($M = 31.36$, $SD = 4.92$), the SC category ranged from 22 to 37 ($M = 29.29$, $SD = 3.69$), and the DO category ranged from 5 to 26 ($M = 16.73$, $SD = 4.73$). The humanities majors’ ($n = 78$) scores for the DC category ranged from 23 to 39 ($M = 31.54$, $SD = 4.83$), the SC category ranged from 20 to 37 ($M = 28.76$, $SD = 3.89$), and the DO category ranged from 5 to 29 ($M = 15.89$, $SD = 4.56$). The music majors’ ($n = 387$) scores for the DC category ranged from 21 to 40 ($M = 31.76$, $SD = 4.21$), the SC category ranged from 14 to 39 ($M = 27.18$, $SD = 4.26$), and the DO category ranged from 7 to 32 ($M = 18.20$, $SD = 4.79$). The pre-professional majors’ ($n = 30$) scores for the DC category ranged from 23 to 40 ($M = 32.57$, $SD = 5.35$), the SC category ranged from 22 to 39 ($M = 28.93$, $SD = 4.53$), and the DO category ranged from 9 to 22 ($M = 15.10$, $SD = 3.24$). The math/science majors’ ($n = 94$) scores for the DC category ranged from 23 to 40 ($M = 31.80$, $SD = 4.33$), the SC category ranged from 19 to 38 ($M = 28.52$, $SD = 4.01$), and the DO category ranged from 7 to 25 ($M = 15.09$, $SD = 4.49$). The social science majors’ ($n = 98$) scores for the DC category ranged from 23 to 40 ($M = 31.59$, $SD = 4.15$), the SC category ranged from 21 to 38 ($M = 29.17$, $SD = 4.02$), and the DO category ranged from 7 to 28 ($M = 15.66$, $SD = 4.61$). The undecided majors’ ($n = 37$) scores for the DC category ranged from 23 to 38 ($M = 30.57$, $SD = 4.55$), the SC category ranged from 18 to 38 ($M = 28.97$, $SD = 3.86$), and the DO category ranged from 5 to 30 ($M = 14.58$, $SD = 4.35$). All
coliaggeate major sub-groups scored the dominant-cooperative category the highest, followed closely by the submissive-cooperative category, and thirdly and more distantly, by the dominant-oppositional category. While scores tended to be similar, the pre-professional majors had the highest score for the DC category, the education majors had the highest score for the SC category, and the music majors had the highest score for the DO category. Results for the TIPQ for major are presented in Table 10.

Table 10

*Descriptives for the Teacher Interactive Preference Questionnaire for Major*

<table>
<thead>
<tr>
<th>Major</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dominant Cooperative</td>
<td>Submissive Cooperative</td>
<td>Dominant Oppositional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>53</td>
<td>30.98</td>
<td>4.87</td>
<td>28.38</td>
<td>4.54</td>
<td>16.28</td>
<td>4.16</td>
</tr>
<tr>
<td>Comp/Tech</td>
<td>22</td>
<td>32.32</td>
<td>4.31</td>
<td>29.27</td>
<td>4.83</td>
<td>15.50</td>
<td>4.67</td>
</tr>
<tr>
<td>Education</td>
<td>58</td>
<td>31.66</td>
<td>5.14</td>
<td>30.19</td>
<td>4.06</td>
<td>15.02</td>
<td>4.77</td>
</tr>
<tr>
<td>Engineering</td>
<td>108</td>
<td>30.36</td>
<td>4.03</td>
<td>27.78</td>
<td>4.05</td>
<td>16.35</td>
<td>4.55</td>
</tr>
<tr>
<td>Fine/Perf Arts</td>
<td>55</td>
<td>31.36</td>
<td>4.92</td>
<td>29.29</td>
<td>3.69</td>
<td>16.73</td>
<td>4.73</td>
</tr>
<tr>
<td>Humanities</td>
<td>78</td>
<td>31.54</td>
<td>4.83</td>
<td>28.76</td>
<td>3.89</td>
<td>15.89</td>
<td>4.56</td>
</tr>
<tr>
<td>Music</td>
<td>387</td>
<td>31.76</td>
<td>4.21</td>
<td>27.18</td>
<td>4.26</td>
<td>18.20</td>
<td>4.79</td>
</tr>
<tr>
<td>Pre-Prof</td>
<td>30</td>
<td>32.57</td>
<td>5.35</td>
<td>28.93</td>
<td>4.53</td>
<td>15.10</td>
<td>3.24</td>
</tr>
<tr>
<td>Math/Sci</td>
<td>94</td>
<td>31.80</td>
<td>4.33</td>
<td>28.52</td>
<td>4.01</td>
<td>15.09</td>
<td>4.49</td>
</tr>
<tr>
<td>Social Sci</td>
<td>98</td>
<td>31.59</td>
<td>4.15</td>
<td>29.17</td>
<td>4.02</td>
<td>15.66</td>
<td>4.61</td>
</tr>
<tr>
<td>Undecided</td>
<td>37</td>
<td>30.57</td>
<td>4.55</td>
<td>28.97</td>
<td>3.86</td>
<td>14.58</td>
<td>4.35</td>
</tr>
</tbody>
</table>
Research Question 2

In order to answer the second research question, “What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument?” ranges, means, and standard deviations were calculated for the Self-Efficacy Questionnaire (SEQ). Summed scores from the questionnaire, with a possible range of 0 to 200, were used to investigate this research question. The scores for the full sample ($n = 1020$) for the SEQ ranged from 77 to 196 ($M = 144.65$, $SD = 21.05$). Results for the SEQ for the full sample are presented in Table 11.

Table 11
*Means, Standard Deviations, and Ranges for the Self-Efficacy Questionnaire*

<table>
<thead>
<tr>
<th>Self-Efficacy Questionnaire</th>
<th>$n$</th>
<th>Mean</th>
<th>$SD$</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Sample</td>
<td>1020</td>
<td>144.65</td>
<td>21.05</td>
<td>119</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for gender for the Self-Efficacy Questionnaire (SEQ) scores. From a possible score of 200, the females’ ($n = 490$) scores for the SEQ ranged from 77 to 196 ($M = 145.97$, $SD = 21.01$). The males’ ($n = 530$) scores ranged from 79 to 196 ($M = 143.43$, $SD = 21.06$). For gender, the calculated sub-group means for the Self-Efficacy Questionnaire (SEQ) were close to the mean for the entire sample; however, the females had slightly higher mean scores than the males. Results for the SEQ for gender are presented in Table 12.
Table 12

Means, Standard Deviations, and Ranges for the Self-Efficacy Questionnaire for Gender

<table>
<thead>
<tr>
<th>Self-Efficacy Questionnaire</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>530</td>
<td>143.43</td>
<td>21.06</td>
<td>117</td>
</tr>
<tr>
<td>Females</td>
<td>490</td>
<td>145.97</td>
<td>21.01</td>
<td>119</td>
</tr>
</tbody>
</table>

