Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-Evaluation, Teacher Observation, and Performance-Oriented Instructional Approaches on Teacher Behaviors and Pupil Responses.

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PREPARING UNDERGRADUATE MUSIC MAJORS TO TEACH BEGINNING INSTRUMENTALISTS: THE EFFECTS OF SELF-EVALUATION, TEACHER OBSERVATION, AND PERFORMANCE ORIENTED INSTRUCTIONAL APPROACHES ON TEACHER BEHAVIORS AND PUPIL RESPONSES

A Dissertation

Submitted to Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The School of Music

by

Leigh-Ann Marie Lethco
B.M., Ohio University, 1988
M.M., Ohio University, 1992
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ABSTRACT

The purpose of this study was to investigate the effects of three approaches to training preservice instrumental music teachers (N = 22) for initial teaching experiences involving beginning instrumentalists (N = 22). The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced instrumental music teachers, and a third evidencing a performance orientation—were administered as a four-week treatment phase in an undergraduate brass techniques course. Primarily, this study was designed to answer the question: Did instructional approach differentially affect teacher behavior across two private lessons?

Teacher (subject) and pupil behaviors were documented and categorized according to various aspects of subject/pupil activity, subject verbalizations, successful/unsuccessful performance trials, and subjects’ secondary instrument (trumpet or trombone) performance competency. In addition, subject and pupil post-treatment attitudes were assessed.

Following the treatment phase, subjects taught two lessons to beginning band pupils. Forty-four lessons (totaling more than 1,000 minutes and averaging roughly 24 minutes) were videotaped and analyzed.

Certain lesson activities were timed using the behavioral observation computer application, SCRIBE. Results indicated that the self-evaluation group engaged their pupils in performance activity 44.76% of
the time, which was significantly more than the teacher observation and performance orientation groups.

Using verbatim transcripts of lessons, subject verbalizations were labeled as academic information, direction-giving, information-gathering, or off-task remarks. Pupil responses were categorized as successful, unsuccessful, or no response. Overall subjects used academic verbalizations three times more than they used direction verbalizations. When pupil responses were preceded by subject verbalizations that were subject matter rich, pupils were more likely to respond successfully than when verbalizations were subject matter neutral, as in direction-giving ($p < .0001$). There were no treatment group differences with regard to subject verbalization and pupil responses.

Subjects’ ability to perform on the secondary instruments studied during treatment was determined by three independent judges. Results indicated no significant differences among treatment groups or between major instruments (brass and non-brass). Further, regardless of treatment, subjects’ attitudes toward treatment were overwhelmingly positive.
CHAPTER 1
STATEMENT OF THE PROBLEM AND REVIEW OF LITERATURE

Statement of the Problem

In order to fulfill requirements for teacher certification, instrumental music education majors are required to complete courses focusing on the secondary instruments, that is, woodwind, brass, percussion, and string instruments other than the individual student's primary instrument (National Association of Schools of Music, 1997). From one institution of higher learning to the next, the format of these courses varies from single family courses (e.g., woodwind techniques) to split family courses (e.g., upper strings, lower strings) to private instruction (applied lessons). Regardless of format, course goals generally address some combination of the following three areas: (a) Students are expected to demonstrate fundamental knowledge of the instruments (e.g., terminology, basic acoustics, transposition, intonation tendencies, reeds/mouthpieces, bowing styles); (b) students are expected to demonstrate the ability to play one or more of the instruments at a minimally competent level commensurate with the amount of course time dedicated to each instrument; and (c) students are expected to demonstrate the ability to apply pedagogy-oriented instruction and experiences to authentic teaching settings involving, in particular, beginning instrumentalists.
The extent to which students meet these expectations is dependent in part on whether sufficient opportunity to do so exists. Opportunity to acquire fundamental knowledge seems readily available from instructors with subject matter expertise and textbooks designed to impart this type of knowledge in considerable detail (Berliner, 1986). Opportunity to develop secondary instrument performance skill exists at institutions equipped with the resources to provide instruments to students for home practice and where instructors structure significant, hands-on experiences with the instruments.

Opportunity for preservice teachers to apply knowledge, that is, to practice making connections between university classroom instruction and authentic teaching settings, though, seems less readily accessible. This "how-to-teach" part of the course, some might say, is incomplete without the presence of human "practice" subjects, whose availability may not be convenient or even possible.

