THE RELATIONSHIP BETWEEN
INTERPERSONAL COMMUNICATION SKILLS, TEACHING EFFECTIVENESS,
AND CONDUCTING EFFECTIVENESS OF MUSIC EDUCATION STUDENTS

by

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ABSTRACT

The purpose of this study was (a) to determine if there was a significant relationship between the interpersonal communication skills of music education students and teaching effectiveness, (b) to determine if there was a significant relationship between the interpersonal communication skills of music education students and conducting/rehearsal technique, and (c) to determine if there is a significant difference between the conductor and ensemble perception of the conductor’s interpersonal communication skills.

Subjects were 30 music education students who had taken at least one semester of conducting instruction. Subjects completed three 10-minutes micro rehearsals with an ensemble. Each micro rehearsal was videotaped. Upon completion of the third micro rehearsal, members of the ensemble completed the Questionnaire on Teacher Interaction for each subject to determine the subject’s perceived interpersonal communication style profile. Each subject completed the Questionnaire on Teacher Interaction using his/her ideal responses to determine an ideal interpersonal communication style profile. Three judges evaluated videotapes of the first and third micro rehearsal for each subject using the Survey on Teaching Effectiveness to determine teaching effectiveness and the Conductor Observation Form to determine conducting effectiveness.

Data were analyzed using two Two-way Analysis of Variances with Repeated Measures to determine if significant differences existed between interpersonal communication skills, teaching effectiveness, and conducting effectiveness. A quotient
of agreement was calculated to determine the degree of association between ideal interpersonal communication styles and perceived interpersonal communication styles.

Eleven subjects were identified as having helpful/friendly interpersonal communication styles, 11 subjects were identified as having understanding interpersonal communication styles, and 8 subjects were identified as having strict communication styles. Significant ($p \leq .05$) differences were found to exist between interpersonal communication skills, teaching effectiveness, and conducting effectiveness. A low (quotient of agreement = .10) degree of association was found between ideal interpersonal communication styles and perceived interpersonal communication styles.
CHAPTER I

INTRODUCTION

Background of the Problem

One of the many goals of a conductor or music teacher is to communicate effectively with his/her ensemble. Durrant (1994) remarked that the effectiveness of a rehearsal is dependent upon the communication skills of the conductor or teacher of the ensemble. Oberski, Ford, Higgins, and Fisher (1999) break down important communication skills even further, stating that teachers need strong interpersonal communication skills. A review of research in teaching, teacher education, general education, and music education also suggest communication skills; specifically interpersonal communication skills, are a useful variable to study.

According to Wubbels and Levy (1993), the study of interpersonal communication skills is equally as important as the study of the methodological aspects of teacher behavior and teaching style, especially for beginning teachers. “This interpersonal element is vitally important for beginning teachers, and sometimes becomes a prerequisite for their survival. If the quality of the classroom environment does not meet certain basic conditions the methodological aspect loses its significance” (p.xiv).

The responsibility of teaching undergraduate students the methodologies and communication skills needed to become a successful conductor or music teacher is a
Responsibility accepted by university music educators. Durrant (1994) stated that attention to and development of communication skills should be addressed in teacher preparation courses. All students who intend to conduct groups or ensembles must develop effective communication skills. Although many music educators and students agree that communication skills, specifically interpersonal communication skills, are important to music teachers or conductors of ensembles, no music education research to date has specifically studied interpersonal communication skills as they relate to teaching effectiveness or conducting effectiveness.

One way to assess interpersonal communication skills of teachers is through the use of self report and group report interpersonal communication skills behavior assessment tools. The Questionnaire on Teacher Interaction, adapted from the Model of Interpersonal Teacher behavior and developed by Créton and Wubbels (1984), Wubbels, Créton, and Hoomayers (1985), Brekelmans (1989), and Wubbels and Levy (1991), is one such tool. The Questionnaire on Teacher Interaction and the Model of Interpersonal Teacher Behavior are based on the systems perspective on classroom communication and the Leary Model of Interpersonal Behavior. The interpersonal teacher behavior model and evaluation instrument was used in the current effort to study the relationship between interpersonal communication skills, teacher effectiveness and conducting effectiveness. Consequently, it was deemed appropriate to present an overview of the foundational theory of the Model for Interpersonal Teacher Behavior. The following section is a summary of the Model for Interpersonal Teacher Behavior, including a discussion of the systems perspective on classroom communication, the
Leary Model for Interpersonal Behavior, adaptation of the Leary Model to the Model for Interpersonal Teacher Behavior, and the resulting teacher interpersonal communication style profiles of the Questionnaire for Teacher Interaction.

Model for Interpersonal Teacher Behavior

Créton and Wubbels (1984) developed the Model for Interpersonal Teacher Behavior. The Model for Interpersonal Teacher Behavior describes the interpersonal communication skills of teachers in the classroom. The model is two-dimensional and is based on the systems perspective on classroom communication (Wubbels, Créton, & Holvast, 1988) and the Leary system for the interpersonal diagnosis of personality (1957).

Systems Perspective on Classroom Communication

According to Créton, Wubbels, and Hoomayers (1989), understanding of interpersonal communication is contingent upon an understanding of the context in which the interpersonal communication takes place. In the scenario of interpersonal teacher behavior, the context in which interpersonal communication takes place is the classroom. Consequently, an overview of classroom communication, specifically the systems perspective on classroom communication is presented below.

Systems communications theories have been used most often in the context of family therapy (Haley, 1963). However, Wubbels, Créton, and Holvast (1988) reported that systems-communication ideas could be used effectively to identify and describe classroom communication and environments. In the systems perspective, the classroom
environment is viewed as a communication system. The classroom environment is characterized by the teacher-student communication in this system.

It is necessary to become familiar with the individual characteristics of teacher-student communication to fully understand the systems communication perspective on classroom communication. It is also necessary to examine the individual characteristics of teacher-student communication to provide a means for discussing and analyzing interpersonal communication skills in the classroom.

The individual characteristics of teacher-student communication that characterize classroom environment and interpersonal communication are (a) cause and effect, (b) report and command, (c) not being able to ‘not communicate’, (d) symmetrical and complementary interaction, (e) blindness, (f) paradoxical injunctions, and (g) metacommunication. Each characteristic will be discussed individually. A brief definition will be given for each characteristic followed an example as the characteristic relates to a classroom environment or situation.

**Cause and effect.**

Cause and effect is one characteristic of teacher-student communication. The cause of communication is defined as a behavior that elicits a resultant behavior. The effect characteristic of communication is defined as the reactionary resultant behavior elicited by the cause.

The determinant of cause and effect behaviors is typically associated with the interpretation of communication punctuation. “When people punctuate communication sequences they figuratively provide ‘full stops’ (beginnings-ends) and ‘commas’
(pauses) regarding their own ideas and imagine similar punctuation in their communication partner’s messages” (Watzlawick, Beavin, & Jackson, 1967, p. 54). The cause (initial behavior or punctuation in communication) and effect (reactionary behavior or interpretation of punctuation) to the communication is a result of the real and interpreted punctuation between two people.

The cause and effect characteristic of communication also occurs in the classroom between the teacher and student. An example of cause in the classroom would be a teacher delivering a lecture on a particular topic or taking disciplinarian action with accompanying punctuation. The effect in the classroom would be the students’ reactions to the interpretation of the cause or lecture/disciplinarian action and corresponding punctuation.

Often, the cause and effect characteristic of teacher-student communication can be used to study problems in the classroom environment. Teachers and students may experience punctuation and interpretation differences in cause and effect of communication. Consequently, teachers and students disagree about the cause and effect of problems in the learning environment.

The following example describes a classroom atmosphere in which the teacher and students disagree about cause and effect of a problem in the learning environment. A first-year teacher who lacks the disciplinary skills to take control of the classroom or of students who misbehave tries to assert control by grading very harshly and sending attitude reports home to parents. However, the teacher does not change his/her communication patterns in the classroom. The students continue to misbehave and in
some instances their out-of-control behavior elevates. The teacher interprets the cause as the misbehavior of the students and the effect as the harsh grading and attitude reports. The students interpret the cause as the teacher for grading harshly, sending home attitude reports, and not taking control of the classroom and the effect as their misbehavior.

The difference in opinion about problems in the learning environment can also lead to a tendency for either the teacher or student to blame the other for the unproductive classroom environment. As Doyle (1986) reported, teachers tend to blame students for most problems in the classroom, while students tend to blame the problems on the teacher (Wubbels & Levy, 1993). Watzlawick, Beavin, and Jackson (1967) explained the tendency to blame the other person as a difference in interpretation of communication punctuation. In the example above, the teacher clearly blamed the students for misbehaving and the students blamed the teacher for not trying to control the misbehavior.

The content and interpretation of communication punctuation is the cause and effect characteristic of teacher-student communication based on the systems perspective on classroom communication. Problems related to cause and effect in the classroom often arise because of differences in the interpretation of communication punctuation.

Another characteristic of teacher-student communication closely related to cause and effect is the report and command aspects of communication. The report and command aspect of communication is based on the systems communication perspective.
The report and command characteristic of communication is also used to describe classroom environment.

**Report and command.**

The report aspect of communication is the information or content of communication. The command aspect of communication is how the report or information is to be interpreted. According to Ruesch and Bateson (1968) the report and command aspect of any communication can be considered the what and how of communication, respectively. For example, a teacher may be angry with a student for misbehaving. The teacher yells at the student and tells the student to stop talking. When the teacher yells, his/her voice cracks as if he/she is nervous and all the students in the classroom burst with laughter. The report aspect of the communication is to stop talking, but the command aspect of the communication is interpreted as a lack of confidence from the teacher. The teacher’s report did not match the teacher’s command aspect of the communication.

Report and command can be delivered through nonverbal and verbal communication. In the classroom, an example of a nonverbal report might be an assignment written on the blackboard as students enter the room. The verbal report would be telling the students what the assignment is. Nonverbal command examples would be how the teacher stands, dress, facial expression, and even the mere presence or absence of presence when giving an assignment (such as not being present when the students enter the room and see the assignment on the blackboard). Verbal command
examples are vocal inflection, tone of voice, vocal dynamic, choice of words, enunciation, pacing, and others qualities that affect vocal delivery.

According to the systems perspective on communication, report and command is used to describe teacher-student communication in terms of what is being communicated and how the communication is interpreted. Report and command aspects of communication can be verbal or nonverbal.

Command-level interaction or how communication is interpreted is not only referred to in the context of the report or content of communication but can be referred as a separate entity. The presence or absence of command-level interaction is another characteristic of teacher-student communication in the systems communication perspective. The presence or absence of command-level interaction (not communicating) is a characteristic in addition to cause and effect and report and command characteristics.

Not communicating.

Not communicating is an attempt to avoid command-level interaction or an attempt to avoid sending communication about how the information should be interpreted. However, according to Woolfolk and Brooks (1983), all human communication contains command-level interaction. Consequently, it is impossible to avoid a command-level interaction or to not communicate.

Command-level interaction can be intentional or unintentional. Trying to avoid command-level interaction or to not communicate actually sends an unintentional message of how to interpret communication. “An attempt by the teacher not to
communicate may be interpreted by students as the teacher showing a one-sided interest in his or her subject and a corresponding lack of interest in them.” (Wubbels & Levy, 1993, p. 7). Attempting not to communicate with students could also lend itself to an unintentional interpretation of intimidation by students or lack of ability.

The previously discussed characteristics of teacher-student communication (not communicating, report and command, and cause and effect) have dealt with content and interpretation of communication. The following characteristics of teacher-student communication (symmetrical and complementary interaction, blindness, paradoxical injunction, and metacommunication) describe types of behaviors exchanged between teachers and students during communication.

Symmetrical and complementary interaction.

Symmetrical interaction occurs when similar communication or behavior is exchanged between communicating partners. An example of symmetrical interaction in a classroom is a teacher that responds angrily to misbehaving students by yelling. Both communicating partners are engaging in a somewhat oppositional behavior resulting in a symmetrical interaction.

Complementary interaction is when different or contrary behavior is exchanged between communicating partners. A classroom example of complementary interaction would be a teacher that lectures to students who behave by being silent and listening or taking notes. The teacher is active while the students are passive, which is a contrary, complementary interaction between the teacher and students.
Symmetrical and complementary interaction can be part of a positive classroom interaction as well as a negative classroom interaction. Students who respond angrily by misbehaving to a teacher’s angry disciplinarian interaction of yelling are engaging in a symmetrical interaction. Student misbehavior may escalate as the teacher yells even though the interaction is symmetrical. The teacher-student symmetrical interaction has resulted in unwanted student behavior.

Similarly, complementary communication may increase unwanted student behavior. Active or dominant teachers may require an extensive amount of student participation in the classroom. The nature of the active teacher’s classroom may be a complimentary interaction where the students passively take notes while the teacher is active. More teacher dominance is used to require more student participation and the students respond complementarily by becoming more passive. The result is more unwanted student behavior.

Symmetrical and complimentary teacher-student interactions occur when both communicating parties are completely aware, acknowledge, and reciprocate the behaviors of the other communicating parties. Reciprocation can be similar (symmetrical) or contrary (complimentary). Blindness, another characteristic of teacher-student communication in the systems communication perspective describes a lack of acknowledgement or reciprocation of student behavior from the teacher.

Blindness.

Blindness is the phenomenon that someone is completely unaware of what is happening around him or her. Blindness typically occurs in a classroom when the
teacher seems to be unaware of disorder or misconduct happening in the classroom. Blindness can occur as a result of the teacher focusing on one student and ignoring the rest of the class. Also, according to Wubbels and Levy (1993), by not confronting the disorder or misconduct, the teacher actually uses blindness as a method for dealing with misbehavior in the classroom. Eventually equilibrium may develop where the teacher allows a large portion of the class to misbehave at a certain level while the class allows the teacher to focus on the subject with the rest of the class.

Since blindness allows the teacher to ignore certain student behaviors, there is also a lack of attention to classroom environment. Classroom environment, characterized by teacher-student interaction is the foundation of the systems perspective on communication and the Model for Interpersonal Teacher Behavior.

To dictate or demand spontaneous behavior from students may perhaps be considered the opposite of blindness in a classroom environment. The demand of spontaneous behaviors is another characteristic of the teacher-student communication in the systems perspective on communication.

Paradoxical injunction.

A paradoxical injunction is a demand for spontaneous behavior made by one communicator to another communicator or group of communicators. An example of a paradoxical injunction can occur in the classroom may be if a teacher criticizes students for not sharing the teacher's enthusiasm or passion about a particular subject. The teacher demands spontaneous behaviors that reflect enthusiasm or passion about the subject.
A paradoxical injunction can trap the communicator on who the demand is being placed. Using the previous example, the teacher may actually use student attitude and enthusiasm as a determinant in the student’s grade, but the spontaneous enthusiasm (deemed attitude) for the subject cannot be produced on demand after the expectation is placed on the student. Not being able to leave the situation or reason with the teacher, the student is trapped. The teacher gets angry because he/she interprets a lack of action or poor attitude from the students.

Students may also put teachers in paradoxical injunctions. Students may demand that the teacher discipline or run the class in a certain way. Once the demand is made, the teacher will appear uncaring if he or she does nothing, but the attempts to comply may not be taken seriously since the students know they initially demanded the behavior. Once again, both communicators are trapped in an unproductive cycle.

While blindness ignores certain student behaviors and paradoxical injunctions demand particular student behaviors, neither one may be effective in creating a productive classroom environment. However, the following characteristic of teacher-student communication may be more effective at creating a positive classroom environment.

**Metacommunication**

Metacommunication is the discussion of the productivity of communication or exchange. For example, teachers who hold students after class typically discuss why their relationship or exchange was not productive in the classroom. The discussion can
focus on one particular behavior on a certain day or a string of behavior occurring throughout a longer period of time.

Information gained from such metacommunication may inform the teacher and student how to modify their communication in a way that is more productive. A teacher may choose to metacommunicate by holding a student after class who is misbehaving. During the metacommunication, the teacher finds out that the student has a hearing problem and cannot hear the teacher because he/she is seated at the back of the classroom. The teacher can move the student to the front of class where he/she does not misbehave because he/she can now hear the teacher. The metacommunication resulted in a more productive way for the teacher and student to communicate in the future. The student is now in the front of the class and the teacher does not have to respond to behavior problems by the student.

**Summary**

Cause and effect, report and command, not communicating, symmetrical and complementary interaction, blindness, paradoxical injunctions, and metacommunication are characteristics of teacher-student communication. The characteristics describe a classroom environment from the systems-communication perspective.