Table 13

Means, Standard Deviations, and Ranges for the Self-Efficacy Questionnaire for Year in School

<table>
<thead>
<tr>
<th>Self-Efficacy Questionnaire</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>381</td>
<td>144.94</td>
<td>21.34</td>
<td>100</td>
</tr>
<tr>
<td>Second Year</td>
<td>281</td>
<td>141.60</td>
<td>19.87</td>
<td>112</td>
</tr>
<tr>
<td>Third Year</td>
<td>169</td>
<td>147.89</td>
<td>22.48</td>
<td>117</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>167</td>
<td>145.07</td>
<td>20.38</td>
<td>117</td>
</tr>
<tr>
<td>Fifth + Year</td>
<td>22</td>
<td>150.50</td>
<td>20.77</td>
<td>68</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for the students’ year in school (first year, second year, third year, fourth year, and fifth-plus year) for the scores from the SEQ. The first year students’ ($n = 381$) scores ranged from 94 to 194 ($M = 144.94$, $SD = 21.34$). The second year students’ ($n = 281$) scores ranged from 84 to 196 ($M = 141.60$, $SD = 19.87$). The
third year students’ \((n = 169)\) scores ranged from 79 to 196 \((M = 147.89, SD = 22.48)\). The fourth year students’ \((n = 167)\) scores ranged from 77 to 194 \((M = 145.07, SD = 20.38)\). The fifth- plus year students’ \((n = 22)\) scores ranged from 124 to 192 \((M = 150.50, SD = 20.77)\). The fifth-plus year students had the highest SEQ scores followed by the third year, the fourth year, and the first year students. The second year students had the lowest SEQ scores. The SEQ results for year in school are presented in Table 13.

Ranges, means, and standard deviations were calculated for the students’ instrument (brass, woodwind, and percussion) for the scores from the SEQ. The brass players’ \((n = 426)\) scores ranged from 77 to 196 \((M = 143.85, SD = 21.19)\). The woodwind players’ \((n = 479)\) scores ranged from 84 to 194 \((M = 144.27, SD = 20.19)\). The percussionists’ \((n = 115)\) scores ranged from 102 to 196 \((M = 149.20, SD = 23.55)\). The percussionists had the highest SEQ score, followed by the woodwinds, with the brass players having the lowest scores. The SEQ results for instrument are presented in Table 14.

Table 14

<table>
<thead>
<tr>
<th>Instrument</th>
<th>(n)</th>
<th>Mean</th>
<th>(SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>426</td>
<td>143.85</td>
<td>21.19</td>
<td>119</td>
</tr>
<tr>
<td>Woodwind</td>
<td>479</td>
<td>144.27</td>
<td>20.19</td>
<td>110</td>
</tr>
<tr>
<td>Percussion</td>
<td>115</td>
<td>149.20</td>
<td>23.55</td>
<td>94</td>
</tr>
</tbody>
</table>
Table 15

Means, Standard Deviations, and Ranges for the Self-Efficacy Questionnaire for Major

<table>
<thead>
<tr>
<th>Major</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>53</td>
<td>145.75</td>
<td>19.50</td>
<td>102</td>
</tr>
<tr>
<td>Comp/Tech</td>
<td>22</td>
<td>141.95</td>
<td>15.47</td>
<td>61</td>
</tr>
<tr>
<td>Education</td>
<td>58</td>
<td>144.21</td>
<td>25.38</td>
<td>119</td>
</tr>
<tr>
<td>Engineering</td>
<td>108</td>
<td>141.56</td>
<td>18.56</td>
<td>98</td>
</tr>
<tr>
<td>Fine/Perf Arts</td>
<td>55</td>
<td>142.60</td>
<td>20.67</td>
<td>85</td>
</tr>
<tr>
<td>Humanities</td>
<td>78</td>
<td>144.32</td>
<td>22.96</td>
<td>93</td>
</tr>
<tr>
<td>Music</td>
<td>387</td>
<td>145.65</td>
<td>21.03</td>
<td>103</td>
</tr>
<tr>
<td>Pre-Prof</td>
<td>30</td>
<td>152.73</td>
<td>25.92</td>
<td>84</td>
</tr>
<tr>
<td>Math/Science</td>
<td>94</td>
<td>143.68</td>
<td>20.41</td>
<td>89</td>
</tr>
<tr>
<td>Social Science</td>
<td>98</td>
<td>147.47</td>
<td>19.19</td>
<td>98</td>
</tr>
<tr>
<td>Undecided</td>
<td>37</td>
<td>136.11</td>
<td>22.06</td>
<td>107</td>
</tr>
</tbody>
</table>

Ranges, means, and standard deviations were calculated for the students’ major for the scores from the SEQ. The business majors’ \((n = 53)\) scores ranged from 93 to 195 \((M = 145.75, SD = 19.50)\). The computer/technology majors’ \((n = 22)\) scores ranged from 107 to 168 \((M = 141.95, SD = 15.47)\). The education majors’ \((n = 58)\) scores ranged from 77 to 196 \((M = 144.21, SD = 25.38)\). The engineering majors’ \((n = 108)\) scores ranged from 97 to 195 \((M = 141.56, SD = 18.56)\). The fine/performing arts majors’ \((n = 55)\) scores ranged from 104 to 189 \((M = 142.60, SD = 20.67)\). The humanities majors’ \((n = 78)\) scores ranged from 99 to 192 \((M = 144.32, SD = 22.06)\).
22.96). The music majors’ \((n = 387)\) scores ranged from 91 to 194 \((M = 145.65, SD = 21.03)\). The pre-professional majors’ \((n = 30)\) scores ranged from 112 to 196 \((M = 152.73, SD = 25.92)\). The math/science majors’ \((n = 94)\) scores ranged from 101 to 190 \((M = 143.68, SD = 20.41)\). The social science majors’ \((n = 98)\) scores ranged from 96 to 194 \((M = 147.47, SD = 19.19)\). The undecided majors’ \((n = 37)\) scores ranged from 79 to 186 \((M = 136.11, SD = 22.06)\). The pre-professional majors had the highest mean SEQ scores of any other sub-group in the study and the undecided majors had the lowest mean SEQ score of any other sub-group in the study. The computer/technology majors had the smallest range of scores and the lowest high score, 18 points lower than the nearest sub-groups’ top score. The SEQ results for major are presented in Table 15.