One of the benchmarks indicative of success as a school-based instrumental music teacher is one's ability to work effectively with beginning level instrumentalists. The teacher's ability to structure successful first-year experiences in instrumental music performance can have long term positive impact on student achievement and attitude (Bruner, 1960). It is therefore imperative that preservice teachers have opportunities to view the "theory" of the university classroom in the
context of how it can be used or how it might need to be adapted in actual practice. It is the bridging of this gap between classroom theory and field-based practice that is the focus of this dissertation.

Given the diversity of interests and expertise among those who teach secondary instrument courses and a scant research literature to guide thought, pedagogical approaches vary (Hall, Boone, Grashel, & Watkins, 1997). In an approach heavily oriented toward performance, the goal is to make preservice teachers the best players possible. It is perhaps assumed that solid performance skills will lay the groundwork from which development of teaching skills will emerge. In another approach, instructors incorporate observations of exemplary instrumental music teachers in addition to promoting skill development on the instruments. It is assumed that live or videotaped observations and discussion related to the observed teacher promote a connection between the university course experience and authentic teaching. In a third approach, preservice teachers might be given opportunities to apply knowledge in the peer teaching environment. Alternatively, arrangements might be made for public and private school students to be available to preservice teachers for teaching practice. A final approach to instruction in the secondary instrument course might entail preservice teacher self-observation and self-evaluation of performance under the assumption that a well developed ability to identify and diagnose one's own secondary
instrument performance strengths and weaknesses might be a necessary precursor to identifying and diagnosing the performance attributes of others in the teaching setting.

These pedagogical options beg the question—what are the effects on the performance and teaching behaviors of preservice music teachers and the performance of their pupils? Although one or some combination of these teaching approaches represent the format of many university secondary instrument courses, there is no empirical evidence to support one over the other or to suggest a most effective combination. Moreover, there is a paucity of research that might guide thought with regard to instructional approach in the secondary instrumental course. Given this general lack of pertinent research, the ubiquity of these courses in music education curricula, and the finite amount of time available in the curriculum to accomplish secondary instrument skill, knowledge, and application goals, there is a clear need for research that examines pedagogical options.

Therefore, the purpose of this study was to investigate the effects of three approaches to training preservice instrumental music teachers for initial teaching experiences with beginning instrumentalists. The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced teachers, and a third evidencing a performance orientation—were administered in an undergraduate brass
techniques course. Primarily, this study was designed to answer the question: Does instructional approach differentially affect teacher behavior across two private lessons to elementary instrumentalists? Toward this end, teacher (subject) and pupil behavior was documented and categorized according to various aspects of subject/pupil lesson activity, various aspects of subject verbalizations, successful/unsuccessful performance trials, and subjects' secondary instrument performance competency. In addition subject and pupil post-treatment attitudes were assessed.

Review of Literature

Introduction

The literature addressing teaching and learning in the secondary instrumental techniques course is scant. The approaches to teaching/learning under investigation in the present study—one focusing on student self-evaluation, another focusing on student observation of model instrumental music teachers, and a third focusing strictly on instrumental performance techniques—have been investigated in a variety of contexts but not in the setting of the secondary instrumental techniques course.

Given the fact that this investigation deals with an attempt to lead students to effective teaching, this review of literature will begin with an overview of research related to teacher effectiveness in music education. While this is not a dissertation on teacher effectiveness, independent and
dependent variables were selected in order to find ways to enhance preservice music teacher preparation. Following this, experimental and descriptive research related to instrumental techniques courses will be examined. Although not directly related to technique courses, several studies related to course content will be included under this section.

Given the central position of teacher observation and self-evaluation as independent variables in this study, literature in these areas will be considered. This section includes reference to self-as-a-model research outside the field of music education because aspects of this approach are employed in one of the experimental treatments.

In order to make a case for the importance of applicable course content and means of presenting content so that students make connections between content and teaching, the areas of transfer and authentic assessment/authentic field experiences will be reviewed. Metacognitive thinking and its importance in learning is included in the section focusing on transfer of knowledge. As part of one experimental treatment, subjects were asked to think "metacognitively" concerning performance as well as instructional approaches on their instruments.