The systems-communication perspective is a useful and effective way to describe teacher-student communication in the classroom. “In its emphasis on report and command-level messages, the systems’ perspective strongly invites us to analyze subliminal, non-verbal teacher behaviors, or the ‘style’ over the substance” (Wubbels & Levy, 1993, p. 12).
The study of the systems' perspective of communication in the classroom has resulted in characteristics of healthy classroom communication. According to Wubbels & Levy (1993) healthy classroom communication involves the following:

1. Send consistent report and command messages
2. Communicate more in a report than command-based manner
3. Are flexible; they’re open to change their communication patterns
4. Behave according to what the situation calls for, rather than force a change in the context
5. Do not exhibit pathological extremes – they seem moderate in their communication style
6. Agree with their partners about punctuations (beginnings, ends, pauses)
7. Understand how they are being perceived by their partners
8. Are able to change their communication style through metacommunication (p. 11)

The systems-communication perspective is one of the foundational concepts behind the Model for Interpersonal Teacher Behavior and the Questionnaire on Teacher Interaction used in the present study. Another foundational concept is the Leary Model for Interpersonal Teacher Behavior. The following section will provide a brief description of the Leary Model for Interpersonal Behavior, the adaptation of the Leary model into the Model for Interpersonal Teacher Behavior, and a description of the teacher interpersonal communication style profiles of the Model for Interpersonal Teacher Behavior.
Leary Model for Interpersonal Behavior

The Model for Teacher Interpersonal Behavior and the Questionnaire on Teacher Interaction used in the present study was adapted from a theory and model developed by Leary (1957). The theory used in Leary’s (1957) model was that avoidance of anxiety, reduction of fear, and maintenance of self-esteem are forces that drive human behavior. Consequently, people choose communication behaviors consciously or unconsciously to reduce anxiety or increase self-esteem. If the communication behaviors are successful at reducing anxiety, fear, or increasing self-esteem, the behaviors are repeated. The result of the repeated behaviors is a communication behavior or pattern, which Leary (1957) referred to as the communicator’s interpersonal communication behavior or style. The interpersonal communication style was the subject of Leary’s (1957) Model for Interpersonal Behavior.

The Leary Model for Interpersonal Behavior is a two-dimensional model that describes and codes interpersonal behavior. Since Leary was a psychologist, the model is based on data from analyses of a variety of dialogues in clinical and other situations. The data were coded for different kinds of interpersonal behavior. The initial analysis yielded sixteen categories of interpersonal behaviors, which were eventually reduced to eight categories of interpersonal behavior. The eight interpersonal behaviors were arranged in a two-dimensional axis and are the interpersonal behaviors adapted to form the Model for Interpersonal Teacher Behavior used in the present study.
The Proximity dimension is one dimension of the Leary Model for Interpersonal Behavior. Wubbels and Levy (1993) define the Proximity dimension as “...the degree of cooperation or closeness between those who are communicating” (p. 14). Leary (1957) used the terms affection and hostility to label and define extreme interpersonal behaviors at the ends of the Proximity dimension axis of the two-dimensional model. An affectionate communicator is one who is very cooperative, while someone who is hostile is more oppositional in communication.

The Influence dimension is the remaining dimension of the Leary Model for Interpersonal Behavior. The Influence dimension describes the frequency of communication and the individual controlling the communication. Leary (1957) labeled the extreme ends of the influence dimension dominance and submission. One who often controls communication is considered dominant and one who lacks control of communication is labeled submissive.

The Leary Model for Interpersonal Behavior was found to be a useful and appropriate model to adapt to the Model for Interpersonal Teacher Behavior and Questionnaire on Teacher Interaction for many reasons. According to Lonner (1980), the Leary Model for Interpersonal Behavior is a model that has been used throughout the world to describe and measure interpersonal behavior or communication. Researchers involved in adapting the Leary Model to the Model for Interpersonal Teacher Behavior felt that world-wide use and acceptance of Leary’s model provided a strong theoretical background and foundation from which they could adapt the model to the classroom (Wubbels & Levy, 1993).
Use of the Leary model in many fields, especially education, provided further evidence for support and usefulness of the Leary model in the Model for Interpersonal Teacher Behavior. For example, Wubbels and Levy (1993) reported specifically that the Proximity and Influence dimensions from the Leary model are accepted terms used by many researchers in various fields to describe human interaction. Slater (1962) used the Proximity and Influence dimensions to describe pedagogical relationships in the classroom, while Dunkin and Biddle (1974) used the dimensions to study teacher’s influence on classroom events. Both researchers corroborated the usefulness of the Proximity and Influence dimensions in their respective research. Consequently, the Proximity and Influence dimensions from the Leary model were found by the researchers studying interpersonal skills in the classroom to be appropriate and useful in the creation of the Model for Interpersonal Teacher Behavior.

The Leary Model for Interpersonal Behavior was also found to be an appropriate theoretical framework to adapt to the Model for Interpersonal Teacher Behavior for reasons other than the previous research in various fields citing its usefulness. The following section will address the criteria set by researchers involved in the adaptation of the Model for Interpersonal Teacher Behavior to be of importance in adapting a theoretical framework.

Adaptation of the Leary Model

Researchers wanted to make sure the theoretical foundation of the Leary model met certain requirements. Adherence to specific requirements would ensure the usefulness and effectiveness of the Leary Model as a foundation for the Model for
Interpersonal Teacher Behavior. According to Wubbels and Levy (1993), the Leary Model for Interpersonal Behavior was determined to be an appropriate theoretical framework for the Model for Interpersonal Teacher behavior. According to specific requirements determined by researchers, the Model for Interpersonal Teacher Behavior adapted from the Leary Model for Interpersonal Behavior would:

1. Enable educators to observe and analyze interpersonal teacher behavior
2. Provide a basis for instrument development to gather data on interpersonal behavior
3. Provide a ‘language’ to describe the relationship between students and teachers
4. Help educators become aware of the systems communication perspective in the classroom...This would enable us to understand the effects which teachers and students have on each other’s behavior
5. Facilitate teacher development based on both teaching competencies and personality
6. Explain the relationship between short-term ‘molecular’ teacher behavior and long-term communication style (p. 13)

Upon determination that the Leary model was an appropriate theoretical foundation for the Model for Interpersonal Teacher Behavior, researchers from the Netherlands and United States adapted the Leary Model of Interpersonal Behavior to form the Model for Interpersonal Teacher Behavior. The Leary two-dimensional model was used in the adaptation to the Model for Interpersonal Teacher Behavior. Just as the
Leary Model of Interpersonal Behavior dimensions are labeled Proximity and Influence, so too are the dimensions in the Model for Interpersonal Teacher Behavior.

The Proximity dimension in the Model for Interpersonal Teacher Behavior describes the degree of cooperation in teacher-student communication. Leary (1957) labeled the opposite ends of this dimension as affection and hostility. The Model for Interpersonal Teacher Behavior adapted the Leary Model and labeled the extreme ends of the Proximity dimension as cooperative and oppositional. Teachers with high Proximity are viewed as more cooperative, while teachers with low Proximity are viewed as less cooperative and more oppositional in the Model for Interpersonal Teacher Behavior.

Researchers of the Model for Interpersonal Teacher Behavior also adapted the Influence dimension from Leary Model for Interpersonal Behavior. The Influence dimension of the teacher model describes how the teacher controls communication with students. Leary (1957) labeled the extreme ends of this axis as dominant and submissive. The Model for Interpersonal Teacher Behavior also uses the terms dominant and submissive to describe the Influence dimension. An extremely dominant teacher may tend to have most of the control in teacher-student communication. This teacher may determine when students talk, how long, and for what purpose. A submissive teacher would tend to have less control in teacher-student communication. A submissive teacher may let students blurt out questions or speak without receiving permission to do so.
The Leary Model for Interpersonal Behavior was further adapted by creating eight teacher communication style profiles using the Proximity and Influence dimensions from the Leary model. Each profile describes whether the teacher is cooperative or oppositional on the Proximity dimension and dominant or submissive on the Influence dimension. According to Wubbels and Levy (1993), one dimension is more dominant than the other dimension in a teacher communication style profile. Consequently, the eight teacher communication style profiles are defined by which dimension (Proximity or Influence) is more dominant and which end (high or low) of the dimensions the teacher communication style is located.

The following section will discuss each of the eight teacher communication style profiles of the Model for Interpersonal Teacher Behavior. The teacher communication style profiles are derived from the Questionnaire on Teacher Interaction. The Questionnaire on Teacher Interaction will be discussed further in chapters two and three; however, the teacher communication style profiles are important since they are used in the present study as the independent variable from which group membership is identified. Each profile will be defined in terms of Proximity and Influence and includes a list of teacher behaviors that may be associated with a particular communication style.

**Teacher Communication Style Profiles**

**Leadership.**

Teachers with a leadership communication style are dominant on the Influence dimension and cooperative on the Proximity dimension. In the leadership profile, the
dominant dimension prevails over the cooperative dimension, meaning that even though a teacher displays both dominant and cooperative aspects, the dominant aspects are more prevalent in the classroom. The following is a list of behaviors that may be associated with teachers having a leadership communication style (Wubbels & Levy, 1993, p. 16).

Notice what’s happening
Set tasks
Structure the classroom situation
Organize
Give orders
Determine procedure
Explain
Hold the attention
Helpful/friendly.

Teachers with a helping friendly communication style are also dominant on the Influence dimension and cooperative on the Proximity dimension. These teachers differ from the leadership communication style teacher in that the cooperative dimension prevails over the dominant dimension in the classroom. The following is a list of behaviors associated with teachers having a helping friendly communication style (Wubbels & Levy, 1993, p. 16).

Assist

Behave in a friendly or consistent manner
Show interest
Join
Be able to make a joke
Inspire confidence and trust

**Understanding.**

Teachers with an understanding communication style are submissive on the Influence dimension and cooperative on the Proximity dimension. The cooperative dimension prevails over the submissive dimension in the classroom. The following is a list of behaviors associated with teachers having an understanding communication style (Wubbels & Levy, 1993, p. 16).

Listen with interest
Look for ways to settle differences
Show confidence and understanding
Empathize
Be patient
Be open
Accept apologies

**Student responsibility/freedom.**

Teachers who have the student responsibility/freedom communication style are also submissive on the Influence dimension and cooperative on the Proximity dimension. However, in the student responsibility/freedom communication style, the submissive dimension prevails over the cooperative dimension in the teacher’s
communication style. The following is a list of behaviors associated with teachers having a student responsibility/freedom communication style (Wubbels & Levy, 1993, p. 16).

  - Give opportunity for independent work
  - Give freedom and responsibility
  - Wait for class to let off steam
  - Approve of something

  **Uncertain.**

Teachers with an uncertain communication style are submissive on the Influence dimension and oppositional on the Proximity dimension. The submissive dimension characterizes the communication style over the oppositional dimension. The following is a list of behaviors associated with teachers having an uncertain communication style (Wubbels & Levy, 1993, p. 16).

  - Keep a low profile
  - Wait and see how the wind blows
  - Admit one is in the wrong
  - Apologize

  **Dissatisfied.**

A dissatisfied communication style is also submissive on the Influence dimension and oppositional on the Proximity dimension. The oppositional dimension prevails over the submissive dimension in the classroom. The following is a list of
behaviors associated with teachers having a dissatisfied communication style (Wubbels & Levy, 1993, p. 16).

Wait for silence
Show dissatisfaction
Criticize
Consider pros and cons
Look glum
Keep quiet
Question
Admonishing.

The admonishing communication style is dominant on the Influence dimension and oppositional on the Proximity dimension. In the classroom, the oppositional dimension prevails over the dominant dimension. The following is a list of behaviors associated with teachers having an admonishing communication style (Wubbels & Levy, 1993, p. 16).

Get angry
Express irritation and anger
Take pupils to task
Correct
Forbid
Punish
A strict communication style is also dominant on the Influence dimension and oppositional on the proximity dimension. The strict communication style differs from the admonishing communication style because the dominant dimension is prevalent over the oppositional dimension in the classroom. The following is a list of behaviors associated with teachers having a strict communication style (Wubbels & Levy, 1993, p. 16).

- Keep reigns tight
- Get class silent
- Exact norms and set rules
- Check
- Maintain silence
- Judge
- Be strict

The teacher communication style profiles describe a teacher’s interpersonal communication style or manner in which he/she communicates with students. The profiles are derived from the Model for Interpersonal Teacher Behavior. Each profile is defined by its location on the Proximity and Influence dimension of the two-dimensional model.

Summary

The systems-communication perspective provides a way for researchers and educators to look beyond the content of communication and discuss the meaning and
interpretation of communication in the classroom. The systems-communication perspective emphasizes that the manner in which a teacher delivers content is as important as the content.

The Model for Interpersonal Teacher Behavior provides a way to describe teacher interpersonal communication in the classroom from the systems-communication perspective. The Interpersonal Teacher Behavior Model emphasizes both teacher proximity and teacher influence and provides a foundation from which to measure teacher interpersonal communication in the classroom using the Questionnaire on Teacher Interaction.

The Questionnaire on Teacher Interaction is an evaluation instrument from the student perspective designed to gather information regarding the teacher's interpersonal communication style. The Questionnaire on Teacher Interaction was designed in conjunction with the Model for Interpersonal Teacher Behavior using both the systems communication perspective and the Leary Model for Interpersonal Behavior. Upon completion of the Questionnaire on Teacher Interaction, a communication style profile can be determined. The present study will use the communication style profile to define group membership. The degree of association between interpersonal skills as defined by the communication style profile, teaching effectiveness, and conducting effectiveness will also be investigated.

Chapter two will include a review of literature using the Questionnaire on Teacher Interaction in educational research. Chapter three will provide a detailed
description of the Questionnaire on Teacher Interaction along with other evaluation
instruments to be used in the present study.

**Need for the Study**

One mission of university music educators is to produce highly effective music
teachers and conductors. Strong interpersonal communication skills are thought to be an
important quality music teachers and conductors should possess to be effective (Oberski
et al., 1999). Music education researchers have studied both verbal and nonverbal
communication behaviors of music teachers and conductors at the preservice, novice,
and expert levels (Durrant, 1994; Madsen & Duke, 1993). However, to date, no music
researcher has specifically studied the interpersonal communication skills of
undergraduate or graduate music students as measured by the Questionnaire on Teacher
Interaction. The Questionnaire on Teacher Interaction is a valid and reliable instrument
designed specifically to determine teacher interpersonal communication styles. An
investigation of interpersonal communication skills, teaching effectiveness, and
conducting effectiveness could be highly effective using such an instrument to
determine interpersonal communication styles of undergraduate and graduate
conductors associated with high teaching effectiveness and conducting effectiveness
scores. Conclusion of interpersonal communication skills research could be most
valuable to university music educators and other teacher trainers in the design and
instruction of undergraduate and graduate conducting curriculum.
Purpose of the Study

The purpose of this study was (a) to determine if there was a significant difference between the interpersonal communication skills of music education students and teaching effectiveness, (b) to determine if there was a significant difference between the interpersonal communication skills of music education students and conducting/rehearsal technique, and (c) to determine if there is a significant relationship between the conductor and ensemble perception of the conductor’s interpersonal communication skills.

Research Questions and Research Hypotheses

1. Does a significant relationship exist between the interpersonal communication skills of student conductors and teaching effectiveness?

2. Does a significant relationship exist between teaching effectiveness and repeated micro rehearsal episodes? A micro rehearsal episode is a five to ten minute rehearsal in which the student conductor will rehearse a piece of music.

3. Do interpersonal communication skills of student conductors significantly affect conducting effectiveness in repeated micro rehearsal episodes?

4. Does a significant relationship exist between the interpersonal communication skills of student conductors and conducting effectiveness?

5. Does a significant relationship exist between conducting effectiveness of student conductors and repeated micro rehearsal episodes?

6. Do interpersonal communication skills of student conductors significantly affect conducting effectiveness in repeated micro rehearsal episodes?
7. Does a significant difference exist between the student conductor and ensemble perception of student conductor interpersonal communication skills?

**Primary Hypothesis**

$H_{01}$ There is no significant ($p \leq .05$) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

**Secondary Hypotheses of $H_{01}$**

$H_{01,1}$ There is no significant ($p \leq .05$) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

$H_{01,2}$ There is no significant ($p \leq .05$) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by situation.

$H_{01,3}$ There is no significant ($p \leq .05$) interaction effect of teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.
Primary HO₂ Hypothesis

HO₂ There is no significant \((p \leq .05)\) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

Secondary Hypotheses of HO₂

HO₂.1 There is no significant \((p \leq .05)\) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

HO₂.2 There is no significant \((p \leq .05)\) difference in conducting effectiveness as measured by the Conductor Observation Form by situation.

HO₂.3 There is no significant \((p \leq .05)\) interaction effect of conducting effectiveness scores as measured by Conductor Observation by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.

Primary HO₃ Hypothesis

HO₃ There is no moderate (quotient of agreement ≥ .50) degree of association between self-reported interpersonal communication style and interpersonal communication
Scope and Limitations

This study was limited to music students enrolled in MUS 371 (Intermediate Conducting) in the Spring, 2003, semester at the University of Arizona in Tucson, Arizona or to those students who had taken at least one semester of a previous undergraduate or graduate conducting course. The demographics of the subjects primarily represent the Southwest region of the United States. Subjects were randomly assigned to groups representing interpersonal communication styles; however, subjects were still members of an intact class.

Definition of Terms

Throughout this study, the terms listed below will be defined as follows:

**Admonishing:** Teacher communication style characterized as oppositional on the Proximity dimension and dominant on the Influence dimension (OD).

**Dissatisfied:** Teacher communication style characterized as oppositional on the Proximity dimension and submissive on the Influence dimension (OS).

**Helpful/Friendly:** Interpersonal communication style characterized as cooperative on the Proximity dimension and dominant on the Influence dimension (CD).

**Influence:** The degree of influence the conductor/teacher has on the ensemble/class communication; reported as either dominant or submissive.