Research Question 3

Pearson product-moment correlation coefficients were calculated in order to answer the third research question: “What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy?” Prior to calculating the correlations, the assumptions of normality, linearity, and homoscedasticity were checked. The normality assumption was met for self-efficacy \((skewness = -0.12, CI ± 0.18, kurtosis = 0.19, CI ± 0.31)\), dominant-cooperative \((skewness = -0.09, CI ± 0.15, kurtosis = -0.29, CI ± 0.31)\), submissive-cooperative \((skewness = 0.12, CI ± 0.15, kurtosis = -0.05, CI ± 0.31)\), and dominant-oppositional \((skewness = 0.14, CI ± 0.15, kurtosis = -0.30, CI ± 0.31)\) using the 95% confidence interval multiplied by the standard error of skewness or kurtosis. Linearity and homoscedasticity were checked using scatterplots for the pairing of self-efficacy with each of the
teacher behavior categories. Each of the pairings met the assumptions of linearity and homoscedasticity.

Pearson product-moment correlations and coefficients of determination ($r^2$) were calculated between self-efficacy and dominant-cooperative, between self-efficacy and submissive-cooperative, and between self-efficacy and dominant-oppositional. Because three correlations were being performed, a Bonferroni correction was applied to reduce the possibility of a Type I error due to overuse of the data. As a result, the initial alpha level of .05 was adjusted to .016 (.05/3). A significant positive relationship was found between self-efficacy and dominant-cooperative ($r = 0.47, p = .000000017$). The coefficient of determination ($r^2$) documented the amount of variance explained between self-efficacy and dominant-cooperative to be 22%. A significant positive relationship was found between self-efficacy and submissive-cooperative ($r = .26, p = .0000062$). The coefficient of determination ($r^2$) documented the amount of variance explained between self-efficacy and submissive-cooperative to be 7%. Finally, a significant positive relationship was found between self-efficacy and dominant-oppositional ($r = .23, p = .00030$). The coefficient of determination ($r^2$) documented the amount of variance explained between self-efficacy and dominant-oppositional to be 5%.

The three correlations investigated the strength of the trend that respondents with higher perceived self-efficacy also tended to prefer the summed teacher interpersonal behavior category items. The strongest correlation was noted between self-efficacy and dominant-cooperative teacher behaviors including: notice what is happening, lead, organize, give orders, set tasks, determine procedures, explain, hold attention, assist, show interest, able to take a joke, inspire confidence, and trust. The next strongest correlation was noted between self-efficacy and submissive-cooperative teacher behaviors including: give independent work, show empathy and
confidence, be patient, be open to student suggestions, and give freedom to students. The weakest of the three correlations was noted between self-efficacy and dominant-oppositional teacher behaviors including: take students to task, quick to correct, keep reigns tight, maintain student silence, be strict, and set rules.
CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter begins with a description of the purpose of the study and a brief discussion of the past literature in order to define the need for the study. Following the introduction to the study, the design and analysis procedures used in this study are presented and a summary of the results for each of the three research questions is included. Lastly, conclusions for addressing the issues presented in this study, and recommendations for future research are presented.

Purpose of the Study

Teacher interpersonal behavior has been shown to positively affect student attitude, motivation, and achievement in school. Teachers as well as educational psychologists and philosophers have written about the benefits and importance of positive, personal interactions between students and teachers for many years. According to researchers, “teachers’ interpersonal skills are crucial to creating and maintaining a positive working climate. Essentially, effective teachers have to be excellent communicators as well as fine technicians” (Wubbels et al., 1997, p. 82). However, often due to differences in age, interests, or other factors, teachers do not relate to or communicate with students as well as they would like and do not understand students as well as they could. This often results in interactions that are distant, strained, and/or misinterpreted. Through the study of students’ preferences of teacher interpersonal behavior, much can be learned about how to better interact with the students and improve the classroom environment and student achievement.

Researchers have also found self-efficacy to be an important factor in students’ academic success (Bandura, 1991; Bandura & Jourdan, 1991; Pajares, 2002; Pajares & Schunk, 2001; Schunk, 1989; Schunk & Pajares, 2001; Zimmerman, 1995, 2000; Zimmerman & Bandura, 1994). Students’ with higher self-efficacy have tended to have higher motivation (Ames, 1992;
Bandura, 1986, 1989), more positive outlooks (DeWitz & Walsh, 2001; Tong & Song, 2004), and higher academic (Bandura, 1986, 1991; Bandura & Jourdan, 1991; Pajares, 2002; Pajares & Schunk, 2001) and musical achievement (Maehr et al., 2002; McPherson & McCormick, 2003, 2006; McPherson & Zimmerman 2002) than students with lower self-efficacy. Research has also found that self-efficacy can be altered through experiences and learning (Allinder, 1994; Bandura, 1997; Guskey, 1988; Mansberger, 1989; Matthews, 2007; Ross, 1992). Thus, it could benefit teachers to have a better understanding of students’ beliefs. In addition, according to Wigfield and Harold (1992), there could be a relationship between teachers’ classroom behavior and students’ self-efficacy. However, this relationship has not been measured.

Research has also been conducted in the areas of interpersonal teacher behavior and self-efficacy in music. However, the research on music teacher interpersonal behavior is very limited. One study examined ensemble members’ perceptions of student conductors’ teacher interpersonal behaviors, teaching effectiveness, and rehearsal techniques and found significant differences between the groups (Hunter, 2004). Self-efficacy studies in music have shown positive relationships between self-efficacy and music performance (Maehr et al., 2002; McPherson & McCormick, 2003, 2006; McPherson & Zimmerman 2002), practice skills (Nielson, 2004), performance anxiety (Mansberger, 1989; Petrovich, 1989; Sinden, 1999), jazz performance (Wehr-Flowers, 2008) and jazz improvisation (Ciorba, 2007; Davison, 2006). Because collegiate music ensembles tend to have a larger variety of students than a typical academic course, additional research may be needed to help understand students’ preferences of teacher interpersonal behavior and student self-efficacy in music as well as the relationship between the two in order to assist music educators in improving their teaching to this wide array of students.
The purposes of this study were to describe collegiate band members’ preferred teacher interpersonal behaviors and perceptions of music self-efficacy based on their major, year in school, gender, and instrument, and to measure the relationship between the preferences of interpersonal teacher behaviors and self-efficacy scores. Participants (N = 1020) were volunteers from 12 large, small, and private universities across the United States. All participants were undergraduate students enrolled in the band program at their school. Each student completed two questionnaires, and the data were compiled to answer the three research questions used in this study.

**Design and Analysis**

The design for the current study was descriptive and correlational in nature. The specific research questions for this study were 1) What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument?, 2) What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument?, and 3) What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy? Means, standard deviations, and ranges were used to answer research questions one and two. Research question three was answered using three Pearson product-moment correlation coefficients, which were calculated between the scores for each of the three preferred teacher interaction styles (dominant-cooperative, submissive-cooperative, dominant-oppositional) and students’ self-efficacy.

**Summary of Results**

Results for research question one, “What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument”,

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revealed that all respondents had the greatest preference for dominant-cooperative teacher behaviors, including: notice what is happening, lead, organize, give orders, set tasks, determine procedures, explain, hold attention, assist, show interest, able to take a joke, inspire confidence, and trust. Submissive-cooperative behaviors were rated next highest, including: give independent work, show empathy and confidence, be patient, be open to student suggestions, and give freedom to students. Third highest were the dominant-oppositional behaviors, including: take students to task, quick to correct, keep reigns tight, maintain student silence, be strict, and set rules.