Instrumentation for this study is adapted and developed from research in sequential patterns and rehearsal frame analysis. These topics are reviewed as they relate to the outcomes of this study. The use of time in teaching environments has been included so that comparisons can be
made between the present study and extant research. Literature will examine research in these areas as it relates to the preparation of preservice instrumental music teachers.

For the purposes of this study, university students enrolled in a teacher training program who had not yet taught in a school setting as certified teachers are referred to as preservice teachers. Techniques course and methods course are not used interchangeably. They will be differentiated as follows: (a) In a methods course, the focus is on the order in which objectives are presented to the learner; and (b) in a techniques course, the focus is on teaching strategies intended to be useful in accomplishing objectives (Gordon, 1993).

**Teacher Effectiveness**

The goal of the university music teacher preparation program is to equip students to be competent, if not effective, teachers. There is a vast literature in teacher effectiveness (Berliner, 1986). This dissertation is not a study in teacher effectiveness, though its focus on subject matter acquisition, delivery, and student outcomes addresses several areas that fall under the teacher effectiveness umbrella. It, therefore, seems prudent to begin with an overview of the teacher effectiveness literature in music education.

Teacher effectiveness refers to teacher behaviors that effect favorable changes in learners' behaviors (Grant & Drafall, 1991; Sang,
In a review of effectiveness research focusing on the instrumental music teacher, Sang (1984) grouped literature related to teaching skills, behaviors, and competencies into three areas: (a) teachers’ musical demonstration or modeling skills, (b) teachers’ aural and visual discrimination skills, and (c) teachers’ diagnostic/prescriptive skills. A more recent literature review related effectiveness to personal and professional characteristics, competencies, instructional behaviors, and student attitude, attentiveness, and achievement (Grant & Drafall, 1991). A comparison of these reviews shows the tendency in recent research to relate teacher effectiveness not only to teacher behaviors but also to student outcomes.

Teacher intensity, perhaps another way of viewing teacher effectiveness, derives from the teacher effectiveness literature in general education. Madsen and Geringer (1989) defined teacher intensity as “sustained control of the student/teacher interaction evidenced by efficient, accurate presentation and correction of the subject matter with enthusiastic affect and effective pacing” (p. 90). In so doing, they addressed both teacher behavior and student outcome.

Buckner (1997) describes intensity as all teaching attributes that combine to produce positive learning outcomes. Because effectiveness and intensity had been used in several investigations with similar definitions, Madsen and Geringer (1989) examined the use of the words “effectiveness”
and "intensity." The correlation between teacher effectiveness and teacher intensity was .92 as determined by a set of independent judges, suggesting similarity in the use of either term.

Madsen, Standley, and Cassidy (1989) found that high and low contrasts of intensity could be taught to student teachers and could be accurately assessed by untrained observers. Similar results were found by Byo (1990) with conducting students. Elementary education students were able to improve targeted skills through intensity training but statistically significant differences did not occur between the group receiving training and a control group (Cassidy, 1990).

Magnitude and affect are teacher controlled variables that can be viewed as components of teacher intensity. Yarbrough (1975) compared high magnitude teaching to low magnitude teaching in choral rehearsals and found that students reported better attitudes and were observed to be more on task during high magnitude teaching periods. In comparing high and low affect teaching involving young children, Sims (1986) found high affect teaching was associated with high levels of student attention.

**Instrumental Techniques Courses**

There are few extant research studies directly related to university music instrument techniques courses, yet Leonhard (1985) states that "the methods [techniques] course lies at the very core of music teacher education" (p. 1). He finds that many teachers are dissatisfied with their
music education courses stating that they are too theoretical and not realistic. His concern is that often application or transfer of material is not included in the courses so students are unable to make immediate connections to their future needs.

A variety of instructional formats including single family courses (e.g., woodwind techniques), split family courses (e.g., upper strings, lower strings), and private instruction (applied lessons) are being utilized in university preservice teacher courses (Hall et al., 1997) yet there is little empirical evidence suggesting which format may best prepare preservice students to use these secondary instrument skills in teaching situations. Martin (1982) examined the effects of heterogeneous and homogeneous teaching settings on the abilities of woodwind techniques students to identify correct embouchure formation, mouthpiece placement, holding and hand position, posture, articulation, breathing, breath support, and tone production among flute, clarinet and saxophone techniques course students. Students participating in heterogeneous settings scored significantly higher scores on audio and visual tests related to performance issues of flute, clarinet, and saxophone with the exception of the audio portion of the saxophone test.