**Interpersonal Communication Style:** The manner in which the conductor/teacher interacts with the ensemble/class.
**Interpersonal Communication Style Profile:** The teacher communication style that corresponds to the subject’s highest score on the Questionnaire for Teacher Interaction.

**Leadership:** Interpersonal communication style characterized as dominant on the Influence dimension and cooperative on the Proximity dimension (DC).

**Micro Rehearsal:** A five to ten minute rehearsal in which the subject rehearses a piece of music for the designated time period.

**Proximity:** The degree of closeness between the conductor/teacher and ensemble/class; reported as either cooperative or oppositional.

**Strict:** Teacher communication style characterized as dominant on the Influence dimension and oppositional on the Proximity dimension (DO).

**Student Responsibility/Freedom:** Teacher communication style characterized as submissive on the Influence dimension and cooperative on the Proximity dimension (SC).

**Uncertain:** Teacher communication style characterized as submissive on the Influence dimension and oppositional on the Proximity dimension (SO).

**Understanding:** Teacher communication style characterized as cooperative on the Proximity dimension and submissive on the Influence dimension (CS).
CHAPTER II

RELATED LITERATURE

In this review of literature, a survey of studies related to (a) interpersonal communication skills of teachers investigated using the Questionnaire on Teacher Interaction and (b) music teaching effectiveness specifically related to conducting are presented. The review of literature related to interpersonal communication skills of teachers covers literature regarding the relationship between teacher interpersonal communication skills and the following: cognitive and affective student outcome, teacher characteristics, teacher experience and changes during the professional career, non-verbal behavior, language and cultural factors, and teacher reactions and coping with difficult situations. Teacher development and interpersonal communication skills studies are also presented. A brief overview of the evolution of research regarding teacher effectiveness is presented at the onset to provide a context in which the study of teacher interpersonal communication skills is appropriate. Studies covering conducting and music teaching effectiveness explore verbal, nonverbal, and personal skills in music education research. A summary appears at the end of each section to emphasize patterns of thought and to substantiate rationale for the present study.

Evolution of Teacher Effectiveness Research

According to Borich (1988), the search for ‘the effective teacher’ has been a focus for more than a century. Effective teachers of the 1800’s were thought to be good
people who were hardworking and devoted to children. Organization, discipline, and the ability to be authoritative were the only special skills seen as necessary to be an effective teacher. In the early 20th century, thousands of studies were conducted to determine which personality traits would predict teaching effectiveness (Getzels & Jackson, 1963). By the 1960’s and 1970’s research on teacher behavior and teaching style became important in the study of teaching effectiveness. For example, Flanders (1970) researched direct and indirect teaching styles.

According to Wubbels and Levy (1993), the research of the 1960’s and 1970’s on teacher effectiveness focused primarily on the methodological aspects of teaching styles. The methodological research, also termed process-product research, produced effective technical strategies for effective teaching in the class. However, the process-product research would not describe all teacher behaviors in a classroom.

According to Wubbels and Levy (1993) and the systems communication perspective of the Model for Interpersonal Teacher Behavior previously discussed in Chapter I, all communication establishes a command level interaction (how interaction takes place) and a report level interaction (what is being communicated). The process-product research explored the methodology of teachers or the report level of teacher-student interaction. The process-product research did not investigate the command level of teacher-student interaction or how communication was taking place. Research regarding teacher interpersonal skills investigates the command level interaction of teacher-student communication and is the focus for the present study.
The following section will review literature in which the Questionnaire on Teacher Interaction was used to gather data to study teacher interpersonal skills. Studies regarding teacher interpersonal skills and the following variables are presented: cognitive and affective student outcome, teacher characteristics, teacher experience and changes during the professional career, non-verbal behavior, language and cultural factors, and teacher reactions and coping with difficult situations. Teacher development and interpersonal communication skills studies are also presented.

A brief review of teacher immediacy research is also presented as it relates to student outcomes. According to Den Brok (2001), research regarding teacher immediacy provides further support for the importance of the influence and proximity dimensions of the QTI on student outcome.

**Teacher Interpersonal Communication Skills**

Research regarding interpersonal communication skills and student outcome distinguishes between cognitive and affective student outcome (Den Brok, 2001). Cognitive student outcomes have been positively correlated to both student perception of teacher influence and proximity. Teacher influence is the dimension of the Questionnaire on Teacher Interaction (QTI) describing who is controlling communication and the frequency of communication. The proximity dimension of the QTI describes the degree of cooperation of the teacher.

**Cognitive student outcome.**

Brekelmans (1989) studied teacher influence using the QTI and cognitive student outcomes. Results on a Physics test were used as the measure of cognitive
student outcome. Teachers who rated higher on the influence dimension of the QTI had students who had higher cognitive student outcomes or higher outcomes on the Physics test.

Similar results were found in studies involving other subjects. Goh (1994) used primary Mathematics classes in Singapore and Henderson (1995) used Biology classes to study teacher influence using the QTI and cognitive student outcomes. Both researchers found a positive correlation or regression coefficients for the particular subscale of leadership on the influence dimension of the QTI and cognitive student outcomes.

The proximity dimension has also been studied in correlation to cognitive student outcomes. Goh (1994), Henderson (1995), and Evans (1998) each found a positive correlation for particular scales in the proximity dimension and cognitive student outcome. Scales in the proximity dimension that positively correlated to cognitive student outcomes were helpful/friendly, understanding, and student responsibility/freedom.

Some researchers have found other degrees of association between proximity and cognitive student outcomes. Rawnsley (1997) found that lower scores on the proximity dimension of the QTI or more opposition led to lower cognitive student outcome, but did not find that cooperative behavior or higher proximity scores led to higher cognitive student outcomes.

Further research in teacher interpersonal communication skills and cognitive student outcome has resulted in implications that the type of measure used to determine
cognitive student outcome may have an effect on the degree of association. Levy, Wubbels, and Brekelmans (1992), Van Amelsvoort, Bergen, Lamberigts, and Setz (1993) and Van Amelsvoort (1999) used report card grades as a measure of cognitive student outcome and found no relationship between teacher proximity on the QTI and report card grades.

From the various studies, it has been found that teachers who tended to control communication in the classroom and the frequency of communication (Influence dimension) to a high degree positively affected cognitive student achievement. Similarly, teachers who tended to behave in a highly cooperative manner toward students tended to have students with higher achievement.

**Teacher immediacy and cognitive student outcome.**

Research in teacher immediacy provides further support for the importance of the proximity dimension of the QTI and cognitive student outcome. “Immediacy is defined as ‘that communication which enhances closeness to one another’ and includes behaviors that indicate approachability, signal availability for communication and increase sensory stimulation and interpersonal warmth and closeness” (Den Brok, 2001, p. 142).

Gorham and Zakahi (1990) studied the teachers of 35 intact education, business, and liberal arts classes. Teacher experience ranged from 1 – 11 or more years. Twenty-one teachers were male and 14 were female. Students of the 35 teachers completed a questionnaire using a five-point Likert scale ranging from Never (0) to Very Often (4). Seventeen items on the questionnaire referred to verbal teacher immediacy behaviors.
and 10 items referred to nonverbal teacher immediacy behaviors. Cognitive outcomes were measured by asking students to report on a scale of 0-9 (a) how much they had learned in the class and (b) how much could they have learned if they had the “ideal” instructor. A learning loss score was calculated by subtracting how much the student had learned from how much the student could have learned. Gorham and Zakahi (1990) reported a strong correlation between teacher immediacy behaviors and cognitive student outcomes.

Sanders and Wiseman (1990) used 952 college student volunteers from two western universities in a study to investigate teacher immediacy and cognitive, affective, and behavioral learning. The sample ethnicity profile was 65.6% white, 14.1% Asian, 14.2% Hispanic, and 3.7% Black. The investigators used these particular groups because they are the majority of ethnic groups found in American colleges. Each participant was asked to complete a questionnaire rating one of their teachers on specific verbal and nonverbal immediacy behaviors defined a priori by the researchers. Cognitive learning was measured by asking the students to rate on scale of 0-9 how much they had learned in the particular class. The researchers reported a significant positive correlation between teacher immediacy and cognitive student outcomes. “For all four ethnic groups, seven teacher behaviors were significantly related to perceived cognitive learning: (a) encourages students to talk, (b) uses humor, (c) has discussions with students outside class, (d) solicits alternative viewpoints, (e) praises student work, (e) does not use a dull voice, and (f) smiles at students” (p. 347).
Neuliep’s (1995) study investigated cognitive student outcomes and teacher immediacy of 77 African-American University students and 113 Euro-American university students. The study measured teacher immediacy and cognitive student outcomes using methods similar to those of Gorham and Zakahi (1990). The researcher reported a strong positive relationship between teacher immediacy and cognitive student outcome in both groups; however, there was a significant negative correlation between the Euro-Americans perception of immediacy and the learning loss score. Neuliep (1995) suggested that Euro-American students believed they would have learned less in a class with a less immediate teacher. Similar results were not found for African American students.

Results of research in teacher immediacy and cognitive student outcome are similar to the results of research using the QTI and cognitive student outcome. Teachers who had more cooperative behaviors or more immediate behaviors positively affected student outcome. Since teacher immediacy and the proximity dimension of the QTI are closely related (Den Brok, 2001), teacher immediacy research provides further support for teacher proximity of the QTI positively affecting student outcome.

Affective student outcome.

Studies that have investigated teacher interpersonal communication skills using the QTI and affective student outcome are typically context-specific and report a positive correlation of both influence and proximity dimensions of the QTI on affective student outcomes. For example, Brekelmans (1989) used Physics as the context for the study. The researcher found that the higher the Physics teachers rated on the proximity
dimension of the QTI, the higher the students rated in the affective outcome of motivation.

Other researchers have also reported relationships between specific teacher interpersonal communication skills on the proximity dimension and affective student outcomes. Derksen (1994), Van Amelsvoort (1993) (1999), and Van Amelsvoort et al. (1993), found the teacher interpersonal behaviors of helpful/friendly and understanding from the proximity dimension of the QTI to be positively associated with affective measures of student pleasure, confidence, effort and relevance.

From the studies regarding teacher proximity and affective student outcomes, it has been found that the higher the teacher is perceived on the proximity dimension the higher the affective student outcome. Studies in affective student outcome and interpersonal teacher behavior tend to be subject specific and measure outcomes such as student motivation, confidence, and effort.

**Teacher immediacy and affective student outcome.**

Just as in the area of cognitive student outcome, teacher immediacy research also supports a strong, direct, and positive degree of association between immediacy and affective student outcomes. Sanders and Wiseman (1990) found six immediacy behaviors significantly related to affective learning. Three dimensions were used to measure affective learning. The first dimension was affect toward the course in general, the second dimension was affect toward course content, and the third dimension was affect toward the behaviors, practices, and theories recommended in the course. Each dimension was assessed by four evaluative semantic differential scales: good/bad,
worthless/valuable, fair/unfair, and negative/positive. The immediacy behaviors found to be significantly related to affective learning were: (a) using humor, (b) asking students about assignments, (c) soliciting viewpoints from students, (d) praising student work, (e) maintaining eye contact, and (f) smiling at students. Sanders and Wiseman (1990) also reported that the nonverbal teacher behaviors of vocal expressiveness, smiling, and eye contact had the greatest effect on student learning across the four cultures used in the study, while the verbal teacher behaviors of using humor, soliciting student views, and praising student work had the greatest pancultural effect on student learning.

Neuliep (1995) used similar methods as that of Sanders and Wiseman (1990) to measure affective student outcome and teacher immediacy. Neuliep (1995) also asked students to rate the likelihood of (a) engaging in the behaviors taught in the class and (b) enrolling in another course taught by the same instructor. Since few studies had been conducted cross-culturally regarding teacher immediacy and affective student outcomes, reliability for immediacy measures and affective measures were calculated. Neuliep (1995) determined that both immediacy measures and affective outcome measures were reliable and appropriate for his study. After data analysis, the researcher reported significant relationships between immediacy and affective outcomes for both groups. Significant positive relationships were also found between immediacy, attitudes about the course content, and intentions to enroll in another class with the same teacher. There was also a significant positive relationship between immediacy and attitudes about the course for the Euro-American group only.
Comstock, Rowell and Bowers (1995) specifically studied nonverbal teacher immediacy. The researchers predicted that high and low levels of nonverbal teacher immediacy would negatively effect affective student outcome while a moderate level of nonverbal teacher immediacy would produce the highest affective student outcome. Unlike previous teacher immediacy studies mentioned, the investigators manipulated teacher immediacy to determine its effects on affective student outcome.

Three treatment groups received a 10-minute session with either a low, moderately-high, or excessively-high level of teacher immediacy. Each level of teacher immediacy included variable levels of proxemics, haptics, vocalics, kinesics, eye contact, chronemics, and physical appearance. Affective learning outcome measures addressed motivation, affect toward content, and affect toward the teacher. A multivariate analysis of variance was used to determine that immediacy manipulation in terms of contrast of levels was successful. Comstock, Rowell, and Bowers (1995) reported an inverted U relationship between teacher immediacy and affective student outcome. Specifically, a moderately-high level of nonverbal teacher immediacy is more effective with regards to affective student outcome than either a low level of nonverbal teacher immediacy or a excessively high level of nonverbal teacher immediacy.

McCroskey, Richmond, Sallinen, Fayer, and Barraclough (1995) also studied nonverbal teacher immediacy but included subjects of four different cultures in their research. The investigators wanted to find out specifically, which nonverbal immediacy behaviors effected affective student outcomes and whether the behaviors were consistent across cultures. Subject from Australian, Finnish, Puerto Rican, and
American cultures were used for the study. Questionnaires regarding teacher immediacy and affective student outcomes were administered in each subject’s native language to avoid translation problems. Alpha reliabilities were calculated for the questionnaire in each language and each culture was found to be appropriate for the study. Results of analyses of variance supported a significant difference between teacher immediacy and attitudes toward the teacher (\( F = 32.49, p < .01 \)) and willingness to enroll in another class with the same teacher (\( F = 4.02, p < .01 \)) among subjects in all cultures involved in the study. Nonverbal immediacy behaviors that contributed to high affective outcomes were vocal variety, relaxed body position, eye contact with the students, and smiling at the students.

Gorham and Zakahi (1990) studied teacher immediacy and affective student outcomes as well as including questions related to teacher affect toward teaching and immediacy. A significant relationship was found between teacher immediacy and affective student outcomes; however, teacher affect toward teaching was not related to immediacy.

Research in teacher immediacy and affective student outcome has included several cultures including Australian, Finnish, Puerto Rican, and American cultures. Researchers reported that a high degree of teacher immediacy, either verbal or nonverbal, was positively correlated to higher student affective outcomes.

Several studies involving teacher interpersonal communication skills have specifically explored teacher-related outcomes such as teacher satisfaction, teacher experience and beliefs, non-verbal behavior, interpersonal communication skills.
throughout teacher career, teacher reaction, and coping with difficult situations. The following section will include an overview of related literature regarding teacher interpersonal skills, the QTI, and teacher-related outcomes.

**Teacher-related outcome.**

Wubbels, Brekelmans, and Hermans (1987) used 66 Physics classes to investigate the interpersonal communication skills of teachers and various teacher-related outcomes or teacher characteristics. The teacher characteristics being investigated were job satisfaction, experience, age, self-esteem, attitudes toward innovations, the type of interaction they prefer to have with student, and their class goals. Age and experience was significantly related to teacher interpersonal communication style. Job satisfaction was not significantly related to teacher interpersonal communication style, but there were differences between particular interpersonal communication styles and job satisfaction. Self-esteem was the only other teacher characteristics found to have an impact on teacher interpersonal communication style. Teachers reporting high self-esteem tended to be either highly cooperative or dominant.

Another teacher related outcome regarding interpersonal communication skills studied by researchers is the change of teacher interpersonal communication skills throughout the career. Data from 573 teachers and approximately 25,000 students from secondary schools in the Netherlands were analyzed (Brekelmans & Créton, 1993). Scores from the Proximity and Influence dimensions of the QTI were gathered for each teacher using both the teacher’s ideal response and student responses. The higher the
score on a dimension, the more that teacher was rated as dominant or cooperative. The teachers were divided into six categories regarding experience: (a) student teachers, (b) teachers with one to five years of experience, (c) teachers with six to ten years of experience, (d) teachers with 11-15 year of experience, (e) teachers with 16-20 years of experience, and (f) teachers with more than 20 years of experience.

According to Brekelmans and Créton (1993), the teachers’ and students’ perceptions on the Influence and Proximity dimensions were lower than the teachers’ ideals. Generally it seemed that teachers tried to become stricter and demonstrate more leadership as their career progressed. However, teachers did not become more friendly or understanding until the very later stages of their career. Researchers speculated that the tendency to become stricter demonstrate more leadership later in the career may be because student teachers and young teachers have not held a leadership role of any significance or for a large amount of time in their young career.

The remaining body of literature regarding teacher interpersonal communication skills investigates language and cultural factors regarding student perception of teacher interpersonal communication skills. The following section will present studies involving Asian-American, Hispanic-American, Dutch, Asian, and American cultures of teachers and students.

Language and cultural factors.