While respondents agreed in terms of the overall scoring for the dominant-cooperative, submissive-cooperative, and dominant-submissive categories, there was some variability across sub-groups. For gender, scores were similar for the females and the males with the males showing only a slightly higher preference for the dominant-oppositional behaviors than did the females. For year in school, the five-plus year students had the highest score for the dominant-cooperative and the lowest score for the submissive-cooperative and the dominant-oppositional although small sample sizes for this sub-group should be considered and results interpreted with caution. The other four sub-groups (first, second, third, and fourth year students) had similar mean scores to each other; however, the first year students had the highest mean score for the submissive-cooperative category and the third year students had the highest mean for the dominant-oppositional category. For instrument, although all mean scores were close, the percussion had the lowest score on the dominant-cooperative and the highest score on the submissive-cooperative and the dominant-oppositional; the brass and woodwind scores were similar to each other. For major, the pre-professional and computer/technology majors had the highest scores in the dominant-cooperative category, the education majors were the highest in the
submissive-cooperative category, and the music majors were the highest in the dominant-oppositional category. The undecided and engineering majors had the lowest scores in the dominant-cooperative category while the music and engineering majors had the lowest scores in the submissive-cooperative category, and the undecided and education majors had the lowest scores in the dominant-oppositional category.

Results for research question two: “What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument,” revealed that the calculated sub-group self-efficacy mean scores for gender, year in school, major, and instrument were close to the overall mean for the entire sample. For gender, the females had slightly higher mean scores than the males. For year in school, the five-plus year students had the highest self-efficacy scores followed by the third year students, and the second year students had the lowest scores. For instrument, the percussion had the highest self-efficacy scores and the brass had the lowest scores. For major, the pre-professional majors had the highest self-efficacy scores and the undecided majors had the lowest. The computer/technology majors had the smallest range of scores and the lowest high score, 18 points lower than the nearest sub-group’s top score.

Three Pearson product-moment correlation coefficients were calculated to answer research question three, “What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy?” The three correlations investigated the strength of the trend that respondents with higher perceived self-efficacy also tended to prefer the summed teacher interpersonal behavior category items. Statistically significant positive relationships were found between each of the three interpersonal teacher behavior categories and students’ self-efficacy. Coefficients of determination
documented the amount of variance explained between self-efficacy and dominant-cooperative to be 22%, between self-efficacy and submissive-cooperative to be 7%, and between self-efficacy and dominant-oppositional to be 5%. The large sample size for this study may have contributed to the statistical significance findings.

As with any study, caution must be taken when interpreting these results. Although the sample size seems large (\(n=1020\)) and includes university band members enrolled in public and private universities located in all parts of the United States, the sample is a very small percentage of the overall population and may not be representative of all university band members. In addition, participants in this study were volunteers and therefore may have had different opinions than those who did not volunteer to participate in the study. Results should not be generalized beyond the sample population used in this study.

Other limitations to the current study involve possible threats to internal and external validity. While all attempts have been made to ensure the internal and external validity of this study, some possible threats may have affected the outcome. An internal threat for testing is a concern for this study due to the fact that the packets of questionnaires and instructions were mailed to the college band director. While it is assumed that instructions were followed and timelines maintained, there is no certainty that the procedures were followed as instructed. Differences in procedures could have resulted in differing return rates and results. History is another internal validity threat that may have impacted this study. While all participants were given the questionnaires during the first week of the academic semester, schools did not start at the same time, which resulted in a three-week difference between the first and the last administration. In addition, students who opted to take the full three days to complete the
questionnaires may have had different experiences during the time period that could have resulted in different responses than those who completed the questionnaires immediately.

There may also be a location threat to internal validity. Because of the design of the study, students were given the questionnaires to fill out on their own. As a result, the questionnaires may have been completed at various times of day and in a plethora of locations; some may have completed the forms before leaving the rehearsal room, some may have completed them in a noisy restaurant, or some may have filled them out at home thus possibly resulting in varied responses. There are also threats to the external validity of this study that raise concerns regarding the generalizability of the findings. Efforts were made to obtain a representative sample of the target population by including different types and sizes of schools from across the United States. However, while the sample size was large ($N = 1020$) it was still an accessible population and not necessarily generalizable to all college band students. The Hawthorne Effect may also be a threat to the external validity of the study. Through the introduction to the study and the informed consent forms, the students were fully aware of the topic of the study. As a result, it is possible that the students answered questions as they thought they should or in a manner in which the researcher wanted, and differently than they would have answered otherwise.

Conclusions

Research Question 1

Research question one asked, “What were the students’ preferences of the directors’ interpersonal teacher behavior in terms of gender, year in school, major, and instrument?” Results revealed that all groups most preferred the dominant-cooperative teacher behaviors, including: notice what is happening, lead, organize, give orders, set tasks, determine procedures,
explain, hold attention, assist, show interest and understanding, friendly, able to take a joke, inspire confidence, and trust. The submissive-cooperative teacher behaviors were second in preference by all groups, including: give independent work, show empathy and confidence, be patient, be open to student suggestions, and give freedom to students. The distant third preference for all groups was the dominant-oppositional behaviors, including: take students to task, quick to correct, keep reigns tight, maintain student silence, be strict, and set rules. These results are consistent with earlier findings; in a study examining students’ best teachers, researchers found that students consistently preferred friendliness, understanding, and strong leadership characteristics in their teachers (Levy et al., 1993). Waldrip, Fisher, and Chuarch’s (2003) study found that high school students described exemplary teachers as those who provided clear instructions, viewed students as capable, had a caring attitude, and engaged the students actively in the classroom. In a study of university students’ preferences of teacher behavior, Sztejnberg, den Brok, and Hurek (2004) found that the students rated ideal teachers extremely high on leadership (dominant-cooperative) and understanding (submissive-cooperative), but extremely low on admonishing (dominant-oppositional). These results show that certain teacher behaviors appear to be consistently preferred in the classroom. To help improve teacher interpersonal behavior, students’ and teachers’ perceptions of the teachers’ interpersonal behavior could be measured and compared to the preferences found in the research. Teachers and administrators could then use this information to develop personal improvement plans and to implement more effective professional development activities.