Levy, Wubbels, Brekelmans, and Morganfield (1997) studied the language and cultural factors in the students’ perceptions of teacher interpersonal communication style. Researchers administered the QTI to 117 Latinos, 111 Asians, and 322 students.
from the United States. The researchers reported a significant difference in the amount of dominance and cooperation their students perceive using chi-square results. A significant degree of association was also reported between cultural background and both the Influence and Proximity dimensions on the QTI. More specifically, Latin American student perceived their teachers as more dominant than other culture groups if Spanish was the primary language in their home. Also, students who were members of a class that was more culturally diverse tended to view their teachers as much more dominant or cooperative than students whom were members of classes than were mostly American students. Researchers suggest that cultural difference in immediacy behaviors, individualism-collectivism, power distance, status, and authority, and context and socialization may influence student perception of teacher communication style.

Den Brok, Levy, Rodriguez, and Wubbels (2002) administered the QTI to the students of 10 Asian-American, and 16 Hispanic-American teachers from two high school in Washington, DC. There were a total of 1973 students who participated in the study. Each student was asked to self-report his or her cultural/ethnic background. The cultural/ethnic makeup of the sample was 57.3 percent white, 15.1 percent Asian, 12.9 percent Hispanic, 9.8 percent African-American, and 4.3 percent Native American.

A significant difference is the perception of teacher communication style related to student ethnic background was reported. All non-Caucasian cultural groups involved in the study rated their teachers as having a higher degree of leadership, being more helpful/friendly, and having more understanding. Although teacher cultural background did not significantly affect students’ perception, Hispanic teachers were perceived as
more helpful/friendly than the Asian teachers were. Researchers also suggested further investigation is needed into the effects of student perceptions of teachers of their own culture. Teachers reported feeling a special bond with students of their own culture.

Wubbels and Levy (1991) compared the interpersonal behaviors of Dutch and American teachers when they validated the QTI for American use. The QTI was translated from Dutch to English in 1985. The final 64 item version includes 59 items that are direct translations from the original Dutch version and five items that are paraphrased from the Dutch version. The American QTI was administered to 31 teachers in multiple classes in the United States. The researchers wanted the teachers to administer the QTI to classes that displayed different student behavior. The teachers were also asked to complete the QTI using the ideal behavioral responses.

According to analyses of data, the English QTI was determined to be a reliable and valid instrument. In addition to acceptable reliability and validity, the data also compared Dutch and American teacher’s interpersonal communication styles. Differences between Dutch and American teachers include: (a) American teachers place more importance on strictness, (b) Dutch teachers place a high degree of importance on student responsibility and freedom. As in previous studies regarding cultural variables, there seems to be some cultural influences in interpersonal communication style of teachers.

Language and cultural factors have affected both student and teacher perceptions of interpersonal communication styles. Multicultural classrooms tend to view their teachers as having more dominant or cooperative behaviors. A classroom of primarily
Caucasian students tends to view teachers as having fewer proximity behaviors. There also seems to be some cultural differences in teacher’s perceptions of important interpersonal communication skills in the classroom.

Interpersonal Communication Skills in Teacher Education

A survey of studies of teacher education literature reveals recommendations by researchers to include teacher interpersonal communication skills in the professional development of teachers or in undergraduate education curriculums. In a study by Ritter and Taylor (1990), researchers reported a need for teacher preparation programs to provide curriculum that addresses and develops positive human relationships and communication skills.

Barton (1994) suggested that assessment of interpersonal communication skills is important in teacher education curriculum. Barton studied the reliability and validity of a teacher effectiveness survey used for graduates of teacher education programs. The teacher effectiveness survey, found to be reliable and valid, addressed and assessed the interpersonal and professional abilities of teacher education students in one of the survey’s three categories. Barton found interpersonal abilities of teacher education students a worthwhile ability to assess.

Since teachers rarely perceive their interpersonal behavior as their students perceive the teacher’s interpersonal behavior, Levy, Wubbels, Brekelmans, and Morganfield (1997) suggested introducing and establishing the use of a student-teacher feedback instrument in teacher education programs specifically regarding teacher interpersonal communication skills. One such instrument that could be used in teacher
education curriculum is the Questionnaire on Teacher Interaction. Introduction of such an instrument may encourage interpersonal communication skill awareness, growth, and encourage use throughout a teacher’s career.

Researchers in teacher education generally agree that strong interpersonal communication skills are an important variable to include in teacher education programs. Introduction and use of teacher feedback instruments regarding interpersonal skills during teacher preparation courses may encourage use of the instrument throughout the career of teachers.

**Teaching Effectiveness in Conducting**

Researchers in music education have identified the need to study communication skills and teaching effectiveness. Specifically, researchers in the area of conducting and ensemble rehearsals have investigated communication skills at the pre-service, novice, and expert teacher levels. Durrant (1994) researched a model for effective communication in the structured teaching of conducting. He remarked that the effectiveness of a rehearsal is dependent upon the general communication skills of the conductor and attention to the development of these communication skills should be given to all those who intend to conduct groups or ensembles. Further, some music education research has specifically studied communication in the forms of verbal and nonverbal communication, while other researchers have suggested a need to study personal skills and general communication skills in music education.
Verbal Communication

According to Burgoon and Saine (1978) verbal communication is a “dynamic process” that creates “shared meaning” from “sending and receiving messages” (p. 5). Researchers in music education have studied verbal communication apart from other types of communication and have reported that verbal communication is used most often in rehearsals to deliver instruction. For example, Carpenter (1986) selected a county in Ohio to study 26 junior and senior high band directors of which fourteen agreed to participate in the study. Rehearsals of each participant were recorded one to five times. The rehearsals ranged from 29 to 60 minutes in length. Judges analyzed segments of 56 rehearsals and found that verbal instruction was used most frequently while nonverbal instruction made up less that 15% of the instructional time.

One way to investigate verbal communication and teaching effectiveness in rehearsals is to explore what elements of individual or ensemble performance are being addressed verbally (Goolsby, 1997). In studies of various levels of teachers, Carpenter (1988), Buell (1990), Pontius (1982), and Sherrill (1986) reported that rhythm was ranked as the most important performance variable addressed in the verbal instruction of instrumental ensemble rehearsals. Carpenter’s (1988) ranking was from a previous study (Carpenter, 1986) in which he investigated junior and senior high band directors’ rehearsals. The researcher used a frequency distribution to tally which performance elements were addressed in rehearsals viewed on videotape. Rhythm was addressed most often in verbal instruction suggesting that effective teachers address rhythm through verbal communication.
Sherrill (1986) also investigated junior high and high school band directors’ rehearsals. The directors were considered to be expert by the criterion of having and excellent festival record and reputation among music education faculty. The chosen participants also taught within 100 miles of Rochester, New York. The study was a descriptive analysis of the first 20 minutes of each rehearsal designed to address warm-ups, balance, intonation, and rhythmical aspects of the participants’ rehearsal techniques. “The conductors in this study devoted a greater portion of their rehearsal time to rhythmic problems and derivations, such as precision, than any other single aspect of performance” (Sherill, 1986, p. 42).

Pontious (1982) studied only outstanding high school band directors. The subjects were five band directors who had a minimum of five years teaching experience and received Division I ratings for the three previous years. Each band director was asked to videotape 30 minutes of two rehearsals during a period that was not either immediately preceding or following a performance. All 10 rehearsals were analyzed and Pontious (1982) reported that most verbal instruction was devoted to rhythm.

Buell (1990) studied an outstanding university band director from the initial reading of a musical piece to the final performance by two university bands. According to Buell’s (1990) analysis, the outstanding university band director spent most verbal instruction addressing rhythm and ensemble precision.

Music education researchers have furthered contributions to verbal communication research by specifically investigating teaching effectiveness and verbal communication or instruction in terms of verbal instruction delivery, verbal feedback,
and time spent in verbal instruction. Price (1992) studied a form of instruction termed sequential patterns of instruction comprised of a student/teacher interaction sequence. A complete sequential pattern of instruction is (1) the teacher’s presentation of an academic (or performance) task, (2) the student response, and (3) the teacher’s specific related feedback. Using 18 undergraduate vocal and instrumental music education majors, the researcher determined that after subsequent training in sequential patterns of instruction there were significant increases ($p < .01$) in use of sequential patterns of instruction. Price (1983) reported that use of complete sequential patterns of instruction are effective in enhancing performance, attitude, and attentiveness while Price (1992) also demonstrated that undergraduate music education majors can be taught to increase their quantity and quality of complete sequential patterns of instruction.

An outgrowth of Price’s (1992) study was related to feedback. Price (1992) and others (Price, 1983; Yarbrough & Hendel, 1993; Yarbrough & Price, 1989, 1991; Yarbrough, Price, & Hendel, 1994; Yarbrough, Price, & Bowers, 1991) determined that specific, related feedback is an important piece of the complete sequential patterns of instruction. Madsen and Duke (1987) added to feedback research reporting that positive feedback or approval is the most effective way to deliver feedback. Positive feedback or approval is contingent upon appropriate musical behavior (Madsen & Duke, 1987).

The most effective teachers were also found to spend more time in rehearsal performing and less time in verbal instruction (Goolsby, 1996; Grechesky, 1985; Pontious, 1982). Goolsby (1996) examined the rehearsals of 10 expert music teachers, 10 novice music teachers, and 10 student teachers. Rehearsals of each teacher were
recorded three times of which only the second and third rehearsals were used to
eliminate the effect of having the investigator present. Specific variables were then
measured with a stopwatch via repeated viewings of the videotapes. Goolsby (1996)
reported that more effective teaching was associated with more time performing and
less time in verbal instruction. Experienced teachers spent more than half of the total
class period in performance. Student teachers spent almost 44% of class time in verbal
behaviors and novice teachers spent approximately 40% of total class time in verbal
behaviors. Grechesky (1985) requested audiotapes of a random sample of 20 high
school band directors’ rehearsals from central Indiana. The random sample was selected
from a population of approximately 200. The audiotapes of directors’ rehearsals
contained a five to eight minute excerpt representative of the band’s musical
performance level. Using an observation form developed by the investigator, four
college band directors evaluated the audio recordings. The five bands receiving the high
scores by the judges using the investigator’s evaluation instrument were termed musical
and the lower scoring bands were termed less musical. Grechesky (1985) concluded that
musical high school band directors tended to use verbal instruction regarding musical
concepts and limit verbal behavior that was instructional, reproving, or nonmusical with
respect to intent. Pontious (1982) concluded from her study of five outstanding band
directors that more time was spent performing in the rehearsals of successful band
directors since verbal instruction was short and concise. Pontious used the Erbes
Rehearsal Interaction Observation System in which the director’s communication is
classified as either supportive or that which controls performers responses. Conductor
talk is analyzed in three-second intervals. Pontious' conclusions when address the frequency of conductor talk during rehearsal and the ration of conductor talk to rehearsal time was that conductor talk was short and rehearsal performance was resumed immediately after completion of conductor statements.

Researchers of teacher effectiveness concerning the verbal communication of conductors in rehearsal have investigated exactly which areas of performance are addressed in verbal communication, time spent in verbal instruction, and how the verbal instruction is delivered. From the previous studies listed above, it can be determined that the most effective teachers spend more time in performance than verbal instruction during rehearsals. The most effective teachers also tend to address rhythm most often in verbal instruction. Sequential patterns of instruction and research regarding feedback are important outgrowths of verbal communication research concerning how verbal instruction is delivered.

Nonverbal Communication

Nonverbal communication is "...attributes or actions of humans, other than the use of words themselves, which have socially shared meaning, are intentionally sent or interpreted as intentional, are consciously sent or consciously received, and have the potential for feedback from the receiver" (Burgoon & Saine, 1978, p. 9). According to Wubbels and Levy (1993), teacher-student relationships or interpersonal communication is fostered through such nonverbal communication as bearing, gesture, facial expression, intonation, sound level, articulation, and context. Music education researchers have used the above mentioned aspects of nonverbal communication and
others in research investigated in the context of conducting and teaching effectiveness.

Researchers have conducted studies describing nonverbal communication behaviors in rehearsals and have determined what nonverbal behaviors are most effective. In 1978, Roshong developed an observational instrument to survey nonverbal communication behaviors of conductors. Roshong (1978) analyzed 82 categories and found that facial approval and disapproval, forward movement towards the ensemble when starting, stopping, sustaining events, and movement away during instruction were the most common nonverbal communication behaviors among the conductors. Yarbrough (1975) termed nonverbal behavior such as eye contact, closeness to students, volume and modulation of voice, gestures, facial expressions, and pacing of a conductor as behaviors that can have high or low magnitude. In Yarbrough’s (1975) study, four mixed choruses were rehearsed with (a) the regular conductor, (b) a high magnitude conductor, and (c) a low magnitude conductor to determine the effective of conductor magnitude on performance, attentiveness, and attitude of the students in the ensembles. No significant differences were reported in Yarbrough’s (1975) study; however, off task behavior was lower during high magnitude conditions and the students in the ensemble preferred the high magnitude conductor. One nonverbal behavior significantly stood out among the others in the high magnitude condition. “...the experimental conductor under the high magnitude condition had significantly more approach movement than either the regular conductor or the low magnitude conductor” (p. 145).
In a study of novice \((n = 6)\) and expert \((n = 6)\) conductors, Byo and Austin (1994) found that expert conductors displayed many high magnitude (Yarbrough, 1975) nonverbal behaviors. A 15-minute videotape of a rehearsal under normal conditions of each conductor was used to gather data regarding frequency of specific nonverbal communication behaviors defined \textit{a priori}. The investigators concluded that expert conductors spent more time conducting expressively and significantly less time in neutral patterns. Expert conductors also maintained eye contact for significantly longer periods of time, gave significantly more cues, and made significantly more expressive use of their bodies and faces.

Another area of research in nonverbal communication and teaching effectiveness is teacher intensity. Intensity is defined as a “global attribute that is used to describe sustained control of the student/teacher interaction, evidenced by efficient, accurate presentation and correct of the subject matter with enthusiastic affect and effective pacing” (Madsen & Geringer, 1989, p. 90). Madsen, Standley, and Cassidy (1989) investigated whether or not preservice music teachers could be taught to identify and demonstrate high and low levels of teacher intensity. Student teachers in music education \((n = 20)\) were trained in teacher intensity. Student teachers were then asked to demonstrate different levels of teacher intensity while freshmen music majors \((n = 23)\), senior music majors \((n = 22)\), and graduate music education majors \((n = 29)\) were asked to identify high and low contrast in teacher intensity. “The single most important result was that intensity as a concept was operationally defined, easily taught to prospective student teachers, ably demonstrated, and easily recognized with an extremely high
degree of reliability by almost all subjects in the study” (p. 89).

Music researchers have also studied the ability to recognize specific nonverbal conducting gestures under the premise that if more effective teachers use nonverbal gestures then it is equally important for students to recognize the gestures. For example, Sousa (1988) investigated the effectiveness of fifty-five nonverbal gestures in communicating specific musical ideas. The study was conducted with junior high, high school, and college musicians. The researchers reported that older students correctly identified significantly more gestures, but all three groups of students had identified 19 gestures in common.

Similar results to that of Sousa’s (1988) study were reported by Mayne (1992) when a study was conducted to determine if facial expressions had any influence on recognizing specific nonverbal conducting gestures. Facial expressions did not have a significant influence on recognizing nonverbal conducting gestures, but as Sousa (1988) reported, older students identified more nonverbal conducting gestures correctly.

Byo (1990) specifically studied the intensity of nonverbal conducting gestures and the ability to recognize them. Undergraduate beginning conductors were asked to demonstrate intensity contrasts for use on videotape developed by the investigator for the study. A variety of independent observers (N = 320) made up of high school band and choir students, undergraduate nonmusic majors, and undergraduate and graduate music majors were asked to identify the intensity of nonverbal conducting gestures viewed on the videotape. The graduate students were able to identify more gestures than any other group although all groups were able to identify intensity of conducting
gestures. The researcher speculated that experience might have influenced the observer’s ability to recognize intensity of conducting gestures. Byo (1990) also remarked the importance of recognizing the undergraduate beginning conductors’ abilities to demonstrate contrast in teacher intensity effectively. Contrast instruction in nonverbal communication may easily present the task of teacher intensity demonstration to beginning conductors (Byo, 1990).

Researchers in the nonverbal communication skills of conductors have studied the most common and most effective nonverbal behaviors of conductors in rehearsals. Facial expression, eye contact, physical proximity to students, volume of voice and pitch modulation, expressive gestures, and pacing were among the most common and effective nonverbal communication behaviors of conductors.

Personal Skills and General Communication Skills

Researchers have studied the importance of personal skills in music teaching effectiveness. Teachout (1997) purpose was “…to compare the responses of preservice teachers and experienced teachers when asked, “What skills and behaviors are important to successful music teaching in the first 3 years of experience?” (p. 43). Subjects were a random sample of preservice ($n = 35$) and experienced ($n = 35$) teachers. The preservice teacher sample was randomly selected from a population comprised of preservice teachers from Ohio State University, University of Oklahoma, University of Alabama, University of the Pacific, and Washburn University. The experienced teacher sample was randomly selected from a population of Kent State University cooperating teachers between 1989 and 1993, graduate students with
teaching experience, and professors of music education from where the preservice
teachers were selected. A questionnaire listing 40 teacher skills and behaviors was used
to gather data regarding ranked importance of teaching behaviors and skills. The
behaviors and skills listed on the questionnaire were classified as personal skills and
behaviors, musical skills and behaviors, or professional skills and behaviors as an ex
post facto measure. Among the personal skills listed on the questionnaire were be
enthusiastic, sense of humor, goal-oriented, professionalism, display confidence,
patience, be organized, speaking skills, positive rapport, creativity, imagination,
leadership skills, flexible, adaptable, manage finances, manage stress well, and mature
(self control). A Two-way ANOVA with Repeated Measures was used to determine that
personal skills and teaching skills were more important to both preservice and
experienced teachers in initial teaching success.

Osman (1989) also felt that teacher training programs should deal with
communication skills of choral conductors more effectively.

Research in teacher training for undergraduate conducting students specifically
designed to evaluate the composite communication skills of the conductor in the
rehearsal has too long been neglected. Many conductors and authors of
conducting and choral methods textbooks spend much time in discussing
conducting technique and score study. (p. 5)

Osman (1989) designed a study that would develop a communication skill instrument to
assess effective communication skills of beginning choral conductors. A panel of 15
expert conductors viewed videotapes of 37 conductors to devise a list of necessary and not necessary behaviors for effective communication. The resulting Communication Skill Evaluation Instrument incorporates both verbal and nonverbal communication skills deemed important for the effective communication of choral conductors.

In summary, personal and general communication skills have been used as a variable in teacher effectiveness research of conductors. Among the important personal and general communication skills are enthusiasm, sense of humor, organization, positive rapport, leadership skills, eye contact, proximity to students, and expressive gestures.
CHAPTER III

METHODOLOGY

Restatement of the Purpose

The purpose of this study was (a) to determine if there was a significant difference between the interpersonal communication skills of music education students and teaching effectiveness, (b) to determine if there was a significant difference between the interpersonal communication skills of music education students and conducting effectiveness, and (c) to determine if there was a significant relationship between the conductor and ensemble perception of the conductor’s interpersonal communication skills.

Sample

Subjects ($N = 24$) were chosen from a population of undergraduate music education students who had taken at least one semester of beginning conducting instruction at the University of Arizona. Subjects ($N = 6$) were also chosen from a population of graduate students pursuing a Doctor of Musical Arts degree in conducting at the University of Arizona. The population consisting of graduate students had 3 or fewer years of public school teaching experience.

Measurement Instruments

Three evaluation instruments were used in the present study to gather data. The Questionnaire on Teacher Interaction (Wubbels & Levy, 1993) was used to determine
the ideal and participant perception of the subject’s interpersonal communication style. The Survey of Teaching Effectiveness (Hamann & Baker, 1996) was used to measure the teaching effectiveness of each subject, and the Conducting Observation Form (Hunter, 2002) was used to evaluate the conducting effectiveness of each subject.

**Questionnaire on Teacher Interaction (QTI)**

The QTI (Wubbels & Levy, 1993) is a questionnaire constructed of 64 items (See Appendix A), such as s/he explains things clearly, or s/he takes a personal interest in us. For each item, subjects are asked to respond using a five-point Likert scale that ranges from ‘never’ to ‘always’. Since teacher interpersonal behavior is relatively stable (Wubbels & Levy, 1993), the QTI only needs to be administered one time after a short period of time when students and the teacher get to know each other. Respondents generally require approximately three to five minutes to complete the questionnaire.

The QTI was used to gather data regarding the interpersonal communication skills of conductor via the ensemble perception. The QTI has eight sectors corresponding to the eight interpersonal communication styles of the Model for Interpersonal Behavior. In the present study, the QTI was administered to both the ‘conductor’ and ‘ensemble’ to gather data regarding the ensemble perception of teacher interpersonal communication skills and the subject’s ideal interpersonal communication style. The subject (conductor) responds to the items in the QTI by circling the appropriate number on the Likert scale that corresponds to what he/she ideally wants in the classroom.
Internal consistency for the QTI at the class level ranged from $r = .80$ to $r = .96$ for each of the eight interpersonal communication scales (Wubbels & Levy, 1993). Test-retest reliability coefficients range from $r = .65$ to $r = .84$ (Wubbels & Levy, 1993). For the purposes of the present study, the QTI was judged to be a reliable instrument.

To confirm validity of the QTI, intra-class correlations and structural analyses were calculated. Intra-class correlations for the QTI were above $r = .80$ for each scale of the QTI using Horst’s (1949) general coefficient. Several studies have been conducted where correlations between scales of the QTI using structural analysis have been determined (Wubbels & Levy, 1993). For the purposes of the present study, the QTI was judged to be a valid instrument.

Survey on Teaching Effectiveness (STE)

The STE (Hamann & Baker, 1996) is an evaluation instrument designed to gather data regarding teaching effectiveness (See Appendix B). The STE is divided in two sections; lesson delivery skills and planning and presentation of lesson. The lesson delivery skills section includes assessment of posture, eye contact, gestures, facial expression, and vocal inflection. Of the final STE score for teaching effectiveness, the lesson delivery skills section is 40% of the final score. The planning and presentation of lesson section includes evidence of lesson planning, organization, subject matter competence, pacing, sequencing pattern/rehearsal cycle, and teaching style. The planning and presentation of lesson section comprises 60% of the final STE score. Each category (except eye contact) of the lesson delivery skill section and the planning and
presentation section are further outlined by sub-categories. Each sub-category is rated using a Likert scale from 1 (Poor) to 5 (Excellent). Using the categorical weighting factors, final STE scores range from 10 to 50.

Test-retest reliability for the STE was determined to be $r = .83$ (Hamann, Lineburgh, & Paul, 1998). Intercorrelations were determined between the categorical scores and the total STE score. The intercorrelations between the categories of the STE ranged from $r = .61$ to $r = .95$ (Hamann et al., 1998). Empirical validity has also been computed for the STE.

Empirical validity for the STE was established to be $r = .89$. Adjudicators were directed to rank video-taped teaching episodes of students from best to least best. Approximately 3 weeks later, the same adjudicators were again directed to assess the video-taped teaching episodes using the STE. Scores for each of the teaching episodes were then ranked and compared to the ranking produced previously. (Hamann et al., 1996, p. 11)

Fant (1996) found a correlation of .89 between ratings of adjudicators who used the STE and the Bergee (1992) Rehearsal Effectiveness Scale. For the purposes of the present study, the STE was found to be a valid and reliable instrument.

Conducting Observation Form (COF)

The COF (Hunter, 2002) is used specifically to evaluate conducting effectiveness (see Appendix C). The COF is divided into several categories regarding conducting technique which include posture, eye contact, facial expression, vocal inflection, preparatory position & preparatory beat, beat plane & patterns, left hand,
cues, knowledge of score, interpretation, and rapport with ensemble. Several categories are further divided into sub-categories to evaluate specific aspects of a particular category. For example, the category posture is divided into sub-categories head and body and arm and baton position. Each category or sub-category is rated using a Likert scale from 1 (Poor) to 5 (Excellent). Each individual score for each item is added to calculate a final total score regarding conducting effectiveness. A test-retest procedure was conducted to determine reliability of the COF. Test-retest reliability was determined to be $r = .82$.

Data Collection Procedures

Data were gathered during the Spring semester of 2003 at the University of Arizona where subjects were currently receiving conducting instruction. Subjects completed three 10-minute micro rehearsals with an ensemble. Subjects rehearsed a piece which was chosen for them by their conducting instructor that was appropriate to their level of conducting technique and appropriate for the level of the ensemble. To standardize the format for each micro rehearsal, subjects were asked to complete a rehearsal frame (Duke, 1994) for each micro rehearsal. The rehearsal frame model (Duke, 1994) was a method for each subject to define his/her musical goals for the micro rehearsal and also defined how the subjects would approach achievement of the musical goals. Each micro rehearsal was videotaped. To determine each subject’s interpersonal communication style, members of the ensemble being conducted by the subject completed the QTI regarding each subject after the third micro rehearsal.
Subjects were also asked to complete the QTI regarding his/her ideal response to each item of the QTI.

Three independent judges evaluated each videotape. The judges used the STE and the COF to evaluate the first and third micro rehearsal of each subject. A teaching effectiveness and conducting effectiveness score was computed for the first and third micro rehearsal of each subject.

The QTI was used to determine the primary interpersonal communication style for each subject. The items of the QTI correspond to one of the eight sub-scales or interpersonal communication styles. The scores for each response of every item corresponding to the same sub-scale of the QTI was added and then divided by the number of evaluators to determine a mean score for each sub-scale or interpersonal communication style. The largest mean sub-scale score of the 8 sub-scales was determined to be the primary interpersonal communication style of the subject.

Each QTI completed by the conductor of the micro rehearsal using ideal responses was used to calculate an ideal interpersonal communication style of each subject. The largest mean sub-scale score of the 8 sub-scales was determined to be the primary ideal interpersonal communication style.

The STE was used to determine the teaching effectiveness score for each subject. “Teaching effectiveness is the magnitude of effective teaching behaviors exhibited during the course of an observation” (Teachout, 1997, p. 80). In the present study, three judges viewed a videotape of the first and third micro rehearsal of each subject. Each judge evaluated the teaching performance of each subject using the STE
for the first and third micro rehearsal. An overall teaching effectiveness score for the first and third micro rehearsal of each subject was determined by computing the judges’ mean STE score for each subject.

Overall STE scores could range from 10 to 50. An overall STE score of 10 would represent the lowest level of teaching effectiveness and an overall STE score of 50 would represent the highest level of teaching effectiveness.

The COF was used to determine the conducting effectiveness score for each subject. In the present study, judges also evaluated the first and third videotaped micro rehearsal of each subject using the COF. The scores for each response were added to determine a final conducting effectiveness score. An overall COF score was determined by computing the judges’ mean COF score for each subject.

Overall COF scores could range from 0 to 80. An overall COF score of 0 would represent a poor (1) response to each item of the COF and consequently be the lowest level of conducting effectiveness. An overall COF score of 80 would represent an excellent (5) response to each item of the COF and would be the highest level of conducting effectiveness. Scores between 0 and 80 would represent various levels of responses to each item.

**Pilot Study**

A pilot study was conducted to verify the procedures of the present study. Subjects from a beginning instrumental conducting class from the University of Arizona were chosen to participate in the pilot study. All participants were asked to provide feedback for further refinement and clarity of the procedures used in the present study.
It was determined that for the purposes of the present study, the procedures were appropriate.

**Equipment**

A Panasonic VHS video camera and Sony T-120 VHS videocassettes were used to record each micro rehearsal for each subject.

**Research Hypotheses**

**Primary Hypothesis**

**H01** There is no significant \( p \leq .05 \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

**Secondary Hypotheses of H01**

**H01.1** There is no significant \( p \leq .05 \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

**H01.2** There is no significant \( p \leq .05 \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by situation.

**H01.3** There is no significant \( p \leq .05 \) interaction effect of teaching effectiveness scores as measured by the Survey of Teaching
Effectiveness by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.

**Primary Hypothesis**

**H0**: There is no significant \( p \leq .05 \) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

**Secondary Hypotheses of H0**

**H0.1**: There is no significant \( p \leq .05 \) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

**H0.2**: There is no significant \( p \leq .05 \) difference in conducting effectiveness as measured by the Conductor Observation Form by situation.

**H0.3**: There is no significant \( p \leq .05 \) interaction effect of conducting effectiveness scores as measured by Conductor Observation by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.
Primary HO3 Hypothesis

HO3 There is no moderate (quotient of agreement ≥ .50) degree of association between self-reported interpersonal communication style and interpersonal communication style as perceived by participants

Data Analyses Procedures

Data regarding research hypothesis HO1 and HO2 were analyzed using two Two-way Analyses of Variance (ANOVA) with repeated measures. Interpersonal communication style and the micro rehearsal situation were used as the independent variables. STE score was used as the dependent variable for HO1. Interpersonal communication style and the micro rehearsal situation were used as the independent variables and COF score was used as the dependent variable for HO2. For HO3, a quotient of agreement was calculated to determine the degree of difference between a subject’s ideal interpersonal communication style and perceived interpersonal communication style.
CHAPTER IV

RESULTS

Seven research questions were formulated for this study.

1. Does a significant relationship exist between the interpersonal communication skills of student conductors and teaching effectiveness?

2. Does a significant relationship exist between teaching effectiveness and repeated micro rehearsal episodes? A micro rehearsal episode is a five to ten minute rehearsal in which the student conductor rehearsed a piece of music.

3. Do interpersonal communication skills of student conductors significantly affect conducting effectiveness in repeated micro rehearsal episodes?

4. Does a significant relationship exist between the interpersonal communication skills of student conductors and conducting effectiveness?

5. Does a significant relationship exist between conducting effectiveness of student conductors and repeated micro rehearsal episodes?

6. Do interpersonal communication skills of student conductors significantly affect conducting effectiveness in repeated micro rehearsal episodes?

7. Does a significant difference exist between the student conductor and ensemble perception of student conductor interpersonal communication skills?

Three primary hypotheses and six secondary hypotheses were developed to answer the research questions. Two-Way Analyses of Variance with repeated measures and
Quotient of Agreement statistics were used to test the hypotheses. The following are the results of those statistics. The Pearson Product-Moment correlation along with the Fisher’s Z’s Transformations were computed to determine interjudge reliability for the STE and the COF.

**STE Interjudge Reliability**

Interjudge reliability for the Survey of Teaching Effectiveness (STE) was calculated using a series of Pearson Product – Moment Correlations and Fisher’s Z-Transformations. A combined mean for interjudge reliability for the pre/post situation was calculated. A moderate interjudge reliability \( r = .73 \) was found to exist among the three judges (see Table 1).

Table 1

**Combined (Pre/Post Situation) Interjudge Reliability for the Survey of Teaching Effectiveness**

<table>
<thead>
<tr>
<th>Judges</th>
<th>Judges</th>
<th>Judges</th>
<th>Mean Interjudge Reliability</th>
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</thead>
<tbody>
<tr>
<td>1 X 2</td>
<td>1 X 3</td>
<td>2 X 3</td>
<td></td>
</tr>
</tbody>
</table>
| Reliability | .741  | .710   | .688                         | .732

**COF Interjudge Reliability**

Interjudge reliability for the Conductor Observation Form (COF) was calculated using a series of Pearson Product – Moment Correlations and Fisher’s Z’s Transformations. A combined mean for interjudge reliability for the pre/post situation was calculated. A moderate interjudge reliability \( r = .76 \) was found to exist among the three judges (see Table 2).
Table 2

Combined (Pre/Post Situation) Interjudge Reliability for the Conductor Observation Form

<table>
<thead>
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<th>Judges</th>
<th>Judges</th>
<th>Mean Interjudge Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 X 2</td>
<td>1 X 3</td>
<td>2 X 3</td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>.747</td>
<td>.816</td>
<td>.693</td>
</tr>
</tbody>
</table>

Interpersonal Communication Styles

Using the QTI, three interpersonal communication styles were identified among the subjects. Eleven subjects were identified as having helpful/friendly interpersonal communication style profiles, 11 subjects were identified as having understanding interpersonal communication style profiles, and 8 subjects were identified as having strict interpersonal communication style profiles. The helpful/friendly, understanding, and strict communication style profiles were then used as the independent variable for QTI style in the statistical analyses.

Primary Ho Hypothesis

A Two-way Analysis of Variance with repeated measures was used to determine if there was a significant ($p \leq .05$) difference in teaching effectiveness scores by interpersonal communication style. A significant ($p = .01$) interaction effect was found to exist between the testing situation and interpersonal communication style and a significant ($p = .001$) difference was also found within the testing situation. A
significant \((p \leq .05)\) difference was found to exist between teaching effectiveness scores by interpersonal communication style (see Table 3). Primary HO1 hypothesis, there is no significant \((p \leq .05)\) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction was rejected.

Table 3

<table>
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<th>Source</th>
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<th>p</th>
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<td>QTII</td>
<td>2</td>
<td>1.24</td>
<td>76.62</td>
<td>.30</td>
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<tr>
<td>Situation</td>
<td>1</td>
<td>26.69</td>
<td>249.62</td>
<td>.00</td>
</tr>
<tr>
<td>QTII X Situation</td>
<td>2</td>
<td>6.25</td>
<td>58.44</td>
<td>.01</td>
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</tbody>
</table>

A significant \((p \leq .05)\) disordinal interaction effect (see Figure 1) was found to exist between the testing situation and interpersonal communication style. Subjects in the helpful/friendly category had the lowest mean STE score in the first micro rehearsal \((M = 23.44)\), displayed the lowest (only slightly lower) mean STE score for the third micro rehearsal \((M = 31.04)\), but displayed the largest increase in mean STE scores between the first and third micro rehearsal. Subjects in the understanding category had the highest mean STE score in the first micro rehearsal but displayed the least amount of gain in mean STE scores between the first and third micro rehearsals. The mean STE score for the third micro rehearsal for the understanding category was \(M = 31.19\); only slightly higher than the helpful/friendly category. Subjects in the strict category had a mean of \(M = 28.64\) for the first micro rehearsal, which is a mean STE score between the
scores of the understanding and helpful/friendly categories. Subjects in the strict category also displayed the highest mean STE score for the third micro rehearsal ($M = 32.28$). The gain in mean STE scores between the first and third micro rehearsals was moderate. In summary, results of statistical analyses were that there was a significant disordinal interaction effect with the helpful/friendly interpersonal communication style subjects having the largest gain score in mean STE scores, the strict interpersonal communication style subjects had the next largest gain in mean STE scores, and the understanding interpersonal communication style subjects had the lowest gain in mean STE scores between the first and third micro rehearsals.
Figure 1  Two-way interaction of STE testing situation by QTI profile
Primary HO₂ Hypothesis

A Two-way Analysis of Variance with repeated measures was used to determine if there was a significant \((p \leq .05)\) difference in conducting effectiveness scores by interpersonal communication style. A significant \((p = .02)\) interaction effect was found to exist between the testing situation and interpersonal communication style and a significant \((p = .001)\) difference was also found within the testing situation (see Table 4). A significant \((p \leq .05)\) difference was found to exist between conducting effectiveness scores by interpersonal communication style (see Table 4). Primary HO₂ hypothesis, there is no significant \((p \leq .05)\) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction was rejected.