The results of the current study for gender showed that both sub-groups had similar overall preferences, with dominant-cooperative behaviors being rated highest, followed by the submissive-cooperative, and lastly the dominant-oppositional behaviors. While there was little
variability in the scores for each sub-group, the females had slightly higher scores for the
dominant-cooperative and submissive-cooperative behaviors, and the males had slightly higher
scores for the dominant-oppositional category. These findings are consistent with some of the
previous research, but not all. For example, studies of middle and high school students have
found that females tended to prefer their teachers to be good leaders, and understanding,
characteristics of the dominant-cooperative category (Goh & Fraser, 1998). Meanwhile, van
Oord and den Brok (2004) found that males tended to prefer more strictness and admonishing
behavior, both characteristics of the dominant-oppositional category, than did females.
However, the females in van Oord and den Brok (2004) tended to prefer their teachers to be
helpful and friendly, characteristics of the submissive-cooperative category, and the males
tended to prefer the teachers to give more student responsibility and freedom, also characteristics
of the submissive-cooperative category. Due to the mixed results in regard to gender, more
research is needed to examine the perceptions and preferences of male and female students with
regard to interpersonal teacher behavior. Teachers could utilize a questionnaire to measure the
teacher interpersonal behavior preferences of their own students. These results may then be used
to inform teachers on the best method of interacting with the male and female students in that
classroom.

The results of the current study for year in school revealed that all sub-groups preferred
the dominant-cooperative behaviors, followed by the submissive-cooperative, and lastly the
dominant-oppositional behaviors. While there was little variability in the scores for each sub-
group, the five-plus year students had the highest mean score for the dominant-cooperative
category, the first year students had the highest mean score for the submissive-cooperative
category, and the third year students had the highest mean score for the dominant-oppositional
category. The findings for year in school are consistent with previous research which found that college students rated their ideal teachers as high on leadership (dominant-cooperative) and understanding (submissive-cooperative) but low on admonishing (dominant-oppositional) (Sztejnberg et al., 2004). The findings suggest that collegiate teachers may be able to utilize some similar teacher interpersonal behaviors with all students. It has long been believed that teachers should interact differently with students of different ages; however, based upon the current findings, there may be some teacher characteristics on which all students agree, irrespective of age or experience level. Teachers may want to regularly assess the students’ perceptions of the teachers’ interpersonal behaviors to determine if their ensemble may have similar preferences as have been documented in the current study.

Results based on instrument showed that all sub-groups had similar overall preferences, with dominant-cooperative behaviors being rated highest, followed by the submissive-cooperative, and lastly the dominant-oppositional behaviors. Sub-group mean scores for the dominant-cooperative and submissive-cooperative categories were very similar to each other. However, the percussion showed a slightly higher preference for the dominant-oppositional behaviors than did the brass or woodwind players. Little or no previous research has been conducted on students’ preferences of teacher interpersonal behavior in regard to instrument played, but research on the interpersonal teacher behavior of conductors showed that band members labeled conductors demonstrating strict behaviors (dominant-oppositional) to be the most effective in teaching and rehearsing. The conductors labeled as understanding (dominant-cooperative) were rated next, and the conductors labeled helpful/friendly (submissive-cooperative) were rated the lowest (Hunter, 2004). While this research did not examine band members by instrument groups, the results of Hunter (2004) are not in alignment with the
findings of the current study, since dominant-cooperative behaviors were rated highest by the instrument sub-groups in the current study, and dominant oppositional were rated lowest. These differing results may be due to the psychological nature of the term conductor versus the term teacher, with the term conductor bringing forth the image of a stern leader, and the term teacher bringing forth a softer version of a leader.

   Based on the findings from the current study, band directors may need to be more aware of the manner in which they interact with each of the sections within the band, especially given the slightly higher preferences of the percussion for the more strict, dominant-oppositional behaviors. Due to the results of the current study and related research, directors should consider having all students give feedback on their perceptions of interpersonal teacher behavior each semester as part of the teacher evaluation process. Directors could then compare the students’ preferences to the evaluation results and make changes to their interpersonal teacher behaviors with different sections based on the comparisons and preferences of the students.

   Lastly, the results based on academic major showed that all sub-groups had similar overall preferences, with dominant-cooperative behaviors being rated highest, followed by the submissive-cooperative, and lastly the dominant-oppositional behaviors; however, there were fluctuations within each category. The pre-professional and computer/technology majors had the highest score in the dominant-cooperative category. The education majors had the highest scores in the submissive-cooperative category. The music majors had the highest scores in the dominant-oppositional category and the lowest score in the submissive-cooperative category. The undecided majors had the lowest score in the dominant-oppositional category and the engineering majors had the lowest score in the dominant-cooperative category.
Previous research on teacher interpersonal behavior and academic majors has found mixed results. Lourdusamy and Khine (2001) examined arts, science, and mathematics majors’ perceptions of their own teacher’s interpersonal teacher behavior and documented no significant differences between sub-groups. The current study found a small disparity between the arts and math/science majors, but because the current study was not comparative in nature, the alignment with the results of the Lourdusamy and Khine (2001) study and the current study can only be done speculatively. Another study, using observational ratings, found that music teachers tended to be more direct and intense than teachers in other fields (Froehlich, 1977). The current study found music majors had higher scores than other majors for the dominant-oppositional behaviors similar to those described by Froehlich; however, the music majors preferred the less direct and intense dominant-cooperative behaviors overall.

Because all the students in this sample were collegiate band members, they all had most likely participated in music classes for many years. The higher preferences for more strict and direct behavior may have been an acculturation to past experiences with music teachers who acted in that manner. Band directors at the collegiate level may be able to improve their own teacher interpersonal behaviors by examining the student preferences documented in past research, their own perceptions of their behavior, and their student evaluations. This knowledge may help the teacher improve his/her own teaching. In addition, these findings may help better prepare future teachers entering the field of music education through observing collegiate band directors’ modeling of effective interpersonal teacher behaviors in the classroom.

Research Question 2

Research question two asked, “What were the students’ self-efficacy scores in terms of gender, year in school, major, and instrument?” Results revealed that females had a slightly
higher self-efficacy mean score than did males. This finding contradicts previous comparative research, but it must be noted that the current study was descriptive and not comparative in nature, thus caution should be maintained when aligning the results of the current study with any comparative study.

Studies in mathematics have shown that males have tended to have higher self-efficacy than females (Hackett, 1985; Pajares & Miller, 1994, 1995), and studies in music have found similar results for jazz (Wehr-Flowers, 2008), practice habits (Nielson, 2004), and music performance (Sinden, 1999). However, in one study of practice self-efficacy, Nielson (2004) divided music majors into three sub-groups and found that females majoring in music education had higher self-efficacy for practicing than the males majoring in music performance and church music. The current study grouped music majors into one category and did not differentiate between the different music specialties; however, this study did find the females had slightly higher self-efficacy scores than the males. One factor contributing to the contradictory findings for gender could be related to the shift that has taken place in recent years in higher education. According to the National Center for Education Statistics, in 2004, women received 58 percent of all bachelor’s degrees in the United States. While this study did have more male participants than female, perhaps the trend toward females outperforming males in school has affected the perceptions of self-efficacy (Buchmann & DiPrete, 2006).