Table 4

Analysis of Variance with Repeated Measures for COF

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>MS Effect</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>COF</td>
<td>2</td>
<td>1.08</td>
<td>426.50</td>
<td>.35</td>
</tr>
<tr>
<td>Situation</td>
<td>1</td>
<td>42.59</td>
<td>1512.77</td>
<td>.00</td>
</tr>
<tr>
<td>QTI X Situation</td>
<td>2</td>
<td>1.76</td>
<td>168.99</td>
<td>.02</td>
</tr>
</tbody>
</table>

A significant disordinal interaction effect (see Figure 2) was found to exist between the testing situation and interpersonal communication style. Subjects in the helpful/friendly category had the lowest mean COF score in the first micro rehearsal \((M = 48.82)\), displayed the lowest mean COF score for the third micro rehearsal.
$(M = 65.50)$, but displayed the largest increase in mean COF scores between the first and third micro rehearsal. Subjects in the strict category had the highest mean COF score in the first micro ($M = 62.31$) rehearsal but displayed the least amount of gain in mean COF scores between the first and third micro rehearsals. The mean COF score for the third micro rehearsal for the strict category was $M = 67.75$. Subjects in the understanding category had a mean of $M = 60.77$ for the first micro rehearsal, which is a mean COF score between the scores of the strict and helpful/friendly categories. Subjects in the understanding category also displayed the highest mean COF score for the third micro rehearsal $(M = 69.12)$. Results of statistical analyses were that there was a significant disordinal interaction effect with the helpful/friendly subjects having the largest gain in mean COF scores, the understanding subjects having the next largest gain in mean COF scores, and the strict subjects having the lowest gain in mean COF scores.
Figure 2, Two-way interaction of COF testing situation by QTI profile
Primary $H_{0.3}$ Hypothesis

The quotient of agreement statistic was used to determine the degree of association between self-reported ideal interpersonal communication styles of subjects and interpersonal communication styles of subjects as perceived by participants. Agreements in interpersonal communication style divided by agreements plus disagreements in interpersonal communication style was the formula used to calculate the quotient of agreement. Three agreements were found and 27 disagreements. The quotient of agreement was determined to be .10. Therefore, there was a low degree of association between self-reported interpersonal communication styles and interpersonal communication styles as perceived by participants. Subjects perceived their interpersonal communication styles to be different than participants’ perceptions of subjects’ interpersonal communication styles.

Summary

Three main research hypotheses were investigated in this study. The first hypothesis dealt with whether there was a significant difference between interpersonal communication styles and STE scores. A significant ($p < .05$) interaction effect was found and a significant ($p < .05$) main effect difference within the testing situation was found. Although all categories increased in mean STE scores between the first and third micro rehearsals, subjects in the helpful/friendly category displayed the most gain in STE scores but had the lowest mean STE score for the third micro rehearsal. Subjects in the strict category had a moderate amount of gain in STE scores but had the highest
mean STE score for the third micro rehearsal. Subjects in the understanding category displayed the least amount of gain in teaching effectiveness.

The second hypothesis regarded whether or not there is a significant difference between interpersonal communication styles and COF scores. A significant \((p \leq .05)\) interaction effect was found and a significant \((p \leq .05)\) main effect difference within the testing situation was found. Subjects in all three categories displayed an increase in their mean conducting effectiveness scores between the first and third micro rehearsal. Similar to the results using the STE, subjects in the helpful/friendly category displayed the most gain in COF scores. Unlike the results using the STE, subjects in the understanding category displayed the highest mean COF score for the third micro rehearsal and subjects in the strict category displayed the least amount of gain in mean COF scores between the first and third micro rehearsals.

The third hypothesis concerned the degree of association between a subject’s ideal interpersonal communication style and the interpersonal communication style perceived by participants. A low (quotient of agreement = .10) degree of association was found between subjects’ ideal interpersonal communication styles and subjects’ interpersonal communication styles as perceived by participants.
Preparation of undergraduate music education students to be excellent conductors and teachers is a responsibility accepted by many university music educators. Interpersonal communication skills is one variable considered important in teacher education. Researchers have studied music teaching effectiveness and conducting effectiveness in various ways; however, no research to date has specifically looked at interpersonal communication skills and their relationship to teaching and conducting effectiveness.

Wubbels and Créton (1984) developed a model to describe and categorize the interpersonal communication skills of teachers in the classroom. An outgrowth of this model was the Questionnaire on Teacher Interaction (Créton & Wubbels, 1984; Wubbels, Créton, & Hoomayers, 1985; Brekelmans, 1989; Wubbels & Levy, 1991) which allowed researchers to measure the interpersonal communication skills of teachers in the classroom. The Questionnaire on Teacher Interaction provides a theoretical framework in which to investigate the relationship between the interpersonal communication skills, teaching effectiveness, and conducting effectiveness of music education students. For purposes of a thorough discussion of the results of the present study, a brief overview of interpersonal communication style profile classifications derived from the Questionnaire on Teacher Interaction will follow.
The interpersonal communication style profiles used in the present study (helpful/friendly, understanding, and strict) are discussed and classified in two areas. One area, proximity, describes interpersonal communication skills in terms of cooperation. An interpersonal communication style profile is either cooperative or oppositional. The second area, influence, describes the way communication is controlled. Influence or control can be dominant or submissive. Each interpersonal communication style profile will have a classification in each area, proximity and influence.

The following interpersonal communication style profiles (helpful/friendly, understanding, and strict) were identified among the subjects in the present study and are classified according to proximity and influence as follows: helpful/friendly is classified as dominant and cooperative, understanding is classified as submissive and cooperative, and strict is classified as dominant and oppositional. In the present study, 11 subjects were identified as helpful/friendly, 11 subjects were identified as understanding, and 8 subjects were identified as strict.

The purposes of this study were (a) to determine if there was a significant difference between the interpersonal communication skills of music education students and teaching effectiveness, (b) to determine if there was a significant difference between the interpersonal communication skills of music education students and conducting/rehearsal technique, and (c) to determine if there was a significant relationship between the conductor and ensemble perception of the conductor’s interpersonal communication skills.
The Relationship Between Interpersonal Communication Skills and Teaching Effectiveness

After statistical analysis using the 3 QTI profiles of helpful/friendly, understanding, and strict, the following primary null hypothesis (HO) and secondary hypotheses (HO1,2, HO1,3) were rejected. The secondary null hypothesis, HO1,1, failed to be rejected.

**Primary Hypothesis**

\[ HO_1 \] There is no significant \( (p \leq .05) \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

**Secondary Hypotheses of HO1**

\[ HO_{1,1} \] There is no significant \( (p \leq .05) \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

\[ HO_{1,2} \] There is no significant \( (p \leq .05) \) difference in teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by situation.
HO$_{1.3}$ There is no significant ($p \leq .05$) interaction effect of teaching effectiveness scores as measured by the Survey of Teaching Effectiveness by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.

Data regarding teaching effectiveness was collected by using the STE (Hamann & Baker, 1996). The STE measures lesson delivery skills, planning, and presentation of the lesson. Final STE scores can range from 10 to 50.

It was found that subjects with a helpful/friendly interpersonal communication style improved the most between the first and third micro rehearsal in teaching effectiveness. The large increase in mean STE scores from the first micro rehearsal to the third micro rehearsal may be due to the type of behaviors that tend to be consistent with the classification of the helpful/friendly interpersonal communication style. For example, the helpful/friendly interpersonal communication style is classified as dominant and cooperative. According to Wubbels & Levy (1993), dominant and cooperative or helpful/friendly teachers tend to assist in class, behave in a friendly or consistent manner, show interest, join, are able to make jokes, and inspire confidence and trust. Perhaps these and other dominant/cooperative behaviors are most helpful in the classroom learning context such as the context of the present study. Dominant/cooperative students may be more open and cooperative with instructor feedback, able to synthesize feedback in a healthy and cooperative manner, and have the ability, resulting from dominance, to apply techniques learned from synthesizing
feedback. The result is that perhaps music education students with dominant and cooperative (helpful/friendly) interpersonal communication skills possess necessary abilities to increase their teaching effectiveness more quickly than music education students with submissive or oppositional interpersonal communication skill profiles.

Another possible explanation for the dramatic increase in mean STE scores for subjects in the helpful/friendly interpersonal communication style profile may be due to self-esteem. Wubbels et al. (1987) reported that highly dominant teachers, such as those in the helpful/friendly communication style profile, tend to have high self-esteem. High self-esteem may help students deal with the personal nature of learning to become a better teacher and conductor. Students with low self-esteem may let instructor feedback become personal, which may in turn contribute to a lack of confidence in teaching ability in future teaching scenarios. Students with high self-esteem may not let instructor feedback interfere with confidence and thus allow the student to focus on ability rather than self-esteem issues. Consequently, if students with helpful/friendly interpersonal communication skills tend to have high self-esteem they may tend to do better in classroom learning situations than students with low self-esteem.

Another interesting result of the data analyses was that subjects with helpful/friendly interpersonal communication skills began with the lowest mean STE score in the first micro rehearsal and also ended with the lowest (slightly lower) mean STE score in the third micro rehearsal. One possible explanation may be that subjects with helpful/friendly interpersonal communication skills did not have much teaching experience before participating in the present study. Consequently, these subjects may
have tended to have lower overall teaching effectiveness scores than subjects with previous teaching experience. It would be helpful to include previous teaching experience as a variable in a future study.

According to data analyses, subjects \( (N = 8) \) having a strict interpersonal communication style had the next largest increase in mean STE scores from the first micro rehearsal to the third micro rehearsal after subjects in the helpful/friendly category. Behaviors consistent with the classification of strict interpersonal communication styles may help explain the results concerning the subjects in the strict interpersonal communication style profile.

According to Wubbels and Levy (1993), the strict interpersonal communication style is classified as dominant and oppositional. Dominant and oppositional or strict teachers tend to be very good at getting the class silent and maintaining silence. Strict teachers may also set exact rules, keep the reigns tight, check student work, and judge.

It was discussed earlier that behaviors consistent with a helpful/friendly interpersonal communication style, which is classified as dominant and cooperative, are helpful in increasing teaching effectiveness scores. Similarly, subjects in the strict interpersonal communication style, classified as dominant and oppositional, also increased their mean teaching effectiveness scores. The increase in mean STE scores for the strict subjects was not as large as the increase in mean STE scores for the helpful/friendly subjects. Since both interpersonal communication styles are classified as having dominant behaviors, it may be hypothesized that the oppositional behaviors consistent with the strict interpersonal communication style profile may not increase
teaching effectiveness as much as those of helpful/friendly interpersonal communication styles.

Strict teachers may not be open to instructor feedback or may be unwilling to cooperate with the instructor due to the oppositional behaviors consistent with the strict interpersonal communication style profile. However, the dominant behaviors consistent with strict teachers such as getting the class silent and maintaining silence, setting exact rules, and keeping the reigns tight may create a classroom environment that allows students to increase their teaching effectiveness scores simply by knowledge gained from experience from the first micro rehearsal to the third micro rehearsal. Since strict teachers may only be improving due to experience and not cooperation with the instructor, subjects with strict interpersonal communication styles may not have as large of increase in mean STE scores as subjects having dominant and cooperative interpersonal communication styles.

Another result of the data analyses involving strict interpersonal communication styles was that these subjects had the highest mean STE scores for the third micro rehearsal. Consequently, the most effective teachers in the study were the strict teachers. According to Wubbels and Levy (1993), highly dominant teachers such as strict teachers tend to control most of the teacher-student communication. Controlling much of teacher-student communication in a music ensemble setting may result in a more effective teacher due to the environment of a music class. For example, if teachers in a musical ensemble environment do not control much of teacher-student communication, students may display off-task behavior such as playing their
instruments at inappropriate times or talking to his/her neighbor at inappropriate times. Complete student control of teacher-student communication would make it difficult for the teacher to align rehearsals with teacher objectives and may result in a chaotic classroom environment. Therefore, a strict interpersonal communication style may be the most effective interpersonal communication style for a music classroom or music ensemble setting. A future study involving subjects in each of the eight interpersonal communication style profiles is needed to further investigate which communication style profiles are most effective in the music classroom.

If subjects with strict interpersonal communication styles tend to control teacher-student communication, then these subjects may also demonstrate high levels of teacher intensity. According to Madsen and Geringer (1989), teacher intensity describes sustained control of student/teacher interaction. Since Madsen, Standley, and Cassidy (1989) reported that contrasts in teacher intensity could be taught to prospective teachers, perhaps prospective teachers can be taught strict interpersonal communication skills. A future study involving the development of specific interpersonal communication skills in the relationship between teacher intensity and interpersonal communication skills may be beneficial to university music educators.

From an evaluation of data analyses involving subjects with an understanding interpersonal communication style profile, it was found that these subjects had the least amount of improvement in mean STE scores from the first micro rehearsal to the third micro rehearsal. A brief overview of the classification and behaviors consistent with
understanding interpersonal communication styles is needed to assist in an explanation of these findings.

According to Wubbels and Levy (1993), the understanding interpersonal communication style profile is classified as submissive and cooperative. Some behaviors that are consistent with understanding teachers include listening with interest, looking for ways to settle differences, showing confidence and understanding, being patient, being open, and accepting apologies. To further the discussion, it may be helpful to consider these submissive and cooperative behaviors in comparison with the results of the other two interpersonal communication styles used in the present study.

Subjects in the helpful/friendly interpersonal communication style, classified as dominant and cooperative, had the largest gain in mean STE scores. Subjects in the strict interpersonal communication style, classified as dominant and oppositional, had the next largest gain in mean STE scores. Finally, subjects in the understanding interpersonal communication style, classified as submissive and cooperative, had the least amount of gain in mean STE scores. It was discussed that the dominant behaviors of both the helpful/friendly subjects and strict subjects were beneficial to the improvement of teaching effectiveness. Since the understanding interpersonal communication style subjects did not display many dominant behaviors, they may not have experienced much improvement in teaching effectiveness.

The cooperative behaviors consistent with subjects in the understanding interpersonal communication style may help these subjects be open to instructor feedback and very amenable to the format of the class and in-class activities. However,
submissive tendencies of this interpersonal communication style may be represented in subjects by a lack of follow-through with the instructor’s suggestions for improvement or a lack of preparation for the next micro rehearsal. Subjects having an understanding interpersonal communication style may only show improvement in teaching effectiveness in ways that involve skills or abilities that can be improved without practice. This type of improvement is different for each subject and depends upon his/her strengths. One subject may be able to improve eye contact without practice or preparation and another subject may be able to improve facial expressions without practice or preparation. Submissive behaviors would also make it difficult to improve on the lesson planning and presentation portion of the STE, explaining such a low gain in mean STE scores from the first to third micro rehearsal.

Subjects in the understanding interpersonal communication style profile had the highest mean STE score for the first micro rehearsal. One possible explanation may be that since typical behaviors of these types of teachers include showing confidence and understanding, perhaps these subjects were able to present themselves better in the first micro rehearsal than subjects in the other interpersonal communication styles. It is also possible that these subjects may have had more previous teaching experience or experience in similar group settings. As stated earlier, a future study including previous teaching experience as a variable would be very helpful in the investigation of interpersonal communication skills and teaching effectiveness.

In summary, mean STE scores of subjects in the helpful/friendly, understanding, and strict interpersonal communication style profiles improved from the first micro
rehearsal to the third micro rehearsal. It would seem that with instruction, music education students having any of the three interpersonal communication style profiles involved in the present study would become better teachers. Helpful/friendly music education students may improve their teaching skills the most, but may not be as effective as either the understanding or strict teachers. Understanding music education students may improve their teaching skills the least, but end up just as effective or more effective as helpful/friendly music education students. Strict music education students may experience a moderate amount of improvement of their teaching skills, but may be the most effective teachers of the three interpersonal communication styles profiles.

The Relationship Between Interpersonal Communication Skills and Conducting Effectiveness

After statistical analysis, the following primary null hypothesis (HO2) and secondary hypotheses (HO2.2, HO2.3) were rejected. The secondary null hypothesis, HO2.1, failed to be rejected.

Primary HO2 Hypothesis

HO2 There is no significant ($p \leq .05$) difference in conducting effectiveness scores as measured by the Conductor Observation Form by interpersonal communication style as measured by the Questionnaire on Teacher Interaction.

Secondary Hypotheses of HO2

HO2.1 There is no significant ($p \leq .05$) difference in conducting effectiveness scores as measured by the Conductor Observation Form by
interpersonal communication style as measured by the Questionnaire on Teacher Interaction, independent of situation.

$H_{0.2}$ There is no significant ($p \leq .05$) difference in conducting effectiveness as measured by the Conductor Observation Form by situation.

$H_{0.3}$ There is no significant ($p \leq .05$) interaction effect of conducting effectiveness scores as measured by Conductor Observation by situation and interpersonal communication styles of student conductors as measured by the Questionnaire on Teacher Interaction.

Data regarding conducting effectiveness were gathered by using the COF (Hunter, 2002). The COF measures conducting abilities such as posture, eye contact, facial expression, beat plane and patterns, left hand, knowledge of score, interpretation, and rapport with ensemble.

According to the data analyses, it was found that subjects ($N = 11$) in the helpful/friendly interpersonal communication style profile showed the greatest gain in conducting effectiveness scores from the first micro rehearsal to the third micro rehearsal. One assumption for helpful/friendly subjects having the greatest gain in mean COF scores is that perhaps the same behaviors consistent with the dominant and cooperative classification of the helpful/friendly interpersonal communication style that contributed to improvement in teaching effectiveness contributed to improvement in conducting effectiveness. Dominant and cooperative (helpful/friendly) behaviors include assisting in class, behaving in a friendly manner, showing interest, joining, making jokes, and inspiring confidence and trust (Wubbels & Levy, 1993).
Helpful/friendly subjects may be open to instructor feedback regarding conducting, cooperative with the instructor, are able to synthesize feedback, and apply the knowledge gained from feedback in subsequent micro rehearsals.

Subjects in the helpful/friendly interpersonal communication style had the lowest mean COF score in the first micro rehearsal. Perhaps helpful/friendly subjects in the present study did not have much conducting experience prior to the investigation. One explanation may be that many music education students do not have many opportunities to gain conducting experience other than formal in-class activities. A future study including previous conducting experience would be beneficial in the investigation of interpersonal communication skills and conducting effectiveness.

Subjects identified as having a strict interpersonal communication style profile displayed the least amount of improvement in conducting effectiveness between the first and third micro rehearsal. Also, unlike the results regarding teaching effectiveness, subjects in the strict category did not have the highest mean COF score in the third micro rehearsal. Perhaps the oppositional and strict behaviors associated with strict interpersonal communication styles are also reflected in conducting technique. Strict teachers may have stricter and less expressive conducting technique and gestures. According to Byo and Austin (1994), expert conductors spend significantly more time conducting expressively and less time in neutral patterns. Strict subjects involved in the present study may have displayed strict, non-expressive conducting technique. Consequently, since the COF measures conductor technique, strict interpersonal communication style subjects have not have scored very high on the COF. Further
research is needed to study strict teachers and their similarities and differences in teaching and conducting effectiveness over time.

Results of data analyses of the subjects in the understanding interpersonal communication style and mean COF scores were in contrast to the results using mean STE scores. Subjects having an understanding interpersonal communication style had the second highest gain in mean COF scores between the first and third micro rehearsals. Also, the mean COF score for the understanding profile for the third micro rehearsal was the highest of the three communication profiles identified in the study. Subjects with the understanding interpersonal communication style were the most effective conductors in the third micro rehearsal. Since the understanding profile is classified as submissive and cooperative, it may be that the submissive and cooperative behaviors of understanding teachers are more conducive to becoming effective conductors. Perhaps submissive teachers feel uncomfortable controlling teacher-student communication or verbal communication which is helpful in teaching effectiveness and are more comfortable controlling their own abilities or nonverbal communication which may be helpful in developing conducting technique. Subjects having an understanding interpersonal communication style may have strong nonverbal communication skills such as eye contact, expressive gestures, facial expressions, variation in proximity to students. Roshong (1978), Yarbrough (1975), Byo and Austin (1994), and Sousa (1988) have listed such nonverbal communication skills as some of the most common and most effective nonverbal communication skills of a conductor. Future research is needed to
investigate nonverbal communication skills of conductors and their relationship to interpersonal communication skills and conducting effectiveness.

In summary, mean COF scores of subjects in the helpful/friendly, understanding, and strict interpersonal communication style profiles improved from the first micro rehearsal to the third micro rehearsal. It would seem that with instruction, music education students having any of the three interpersonal communication style profiles involved in the present study would become better conductors. Subjects profiled as helpful/friendly may improve their conducting skills the most, but may not be as effective as either the subjects profiled as understanding or subjects profiled as strict. Subjects classified as strict displayed the least improvement in their conducting effectiveness. They also had a final COF score that was between the helpful/friendly and understanding students' scores. Subjects identified as understanding may be the most effective conductors over time with a moderate amount of improvement from beginning to end.

**Relationship Between Subject’s Ideal Interpersonal Communication Style and Perceived Interpersonal Communication Style**

After statistical analysis, it was determined that there was a low (quotient of agreement = .10) degree of association between subject’s ideal interpersonal communication style and perceived interpersonal communication style profile.
Primary HO\textsubscript{3} Hypothesis

HO\textsubscript{3} There is no moderate (quotient of agreement > .50) degree of association between self-reported ideal interpersonal communication style and perceived interpersonal communication style

Since subjects in the present study were music education students, a low degree of association between self-reported ideal interpersonal communication style and perceived interpersonal communication style may have been due to a lack of teaching and conducting experience among subjects. Levy et al. (1997) reported that teachers rarely perceive their interpersonal communication skills as their student’s perceive them. Levy et al. (1997) suggests that the introduction feedback and development of interpersonal communication skills into teacher education programs may help preservice teacher better identify their interpersonal communication skills as others perceive their interpersonal communication skills. A future study involving use of the QTI throughout music education curriculum could investigate whether or not use of the QTI helps students identify their interpersonal communication skills as others perceive their interpersonal communication skills.

What has been found from this study can be summarized as follows. Music education students perceived as having helpful/friendly, strict, or understanding interpersonal communication profiles increased in both teaching effectiveness and conducting effectiveness over time. Subjects classified as helpful/friendly showed the greatest gain in both teaching and conducting effectiveness from the first micro rehearsal to the third micro rehearsal. Subjects having understanding interpersonal
communication style profiles displayed the least amount of improvement in mean STE scores from the first micro rehearsal to the third micro rehearsal and subjects having strict interpersonal communication style profiles displayed the least amount of improvement in mean COF scores from the first micro rehearsal to the third micro rehearsal. Subjects classified as strict displayed the highest mean teaching effectiveness scores for the third micro rehearsal while subjects classified as understanding displayed the highest mean conducting effectiveness scores for the third micro rehearsal. Music education students’ ideal interpersonal communication style profiles did not agree with their perceived interpersonal communication style profiles.

**Implications**

Implications from this study can be applied on many levels. Results from the present study can benefit music education students, classroom music teachers, and university music educators. Music education students can use the measurement tools employed in the present study in the development of their own teaching and conducting effectiveness. For example, it may be beneficial for music education students to use the QTI because they may lack awareness of their interpersonal skills or feel ill equipped to discuss interpersonal skills in the context of the classroom. Music education students can use the QTI to survey their ideal interpersonal communication skills and compare that to what their peers, students, and instructors perceive their interpersonal communication skills to be. Students would need to obtain permission from classroom instructors to use the QTI. Music education students would then administer the QTI to students or peers in any teaching situations that the music education students are
involved in. The QTI would be most useful in teaching situations where there are at least 10 students or peers to complete the QTI and in teaching situations where the music education students has taught at least 3 or more times for at least 10 minutes. Music education students would also complete the QTI using their ideal responses to determine their ideal interpersonal communication style. After scoring the QTI, music education students could possibly have information concerning their interpersonal communication style from three different sources; peers, students, and him/herself. The interpersonal communication style results from the three difference sources could be compared and analyzed to determine if there were particular interpersonal communication skills that needed attention. Music education students could then design a plan of action to develop specific interpersonal skills that students felt needed attention. Music education students could then use the QTI throughout their undergraduate career to track progress, change in their perceived and ideal interpersonal skills, and interpersonal skills in various contexts. The QTI provides a solid theoretical framework to measure, discuss, and develop individual interpersonal communication skills.

Since it was found that in the present study strict subjects were the most effective teachers, music education students may want to use QTI results from peers and students to track their progress toward development of strict interpersonal communication skills. It was also determined in the present study that dominant and cooperative interpersonal communication skills were beneficial skills to have in classroom learning situations. If a music education student administered the QTI to
his/her peers and it was determined that he/she was submissive and oppositional, the QTI would provide a framework from which to measure the student’s progress toward more dominant and cooperative behaviors in the classroom. The result may be that students increase their teaching and conducting effectiveness at a higher rate and experience more success in the classroom.

The STE and COF may be used by music education students in the form of reflective practice. Students can use teaching opportunities throughout their studies, whether field practice or peer teaching, to videotape themselves teaching and conducting in various contexts. Students would then complete the STE and COF while reviewing the videotape. Not only would students have a framework from which to evaluate their own teaching and conducting, but students could gain more insight into effective teaching and conducting skills simply by reviewing the STE and COF. By completing the STE and COF on themselves, students would be constantly reminded of the skills needed to score high on these evaluation instruments, and thus could incorporate these skills in preparation for future teaching and conducting episodes.

Classroom music teachers can use the QTI, STE, COF, and forms of assessment regarding student outcome or teacher outcome to improve their teaching effectiveness, conducting effectiveness, and student outcome. If classroom music teachers administer the QTI to their students, teachers can correlate results with student outcome assessments to determine specifically which interpersonal communication skills are helpful for certain student outcomes. For example, a high school band director may administer the QTI to his/her symphonic band and determine his/her perceived
interpersonal communication style. The band director can also administer a simple questionnaire asking the students to rate from 1 (Low) to 5 (High) various items related to student outcome such as: how much do you feel you have learned in this course; what is the likelihood of you enrolling in symphonic band next year; rate how much you enjoy this course. By administering the QTI and the same questionnaire in subsequent semesters, the band director can determine if there seems to be relationships between certain interpersonal skills and items on the questionnaire. The band director could also administer the QTI and the same questionnaire in his/her other classes to see if his/her interpersonal communication style changes with different students and determine if answers to items on the questionnaire concerning student outcome change with the interpersonal communication style. The band director may find that the symphonic band perceives him/her as admonishing and the students do not feel that they are learning very much in the ensemble. The band director could then design a plan of action to develop his/her interpersonal communication style and repeat the procedure. The band director can then track changes in interpersonal communication style and changes in student outcome. There are many other types of student outcome assessments that can be used including teacher-designed questionnaires, teacher-designed tests, standardized music assessments, ensemble ratings from festival, and teacher retention rates.

The STE and COF can be used by qualified independent observers along with the QTI and student outcome assessments as professional development tools to continue developing the teacher’s skills in the classroom. Department or district music coordinators may want to have music teachers administer the QTI to a particular class
while the coordinator completes the STE and COF during a scheduled time for teacher observation. Teachers and coordinators can discuss results, determine correlations over time, and develop a plan of action for areas that need attention. The teacher and coordinator may determine that the teacher needs to have more of a leadership interpersonal communication style for a particular class while another class may need more of a strict interpersonal communication style. The result of using the QTI, STE, COF, and forms of student outcome assessment can be an effective method for gathering data regarding interpersonal communication skills, teacher skills and student outcome.

University music educators can use this study as a reference in construction of a music education curriculum that includes the discussion, assessment, and development of interpersonal communication skills in teacher education classes. The QTI, STE, and COF can specifically be used as assessment and measurement tools in the music education curriculum. For example, identification of a particular music education student’s interpersonal communication style profile would allow university music educators the ability to target the development of interpersonal communication skills that need attention. Students perceived to be submissive or oppositional might need to work on becoming more dominant and cooperative, especially since it was found that strict teachers are more effective teachers than teachers having helpful/friendly or understanding interpersonal communication style profiles. It was determined in the present study that students having dominant and cooperative interpersonal communication styles improve their conducting and teaching effectiveness more
quickly than other interpersonal communication styles. University music educators may want to teach dominant and cooperative interpersonal communication skills to their students that in turn may help students increase their teaching and conducting effectiveness more quickly. Development of all interpersonal communication skill profiles (leadership, helpful/friendly, understanding, student responsibility/freedom, uncertain, dissatisfied, admonishing, strict) would afford the student a well-rounded vocabulary of behaviors in each of the eight interpersonal communication style profiles. By using the QTI in music education curriculum, university music educators can teach students how and when to use certain interpersonal communication skills. The ability to choose the appropriate interpersonal communication skills for particular classroom learning situations may result in fewer classroom management problems, higher student cognitive and affective student outcome, and more teacher job satisfaction.

University music educators can use the STE and COF for teaching observations of student during field practice, peer teaching, and student teaching. Using both forms simultaneously can help both instructors and students determine what skills need attention. For example, a student may score high on the STE, specifically a student may receive high scores on the lesson planning and presentation section; however, the student may receive low conducting effectiveness scores. Analyzation of such scores might mean the student needs to work on conducting technique. As the student works on conducting technique in future teaching opportunities, the instructor can use both the STE and COF to track results toward that goal and also to ensure that STE scores do not go down while working on conducting effectiveness.
There are many implications from the present study for further research in the area of interpersonal communication skills, teaching effectiveness, and conducting effectiveness. Future researchers could investigate whether or not particular interpersonal communication skills can be developed in music education students and how best to approach this task. For example, if music education students are perceived as being admonishing, can helpful/friendly or other interpersonal communication skills be developed? If interpersonal communication skills can be developed, how does one best approach this task? Another study could involve researchers investigating interpersonal communication skills and student outcome. Do music teachers with certain interpersonal communication style profiles have higher outcomes on cognitive or affective student assessments? Research could also be done to study what types of interpersonal communication skills and profiles are most effective in various ensemble and music teaching situations. Since a music teacher often has many different classes throughout the day (beginning band, high school band, music appreciation, jazz band), perhaps teachers may need to use different interpersonal communication skills in each specific context.

If this study were to be replicated, steps could be taken to strengthen the study. A larger sample would allow the researcher to more effectively study the relationships between interpersonal communication styles, teaching effectiveness, and conducting effectiveness in the following manner. A larger sample size may increase study reliability and change study outcomes. In the present study only 3 of 8 interpersonal communication styles were identified among subjects, increasing the sample size would
allow the researcher to identify subjects in other interpersonal communication style profiles. All eight interpersonal communication style profiles must be studied in order to better understand the relationship between interpersonal communication styles, teaching effectiveness, and conducting effectiveness.

Having the subjects conduct rehearsals of middle or high school ensembles rather than ensembles made up of other music education students could also strengthen reliability. Public school music ensembles may be able to evaluate the subjects more objectively where ensembles of music education students may allow personal feelings to interfere with subject evaluation. One method of strengthening the reliability in such a manner may be to use student teachers that are conducting public school ensembles.

Research into the acquisition, development, and relationship of interpersonal communication skills to teaching and conducting effectiveness of music educators is strongly encouraged. Such research can help music educators and music students understand and develop their interpersonal communication skills in the classroom. Interpersonal communication skills research can help teachers or students who seem to have natural teaching ability determine what interpersonal communication skills and skills regarding teaching and conducting effectiveness contribute to their success. It is important for excellent teachers to know what they are doing well so they may continue to improve and target weak areas of their teaching skills. Teachers or students who feel awkward in the classroom can use the QTI, STE, and COF to determine areas that need attention.
Discussion and development of interpersonal communication skills in music education curriculum may be quite personal and somewhat awkward to implement. It is important to continue research in interpersonal communication skills and music education so that practitioners may have a foundation to discuss, develop, and implement interpersonal skills curriculum based on research rather than intuition.
APPENDIX A

Questionnaire on Teacher Interaction
The purpose of this research project is to determine if a significant relationship exists between the interpersonal skills and teaching effectiveness of undergraduate instrumental conducting students. You could gain skills that may be beneficial to increased teaching effectiveness in the instrumental conducting environment. No time outside of class is required for you to participate in this project. By completing this questionnaire, you are granting consent for use of this information.

**Demographic Information**
Place an “x” next to the correct answer for the following 6 items concerning your demographic information.

1. **Your Gender**
   - [ ] Male
   - [ ] Female

2. **Your Age:**
   - [ ] 18 years old
   - [ ] 19 years old
   - [ ] 20 years old
   - [ ] 21 years old
   - [ ] Over 22 years old

3. **Your Grade Level:**
   - [ ] Freshmen
   - [ ] Sophomore
   - [ ] Junior
   - [ ] Senior
   - [ ] Graduate Student

4. **The most recent grade you received from your teacher IN THIS CLASS**
   - [ ] Have not received a grade
   - [ ] A, A-
   - [ ] B, B+, B-
   - [ ] C, C+, C-
   - [ ] D, D+, D-
   - [ ] Lower than D
   - [ ] Other

5. **Country or Region in which you were born:**
   - [ ] USA
   - [ ] Latin America
   - [ ] Southeast Asia
   - [ ] Korea
   - [ ] Vietnam
   - [ ] Japan - China
   - [ ] Another country in
   - [ ] Iran - Iraq -
   - [ ] Other

6. **If you were NOT born in the USA, how long have you lived here?**
   - [ ] Less than 1 year
   - [ ] 1-3 years
   - [ ] 3-5 years
   - [ ] 5-10 years
   - [ ] more than 10 years
Questionnaire on Teacher Interaction

On the next page you will find 64 sentences. For each sentence, circle the letter that most applies to the teacher of this class.