For year in school, the results revealed that the older students tended to have higher mean self-efficacy scores than the younger students. The five-plus year students, the oldest and smallest group, had the highest self-efficacy scores. Next were the third year students, followed by the fourth year students. The first year students were a little lower than the fourth year and the second year students had the lowest self-efficacy scores. According to Bandura (1986), one of
the prime factors in influencing self-efficacy is experience; therefore, higher self-efficacy scores in the older students may be a predictable finding. However, in a study of jazz self-efficacy in collegiate jazz band members, no significant differences were found for year in school (Wehr-Flowers, 2008).

College band directors should be cautious and aware of fluctuations in self-efficacy, as it could be a direct result of the collegiate and/or classroom experience. First year students were the largest group in this study and were one of the least efficacious. The second year students, who were almost equally represented in this study, had the lowest self-efficacy scores perhaps due to bad experiences or the realization of higher collegiate expectations and performance standards. The numbers of participants in the third, fourth, and five-plus years decreased noticeably and had higher self-efficacy than the second year students. In addition to increased experience levels, it is possible that the low efficacious students dropped out of the band program thus causing the scores to rise. Improved monitoring of student self-efficacy through regular student questionnaires could improve retention in the collegiate band program. Valuable information may be able to be gathered if collegiate directors would administer a measure of student self-efficacy at the end of each semester along with the standard teacher evaluation.

Results for instrument showed that percussion had the highest self-efficacy scores, followed by the woodwinds, and then the brass. Research on self-efficacy in terms of instrument played is very limited. A single study examining jazz self-efficacy found no significant differences for instrument (Wehr-Flowers, 2008). The higher means for the percussionists may be attributable to previous experiences specific to concert band. In general, percussionists are expected to play a more independent role within the ensemble from a very early age; as a result, the higher perceptions of self-efficacy may develop. In order to improve all students’ self-
efficacy, some of the same instructional techniques could be utilized for all students, including greater solo playing opportunities and increased individual responsibility and accountability for each part.

Finally, the self-efficacy scores based on academic major varied more than with the other sub-groups measured in the current study, with over 16 points difference in the highest and lowest mean scores. The highest mean scores for self-efficacy were from the pre-professional majors, which included pre-medical, pre-law, pre-dental, and pre-veterinary. These were also the highest self-efficacy mean scores for the entire study, followed five points lower by the social science majors, then the business majors, and the music majors. The lowest three self-efficacy mean scores were from engineering majors, the computer/technology majors followed by the undecided majors, who also had the lowest mean scores in the entire study.

Little research has been conducted on students’ self-efficacy in terms of major. Nielson’s (2004) study of practice self-efficacy examined music education, music performance, and church music majors, and found no significant differences for major. The low scores for the undecided majors in this study were in alignment with past research that found that self-efficacy was related to the extent of perceived career options (Lent et al., 1986) and career choices (Lent & Hackett, 1987) to which student felt they had access. Identification of students with lower self-efficacy may enable teachers to develop practices to help students in ways of raising self-efficacy such as providing opportunities to observe successful peers perform, receiving additional individual assistance and guidance, and providing opportunities for low stress performances in which the student may feel successful.
Research Question 3

Research question three asked, “What is the relationship between collegiate band students’ preferences of directors’ interpersonal teacher behaviors (categorized into dominant-cooperative, submissive-cooperative, and dominant-oppositional) and students’ perceived self-efficacy?” Statistically significant positive relationships were found between self-efficacy scores and each of the three teacher interpersonal behavior preference scores. The three correlations investigated the strength of the trend that respondents with higher perceived self-efficacy, also tended to prefer the summed teacher interpersonal behavior category items. The strongest correlation was noted between self-efficacy and dominant-cooperative teacher behaviors, including: notice what is happening, lead, organize, give orders, set tasks, determine procedures, explain, hold attention, assist, show interest, able to take a joke, inspire confidence, and trust. The coefficient of determination ($r^2$), documented the amount of variance explained between self-efficacy and dominant-cooperative to be 22%. The next strongest correlation was noted between self-efficacy and submissive-cooperative teacher behaviors, including: give independent work, show empathy and confidence, be patient, be open to student suggestions, and give freedom to students. The coefficient of determination ($r^2$), documented the amount of variance explained between self-efficacy and submissive-cooperative to be 7%. The weakest of the three correlations was noted between self-efficacy and dominant-oppositional teacher behaviors, including: take students to task, quick to correct, keep reigns tight, maintain student silence, be strict, and set rules. The coefficient of determination ($r^2$), documented the amount of variance explained between self-efficacy and dominant-oppositional to be 5%.

Little research has been conducted on the relationship between teacher interpersonal behavior and student self-efficacy. One study conducted by Matthews (2007) examined the
effect of conductors’ goal orientation (mastery and performance) and shared performance cues (expressive, interpretive, basic) on instrumentalists’ self-efficacy. The study found no significant differences for the type of shared performance cue on self-efficacy. However, the students whose teachers used mastery goals had significantly higher self-efficacy than the students whose teachers used performance goals. This study confirms a possible link between self-efficacy and teacher variables; however, more research is needed on this topic.

It should be noted that the correlation results of the main study contradicted the findings of the pilot study. The main study found statistically significant positive results for all three teacher interpersonal categories (dominant-cooperative, submissive-cooperative, and dominant-oppositional) and self-efficacy. The pilot study found a statistically significant negative relationship for dominant-cooperative and self-efficacy and a statistically significant positive relationship for dominant-oppositional and self-efficacy. In addition, no significant relationship was found for submissive-cooperative and self-efficacy in the pilot study. Since the pilot study data were collected at a single school and the data for the main study data were collected from 12 schools across the nation, it may be important for studies to investigate students’ preferences of interpersonal behavior by region so as to obtain a more complete picture of this complex issue.

The current study showed that the strongest relationship was found between self-efficacy and dominant-cooperative teacher behaviors. This indicates that students who are high in self-efficacy may respond better to teacher behaviors such as notice what is happening, lead, organize, give orders, set tasks, determine procedure, explain, hold attention, assist, show interest, behave in a considerate manner, able to take a joke, inspire confidence, and trust. Highly efficacious students may resonate with these behaviors because they are traits that the students themselves exhibit. It may also be that lower efficacious students do not perceive themselves as
having these traits and thus do not resonate as well with those behaviors resulting in lower teacher preference ratings. In order to determine students’ feelings of self-efficacy, teachers may wish to administer a self-efficacy assessment. From this information, teachers may have some success in predicting the preferred dominant-cooperative behaviors of the students based on their self-efficacy.

A weaker correlation was found between self-efficacy and preference for submissive-cooperative teacher interpersonal behaviors in this study. These results indicate a greater disparity in the data set with some highly efficacious students preferring submissive-cooperative behaviors and other highly efficacious students having lower preference for submissive-cooperative behaviors. The same spread of scores is evident of lower efficacious students with some low efficacious students preferring submissive-cooperative behaviors and other low efficacious students having a lower preference for submissive-cooperative behaviors.

The weakest correlation was found between self-efficacy and preferences for dominant-oppositional teacher interpersonal behavior in this study, suggesting that there may not be a clear linear relationship between these two variables. These results indicate the greatest disparity in the data set with some highly efficacious students preferring dominant-oppositional behaviors and other highly efficacious students having lower preference for dominant-oppositional behaviors. The same spread of scores is true of lower efficacious students with some low efficacious students preferring dominant-oppositional behaviors and other low efficacious students having a lower preference for dominant-oppositional behaviors.

Due to the lack of clear linear relationships between self-efficacy and submissive-cooperative behaviors and between self-efficacy and dominant-oppositional behaviors, teachers may wish to administer both self-efficacy and teacher interpersonal behavior preference
assessments to their students in order to determine how these two variables interact for each student. This would allow teachers to be aware of how their interpersonal behaviors and the students’ preferences for those behaviors may be in alignment with the students’ self-efficacy. The teachers could then adapt their interpersonal teacher behaviors to each student.

Recommendations for Future Research

This study examined band students’ preferences of teacher interpersonal behavior and perceived self-efficacy by gender, year in school, instrument, and academic major. While the results were informative, future research could study these issues more closely by examining responses to individual questions by similar sub-groups as were used in the current study. Examining descriptive and comparative results may reveal more specific trends in students’ preferences of teacher interpersonal behavior and self-efficacy. Additionally, qualitative studies could be conducted to observe specific situations and the interactions that happen between students and teachers. Experimental studies could also be conducted on possible methods of raising self-efficacy.

The current study sampled a wide variety of students in order to obtain a comprehensive sample. Future studies could examine the responses from various regions of the country for differences, particularly for preferences of interpersonal teacher behavior. This knowledge could be useful in training teachers and in helping faculty who have relocated so that the teachers could understand and adapt to possible region differences by gaining a better understanding of many regions’ student preferences of teacher interpersonal behavior.

Band directors often have a unique opportunity to teach and interact with students over the course of multiple semesters or years, and as a result, they have the chance to develop strong relationships with the students; however, this relationship does not always occur. The research
that has been conducted on students’ preferences of teacher interpersonal behavior and perceptions of self-efficacy is intended to assist teachers in improving skills that could aid in fostering relationships. In addition, most of the research on self-efficacy and teacher interpersonal behavior has focused on students in non-music classes at the primary and secondary levels. Additional research would be beneficial in music classes at the primary and secondary levels.

More research is also needed on students’ preferences of music teacher interpersonal behavior at other levels of education. Although alternate measurement instruments may need to be developed for younger students, it may be beneficial to study the preferences of high school and middle school band members. These findings could be compared to previous studies of non-music students and to collegiate students in order to develop a better understanding of band students and their desires and needs at different ages. Longitudinal studies could also be conducted to measure preferences over a span of many years in order to understand better the changes that may occur and at what ages the changes may take place.

In terms of teacher interpersonal behavior in the classroom, research is needed to discover methods of developing these versatile communication and interpersonal skills. There are many possibilities that could be examined to accomplish this goal. The current speech and communication courses taught to undergraduate students could be examined to determine which curricula are most effective in meeting the future needs of the students in the courses and whether students are learning about the communication process including styles, biases, and perceptions. Other considerations could include the development of new courses or curricula that could address interpersonal communication and relationship skills from other perspectives such as basic theatre/dramatic training or curricula modeled after programs, such as the Dale Carnegie
Training, which works with business leaders on interpersonal and communication skills (Dale Carnegie Training, n.d.).

In addition to the education undergraduates receive, additional research is needed on the best ways to prepare and train university level instructors. Many of these individuals have very high levels of content knowledge and are leading experts and researchers in their fields; however, subject matter expertise may not prepare an individual to successfully teach others. While many universities have instituted some form of new faculty orientation/training, the topics are often basic skills such as time and classroom management and assessment methods, but may not include topics such as relating to students, communication skills, or self-efficacy development. Hence, studies are needed that can compare viable training procedures for new collegiate faculty.

Research on the separate topics of teacher interpersonal behavior and student self-efficacy has been prolific, indicating their importance in the field of education. Determining appropriate ways to measure students’ preferences of teacher interpersonal behavior may assist teachers in understanding the students and how to interact with them successfully. Self-efficacy research has shown that students’ beliefs can affect their behaviors. As result, understanding a students’ self-efficacy beliefs may allow the teacher to create educational settings in which the student may increase in self-efficacy and thus increase in achievement, motivation, and success. The results of this study have documented a relationship between students’ preferences of teacher interpersonal behaviors and perceived self-efficacy. Collegiate band directors may wish to examine their own behaviors to determine how they align with the students’ preferences. Continued research is needed in order to understand more completely the relationship between
interpersonal teacher behavior and self-efficacy in terms of the possible ramifications on teacher preparation programs and teaching methodologies.
APPENDIX A

MEASUREMENT INSTRUMENTS
Teacher Interaction Preference Questionnaire

The purpose of this questionnaire is to measure students’ preferences of teacher interpersonal behavior.

Please rate the following statements based on how you prefer your teachers to behave – this is not an evaluation of your teacher but a description of your ideal teacher. Please consider how important each behavior is to you and rate them accordingly.

For each statement, please circle the number corresponding to how strongly you prefer each item. For example:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never prefer</th>
<th>Sometimes prefer</th>
<th>Always prefer</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher should express him/herself clearly</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

If you always prefer that the teacher express him/herself clearly, circle 4. If you never prefer that the teacher express him/herself clearly, circle 0. You can also choose 1, 2, or 3 for responses that fall in between.

Please circle one rating for each statement – please do not circle between numbers.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never prefer</th>
<th>Sometimes prefer</th>
<th>Always prefer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher should be strict.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. The teacher should talk enthusiastically about the subject.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. The teacher should trust the students.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. The teacher should allow the students to talk to him/her if they disagree with something.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. The students should have input in the class decisions.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. The teacher should be demanding.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. The teacher should be willing to explain things repeatedly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. If the students feel strongly about something, the teacher should be willing to be flexible.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. The teacher should get angry easily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10. The teacher should have high standards.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11. The students should be able to influence the teacher.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12. The students should have the opportunity to choose music for the band to perform.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13. The teacher should allow the students to goof off in class.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14. The teacher should take personal interest in the students.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Statement</td>
<td>Never prefer</td>
<td>Sometimes prefer</td>
<td>Always prefer</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>15. The teacher should be friendly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16. The teacher should be someone the students can depend on.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17. The teacher should get angry in class.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18. The teacher should hold the students’ attention.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>19. The teacher should explain things clearly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>20. The teacher should be impatient.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21. The teacher should have a sense of humor.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>22. The teacher should allow students to serve in responsible/leadership positions.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>23. The teacher should be able to take a joke.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>24. The teacher should be willing to listen to students’ ideas.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25. The teacher should be a good leader.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>26. The students should be afraid to go to class unprepared.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>27. The students should be afraid of the teacher.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>28. The teacher should act confidently.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>29. The teacher should be sarcastic.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>30. The teacher should make an example of students who cause problems.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Self-Efficacy Questionnaire

The purpose of this questionnaire is to measure your feelings of self-efficacy while participating in a collegiate band. Please rate each of the following statements based on how certain you are that **YOU** can do each of the following.