For example:

This teacher explains things clearly

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you think that your teacher *always* explains things clearly, circle letter E. If you think your teacher *never* explains things clearly, circle letter A. You can also choose letters B, C, D, which are in between. If you want to change your answer after you’ve circled a letter, please erase completely. Thank you for your cooperation. PLEASE BEGIN.

1. This teacher is strict.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. We have to be silent in this teacher’s class.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

3. This teacher talks enthusiastically about his/her subject.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
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<td></td>
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</tbody>
</table>

4. This teacher trusts us.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

5. This teacher is concerned when we do not understand.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

6. If we don’t agree with this teacher we can talk about it.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<tr>
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</tbody>
</table>

7. This teacher threatens to punish us.

<table>
<thead>
<tr>
<th>Never</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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</tr>
</tbody>
</table>
8. We can decide some things in his/her class.

9. This teacher is demanding.

10. This teacher thinks we cheat.

11. This teacher is willing to explain things again.

12. This teacher thinks we don’t know anything.

13. If we want something this teacher is willing to cooperate.

14. This teacher’s tests are hard.

15. This teacher helps us with our work

16. This teacher gets angry unexpectedly.

17. If we have something to say this teacher will listen

18. This teacher sympathizes with us.

19. This teacher tries to make us look foolish

20. This teacher’s standards are very high.

21. We can influence this teacher
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Never</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>We need this teacher’s permission before we speak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>This teacher seems uncertain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>This teacher looks down on us.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>In this teacher’s class we can choose what we want to work on.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>This teacher is unhappy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>This teacher lets us fool around in class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>This teacher hurts our feelings by making fun of us.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>This teacher cares about us.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>This teacher thinks we can’t do things well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>This teacher explains things clearly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>This teacher knows when we don’t understand.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>This teacher lets us get away with a lot in class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>This teacher is hesitant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>This teacher is friendly.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
36. We learn a lot from this teacher. Never Always
   A   B   C   D   E
37. This teacher is someone we can depend on. Never Always
   A   B   C   D   E
38. This teacher gets angry quickly. Never Always
   A   B   C   D   E
39. This teacher acts as if he/she does not know what to do. Never Always
   A   B   C   D   E
40. This teacher holds our attention. Never Always
   A   B   C   D   E
41. This teacher’s too quick to correct us when we break a rule. Never Always
   A   B   C   D   E
42. This teacher lets us push him/her around. Never Always
   A   B   C   D   E
43. This teacher is impatient. Never Always
   A   B   C   D   E
44. This teacher’s not sure what to do when we fool around. Never Always
   A   B   C   D   E
45. This teacher knows everything that goes on in the classroom. Never Always
   A   B   C   D   E
46. It’s easy to make a fool out of this teacher. Never Always
   A   B   C   D   E
47. This teacher has a sense of humor. Never Always
   A   B   C   D   E
|   | 48. This teacher allows us a lot of choice in what we study. |   | 49. This teacher gives us a lot of free time in class. |   | 50. This teacher can take a joke. |   | 51. This teacher has a bad temper. |   | 52. This teacher is a good leader. |   | 53. If we don’t finish our homework we’re scared to go to this teacher’s class. |   | 54. This teacher seems dissatisfied. |   | 55. This teacher is shy. |   | 56. This teacher is patient. |   | 57. This teacher is strict when grading our work. |   | 58. This teacher is suspicious of us. |   | 59. It is easy to pick a fight with this teacher. |   | 60. This teacher’s class is pleasant. |   | 61. We are afraid of this teacher. |   | 62. This teacher acts confidently. |
|   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |   | Never | A | B | C | D | E | Always |
63. This teacher is sarcastic.

64. This teacher is lenient.
APPENDIX B

Survey of Teaching Effectiveness
**Survey of Teaching Effectiveness**

### I. LESSON DELIVERY SKILLS (Weighted 40%)

**POSTURE**

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Head &amp; Body:</td>
<td>&quot;Excellent&quot; = Head lifted and centered; body lifted, relaxed, and poised</td>
<td>&quot;Poor&quot; = Head forward or to one side; body rigid or slouched</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>Excellent</td>
</tr>
<tr>
<td>B. Arms &amp; Hands:</td>
<td>&quot;Excellent&quot; = Normally relaxed with flowing gestures</td>
<td>&quot;Poor&quot; = Hand(s) in Pocket(s), fidgeting/wrinking or clenched; arms crossed front or back</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>C. Legs:</td>
<td>&quot;Excellent&quot; = Balanced; weight equally distributed</td>
<td>&quot;Poor&quot; = Crossed; locked knees; swaying; leaning on one leg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**EYE CONTACT**

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Excellent&quot; = Movement about room with individual eye contact</td>
<td>&quot;Poor&quot; = Locked; staring; looking over heads or at floor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GESTURES**

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Hands &amp; Arms:</td>
<td>&quot;Excellent&quot; = Natural, flowing; appropriate for spoken content</td>
<td>&quot;Poor&quot; = Absence of gestures; mechanical; inappropriate and/or contrived</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>B. Upper &amp; Lower Body:</td>
<td>&quot;Excellent&quot; = Change of stance, varying proximity to group/individuals; upper body directional change</td>
<td>&quot;Poor&quot; = Absence of movement; nervous pacing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**FACIAL EXPRESSION**

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Excellent&quot; = Naturally varying; unconstrained changes of eyes, mouth and facial muscles</td>
<td>&quot;Poor&quot; = Absence of variation; exaggerated and/or contrived</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

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VOCAL INFLECTION

A. Dynamics:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Comfortably and easily understood; naturally varying with appropriate accents and emphasis
"Poor" = Too soft to hear; uncomfortably loud; forced from the throat; static

B. Tempo & Phrasing:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Comprehensible pace with moderate variations and appropriate pauses for emphasis
"Poor" = Too fast for comprehension; too slow for interest; fixed tempo with lack of pauses

C. Pitch:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Natural variations for emphasis; voice is pitched for teacher/student listening comfort and ease i.e. predominantly in lower third of range
"Poor" = No variation; contrived; speaking predominantly in upper two-thirds of range

B. Diction:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Clearly articulated vowels and consonants; projected and resonating; easy to understand
"Poor" = Placed in back of throat, swallowing words; lack of resonance; lazy tongue and lips

II. PLANNING & PRESENTATION OF LESSON (Weighted 60%)

EVIDENCE OF LESSON PLANNING

A. Content:

1a. Materials - Appropriate Music:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Music appropriate for the age and ability of the students
"Poor" = Music not appropriate for students

1b. Materials - Music & Concept:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Music exemplary of the concept being developed
"Poor" = Music unrelated to concept; poor example

1c. Materials - Supportive:

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

"Excellent" = Used appropriate supportive materials i.e., charts, recordings, video-taped presentations, computers, pictures
"Poor" = Materials unrelated to concept; poor materials

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A. Content Continued:

2. Objectives:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Determined appropriate objectives; students were made aware of objectives
"Poor" = Objectives were not appropriate; students were unaware of lesson objective focus

B. Organization:

1a. Activities - Type:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Type of activities were appropriate for students' age and skill and/or for number of students in the setting
"Poor" = Inappropriate activities for students' abilities, age, or for the number of students in the setting

1b. Activities - Number:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Number of activities were appropriate for students' age, skill, and for the length of the class; each activity was of appropriate length
"Poor" = Inappropriate number of activities for students, situation, and setting; inappropriate length of activities

1c. Activities - Sequencing:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Activities were sequenced logically
"Poor" = Lack of order and/or flow of activities; activities missing in learning sequence

SUBJECT MATTER COMPETENCE

A. Information & Demonstrations:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Presented correct information; accurate demonstrations
"Poor" = Presented incorrect, contradictory, or misleading information; did not or could not accurately demonstrate i.e., clapped or sang incorrect rhythms; did not demonstrate or provide information

B. Musical Model:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Expressive and accurate i.e., attention to phrasing
"Poor" = Nonexpressive, incorrect or inappropriate modeling; no modeling evidenced

C. Conducting:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Appropriate gestures for the group and the situation
"Poor" = Inappropriate gestures or not evidenced

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PACING

A. **Logistics:**

*Excellent* = Organized, orderly; evidence of student learned logistics i.e., students get instruments or books quickly, efficiently, quietly and return to their seats and continue to prepare and ready themselves for the rehearsal/class.

*Poor* = Chaos; students have no planned routine(s) that enable them to prepare for rehearsal/class.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

B. **"On-Task":**

*Excellent* = Class began and ended promptly, wasted time minimal, time effectively utilized; definite closure to lesson.

*Poor* = Class began late, students released late and students hurriedly put away instruments/equipment/materials; time not utilized effectively; class ended without closure.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

C. **Flow:**

*Excellent* = Appropriate balance between teacher directives/explanations and student participation; one activity led to another without interruptions or breaks.

*Poor* = Teacher talked too much; too much time spent going from one activity to another; long, disruptive breaks between and within activities.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

D. **Responsiveness to Group:**

*Excellent* = Teacher responded appropriately to group and individual musical/technical needs and problems.

*Poor* = Teacher was unaware of, did not respond, or responded inappropriately to group or individual musical/technical needs and problems.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

SEQUENCING PATTERN/REHEARSAL CYCLE

A. **Directive:**

*Excellent* = Specific directive identifying task to be accomplished.

*Poor* = Non-specific directive with no specific task to be accomplished.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

A. **Feedback:**

*Excellent* = Specific positive or negative feedback provided; utilized student ideas and comments when/where applicable.

*Poor* = No feedback or non-specific feedback provided.

| Poor | 1 | 2 | 3 | 4 | Excellent | 5 |

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TEACHING STYLE

A. Charisma, Energy, Confidence, Enthusiasm

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Secure, animated; captured student attention and interest
"Poor" = Sluggish, lethargic, insecure; students were bored or disinterested

B. Interest Shown in Students/Topic:

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Sincere; interest evident in student welfare and topic presented
"Poor" = Lacked sincerity; interest in student or topic not evident; "only went through the motions"

C. Supports and Encourages Students' Efforts

<table>
<thead>
<tr>
<th>Poor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Excellent</th>
<th>5</th>
</tr>
</thead>
</table>

"Excellent" = Sincere praise provided; emphasized positive aspects of student efforts; constructive suggestions and comments provided
"Poor" = Sarcastic; belittled students and students' efforts; emphasized negative aspects of student efforts; contrived praise

**Evaluation Totals**

**Part I**
- Posture
- Eye Contact
- Gestures
- Facial Expression
- Vocal Inflection

\[ \text{Total of Part I} \times 2 \times .40 = \]

**Part II**
- Evidence of Lesson Planning
- Subject Matter Competence
- Pacing
- Sequencing Pattern
- Teaching Style

\[ \text{Total of Part II} \times 2 \times .60 = \]

**Total Score** = Total of Part I + Total of Part II

Total Score Range: 10 Ineffective - 50 Extremely Effective

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APPENDIX C

Conducting Observation Form

POSTURE
A. Head and Body: (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Feet approximately shoulder width apart, weight evenly distributed between both feet, body erect, shoulders relaxed
   “Poor” = Slouched, leaning to one side, head down, shoulders hunched, excessive movement

B. Arm and Baton Position: (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Firm but flexible grip, fingers naturally curved, palm faces downward, arms raised and visible, elbows away from body
   “Poor” = Tense fingers, palm faces to the side, baton extends up or down, arms not visible, elbows tucked in to body

EYE CONTACT (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Moves about ensemble with held individual eye contact, maintains eye contact during instruction & conducting
   “Poor” = Only scans ensemble, eyes averted during instruction & conducting, favors a particular part of room or ensemble

FACIAL EXPRESSION (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Sincere and natural during instruction, matches mood and style of music while conducting, encourages stylistic performance
   “Poor” = Absence of facial expression, insincere or contrived, does not match mood or style of music, discouraging

VOCAL INFLECTION (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Easily understood, natural variation, implies energy & enthusiasm, articulate, precise, descriptive
   “Poor” = Monotone, speaks too fast or slow, slurred speech, implies lack of energy & enthusiasm, too much talking, rambling

PREPARATORY POSITION & PREPARATORY BEAT (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Baton in correct position for preparation, visual scan for readiness, correct tempo, dynamic & style, eye contact maintained
   “Poor” = Moving too quickly from preparatory position to downbeat, no eye contact, incorrect tempo, dynamic, or style

BEAT PLANE & PATTERNS
A. Vertical Plane: (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Approximately centered between waist and chest level, beat plane slightly away from body,
   “Poor” = Beat plane below waist or above chest, too close to body or excessive extension

B. Horizontal Plane: (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Basic horizontal plane is centered between shoulders with room for wider or narrower range of motion
   “Poor” = Basic horizontal plane is wider than shoulder width or much narrower than shoulder width

C. Ictus (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Clear, defined by the tip of the baton, matches style of music, given exactly in time, each ictus is even and steady
   “Poor” = Unclear, defined by wrist or another part of arm, ictus is out of time, incorrect style, uneven

D. Rebound (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Appropriate for style and dynamic of music, does not obscure beat pattern
   “Poor” = Inappropriate for style and dynamic of music, excessive rebound or subdivision

LEFT HAND
A. Technique: (Poor) 1 2 3 4 5 (Excellent)
   “Excellent” = Independent of right hand, fingers look natural, beside body when not in use, implies correct style, dynamic, & phrasing
“Poor” = Lacks independence, jerky movement, hand looks tense or unnatural, drifts when not in use, implies incorrect style, dynamics

B. Use: (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Used for mirroring, dynamics, balance, cues, phrasing, & nuance
“Poor” = Lack of variety of use of left hand

CUES (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Establishes and maintains eye contact, given in appropriate preparation, style, dynamic, & tempo, clear, variety of delivery
“Poor” = Lack of cues, unclear, lacks variety of delivery, no eye contact, incorrect style, dynamic, or tempo, no preparation

KNOWLEDGE OF SCORE (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Head is out of score, correctly interprets terms used in score, gives correct transpositions, accurate when modeling
“Poor” = Head buried in score, incorrect interpretation of terms, inaccurate transpositions, inaccurate modeling

INTERPRETATION (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Appropriate to style period and composer intent, reflects character of music
“Poor” = Inappropriate to style period and composer intent, over-romanticized, under-romanticized, lack of character & phrasing

RAPPOR WITH ENSEMBLE
A. Charisma (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Establishes excellent rapport with students on a professional level, provides stimulating and/or self actualizing learning environment
“Poor” = Tries to be “chummy” with students, lack of leadership, learning environment is overcontrolled,

B. Energy & Enthusiasm (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Animated, sincere, presents self as focused and interested in rehearsal
“Poor” = Sluggish, tiring, presents self as unfocused or not interested in rehearsal or ensemble

C. Confidence (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Secure, non-threatening, relaxed
“Poor” = Insecure, threatening behavior or demeanor,

D. Communication (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Gives positive feedback, interest in student achievement, evokes student attention & motivation
“Poor” = Negative, disinterested in students, evokes misunderstandings, ensemble feels belittled, bored, or unappreciated

REHEARSAL TECHNIQUE
A. Pacing (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Begins rehearsal promptly, stops for significant reasons, language is concise and informative
“Poor” = Spends too much time one aspect of rehearsal, moves too quickly without giving students opportunity for improvement

B. Feedback (Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Positive, given with instruction for improvement, given both verbally and nonverbally, given in a complete cycle
“Poor” = Negative, admonishing, no instruction for improvement, only given when errors occur

C. Error Detection ( Poor) 1 2 3 4 5 (Excellent)
“Excellent” = Detects errors among full ensemble sonority, detects errors with reference to musical direction
“Poor” = Can only detect errors when parts are isolated, only detects errors in technique

Total Score _______________
APPENDIX D
QTI PERMISSION CORRESPONDENCE

Subject:
Re: Questionnaire on Teacher Interaction

Date:
8/14/2002 4:59:55 AM Eastern Daylight Time

From:
<jlevy@gmu.edu>

To:

ternesl@netscape.net (lisa ternes)

Cc:
P.denBrok@IVLOS.UU.NL, th.wubbels@fss.uu.nl

Attachment:

jlevy.vcf

Lisa: Thanks for your interest in our work. I will refer you to Dr. Perry den Brok, of Utrecht State University in The Netherlands. Perry recently completed an excellent dissertation using the QTI, and has also done an extensive lit review on it. Perry will be able to assist you with any questions you might have. Perry's email address is P.denBrok@IVLOS.UU.NL.

We welcome your use of the QTI in your dissertation - we just ask that you share the results with us.

Best of luck.

Jack Levy
REFERENCES


Den Brok, P. J. (2001). *Teaching and student outcomes: a study on teachers’ thoughts and actions from an interpersonal and a learning activities perspective.* Nijmegen, Netherlands: Perry den Brok.