**Please circle one rating for each statement – please do not circle between numbers.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Cannot do at all</th>
<th>Moderately certain</th>
<th>Certain I can do</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I continue to work toward my goals even when I face setbacks.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. I can reach my goals if I try hard enough.</td>
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<tr>
<td>3. If someone needs help, I can find a way to be of assistance.</td>
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<td></td>
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<tr>
<td>4. It is easy for me to stick to my objectives.</td>
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<tr>
<td>5. I am confident that I could deal efficiently with unexpected events.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. I can solve most problems if I invest the necessary effort.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. I can remain calm when facing difficulties.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8. When I am confronted with a problem, I can usually find several solutions.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9. No matter what comes my way, I'm usually able to handle it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I keep working on a task even if I am having trouble.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I can make a positive contribution to any organization.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>12. I can come up with creative ways to solve problems.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13. I can learn from my mistakes so I do not repeat them.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I can concentrate on a task for an extended period of time.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15. I can complete tasks without having to be reminded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I can turn obstacles into positive experiences.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>17. I can improve my performance by practicing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. If there is a problem, I can take the initiative to try to solve it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I can motivate others to work hard.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I can make a greater contribution to the organization if I practice.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please answer the following demographic questions:

Please indicate your gender (please circle one): Male Female

Please indicate your year in school (please circle one): 1 2 3 4 5+ graduate

What is your current age? __________________________

What is your primary instrument? (please circle one)
- Flute
- Bassoon
- Baritone/Euphonium
- Clarinet
- Trumpet
- Tuba
- Saxophone
- French Horn
- Percussion
- Oboe
- Trombone

What is your Major? (please circle one)
- Agriculture
- Business (Accounting, Management, Marketing, etc)
- Computers/Technology
- Education (other than Music Education)
- Engineering
- Fine & Performing Arts (other than Music)
- Humanities (English, Foreign Languages, History, etc)
- Mathematics
- Music (including music education)
- Pre-professional (Law, Medical, Dental, Vet, etc)
- Sciences (Biology, Chemistry, Physics, etc)
- Social Sciences (Psychology, Sociology, Social Work, Communication, etc)
- Theology (Bible, Ministry, Missions, etc)
- Undeclared/Undecided
- Other (please specify)____________________________

THANK YOU!!!
APPENDIX B

INSTITUTIONAL REVIEW BOARD LETTERS
October 9, 2008

Natalie Steele
Department of Music
University of North Texas

RE: Human Subjects Application No. 08337

Dear Ms. Steele:

In accordance with 45 CFR Part 46 Section 46.101, your study titled “The Relationship between collegiate Band Members’ Preferences of Teacher Interpersonal Behavior and Perceived Self-Efficacy” has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed is the consent document with stamped IRB approval. Please copy and use this form only for your study subjects.

No changes may be made to your study’s procedures or forms without prior written approval from the UNT IRB. Please contact Sheila Bourns, Research Compliance Administrator, ext. 3940, if you wish to make any such changes.

The IRB would like to thank you for submitting such a well-put together, thorough application. We appreciate the work you put into your study.

Sincerely,

[Signature]
Patricia L. Kaminski, Ph.D.
Chair
Institutional Review Board

PK:sb

CC: Dr. Debbie Rohwer
Natalie Steele  
Department of Music  
University of North Texas

Institutional Review Board for the Protection of Human Subjects in Research (IRB)  
RE: Human Subject Application #08337

Dear Ms. Steele:

The UNT IRB has received your request to modify your study titled "The Relationship between Collegiate Band Members' Preference of Teacher Interpersonal Behavior and Perceived Self-Efficacy." As required by federal law and regulations governing the use of human subjects in research projects, the UNT IRB has examined the request to include

[Redacted text]

to this study. The modification to this study is hereby approved for the use of human subjects.

Please contact Sheila Bourns, Research Compliance Administrator, at (940) 565-3940, or Boyd Henndon, Director of Research Compliance, at (940) 565-3941, if you wish to make changes or need additional information.

Sincerely,

Patricia L. Kaminski, Ph.D.  
Chair  
Institutional Review Board

PK/3b

CC: Dr. Debbie Rohwer
University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Title of Study: The relationship between collegiate band members' preferences of teacher interpersonal behavior and perceived self-efficacy

Principal Investigator: Natalie Steele, a graduate student in the University of North Texas (UNT) Department of Music.

Purpose of the Study: The purpose of this study is to describe collegiate band members' preferred teacher interpersonal behaviors and perceptions of music self-efficacy and to measure the relationship between preferences of interpersonal teacher behaviors and self-efficacy scores.

Study Procedures: You will be asked to complete two questionnaires, which will be distributed during regular rehearsal time. You will be asked to complete the questionnaires on your own and return them to your director. It will take no more than 6 minutes to complete the questionnaires. This procedure will be done on two separate occasions with at least a week separating the measurements.

Foreseeable Risks: No foreseeable risks are involved in this study, however, participants could experience emotional and/or psychological difficulties resulting from the self-reflection needed for the questionnaire. Any students experiencing difficulties will be referred to the local campus health services/counseling center.

Benefits to the Subjects or Others: The participants may benefit from heightened awareness of teacher behaviors and personal attributions. This knowledge may assist students in becoming more successful in the classroom by raising their awareness of their own self-efficacy and their preferences in teacher behaviors.

Procedures for Maintaining Confidentiality of Research Records: Only general demographic information will be obtained from the questionnaires and names will not be acquired. To ensure confidentiality, consent forms will be stored separate from the questionnaires. There will be no identifying information on the questionnaires to link them to specific consent forms. All records will be kept in a file cabinet in my locked office. No other students or teachers will see the completed questionnaires. The confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Natalie Steele at telephone number [redacted] or the faculty advisor, Dr. Debbie Rohwer, UNT Department of Music, at telephone number [redacted].

Office of Research Services
University of North Texas
Last Updated: August 8, 2007
Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at 940-565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Natalie Steele has explained the study to you through the instructional DVD and provided contact information to you if you have questions or need further information. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of Participant

Signature of Participant

Date

APPROVED BY THE UNT IRB

DATE: 10/6/07

Office of Research Services
University of North Texas
Last Updated: August 9, 2007
REFERENCES


den Brok, P. (2001). *Teaching and student outcomes. A study on teachers' thoughts and actions from an interpersonal and a learning activities perspective*. Utrecht, Belgium: W.C.C.