Stuart (1979) created instructional videotapes for use in a string techniques course. The videotapes were used in combination with class lectures, slides, and discussions in order to increase preservice teachers’
error detection skills in the classroom. A group using a videotaped instructional method was compared to a group that used peers in a lab orchestra setting to practice error detection. Results of an error detection test showed that the videotape instructional group scored significantly higher than the lab orchestra group.

Descriptive information concerning techniques courses was found in several *Percussive Notes* articles (Baker, 1991; Cirone, 1983; Cocuzzi & Shiner, 1988). These authors offered information related to course content and/or specific course outlines. Concerned with the preparation of band directors to lead percussion sections, Cocuzzi and Shiner (1988) list areas which they feel need to be addressed in the techniques course. They suggest instructors go beyond a primary focus on traditional snare drum rudiments and address a more comprehensive array of percussion performance techniques and issues. Cirone (1983) states that it is not as important to develop technique in the percussion class as it is for the preservice students to hear the correct sounds and be able to get their percussion sections to reproduce those sounds. All authors agree that the percussion techniques course needs to take on a total percussion education approach in order to prepare future teachers to handle the percussion demands of today's ensembles and literature.

Parker (1982) identified deficiencies in student teacher preparation which related to preservice teachers' training in techniques and methods.
courses. This research found a lack of adequate emphasis on knowledge and performance of instructional skills in preservice teacher training. Parker identified four areas in need of emphasis in teacher preparation programs: (a) theoretical perspective on instructional skills, (b) modeling, (c) practice, and (d) feedback. Using these four areas, the author designed a model which incorporated these areas into preservice teacher programs.

In contrast to the deficient programs identified by Parker (1982), Jennings (1988) reported predominantly positive comments by college and high school band directors as they reflected on the value of the methods and techniques courses in which they had been students. The results of a survey concerning the effectiveness and importance of preservice training indicated that the majority of respondents were pleased with their training and found both methods and techniques courses, along with many others, to be very applicable to their preparation for teaching.

In a case study, Conway (1997) described a brass techniques course that included a variety of assessment tools. The author examined methods to assess students in a more authentic manner—one that more accurately reflects practices of the course. Along with traditional methods of assessment of performance tests (trombone and trumpet only) and objective examinations, students were also assessed through observation reports, journals (student and teacher reflections), notebooks, oral class presentation, interviews, and class performances with adjudication.
Student course evaluations noted primarily positive responses but expressed concerns for the work-load involved in the one credit course. The author felt that students were motivated by the varied assessment strategies.

Although empirical research related to instrumental techniques course development has not been substantial, evidence of course content can be inferred from the following research. This research does not utilize populations from techniques courses but it has the potential to influence curriculum by showing the importance of good models in educational settings. Instruction based on modeling as defined by Dickey (1992), consists of alternations of teacher demonstration and student imitation. Simply, the teacher models the task and then provides opportunity for the student to imitate (Monroe, 1907). In music education the teacher might demonstrate using a musical instrument, the voice, or electronic media (e.g., a recorded or MIDI example). This method of instruction fits under the umbrella of the Pestalozzian Principle, which advocates that children experience sounds before being taught the theories of those sounds. In this paradigm, labelling sounds, reading music, and defining concepts would follow the process involved in “experiencing” sounds.

Sang (1987) identified four related skills that must be in place for instrumental music teachers to be considered effective modelers:

(1) demonstrate fundamental musical concepts on the instrument being taught; (2) demonstrate on instrument of choice subtle aspects
of music including phrasing and vibrato; (3) demonstrate musically related aspects of performance including posture, breathing, and embouchure; and (4) demonstrate melodic sequences by ear representing both correct and incorrect performance. (p. 156)

Sang (1982; 1985) found that music teachers' modeling skills, discrimination skills, and diagnostic skills contributed to effective teaching scores and that modeling skills were the greatest factor in the variance of beginning music teachers' instructional effectiveness. Sang (1987) continued his research with first-year instrumental teachers by measuring their ability to model musical concepts utilizing their major instrument and secondary instruments and comparing these results to their beginning instrumental students' performance abilities. He found significant relationships between teacher modeling skills and student performance skills as well as the amount of instrumental modeling used during teaching. Teachers who were able to model successfully on instruments tended to have students who could play at a higher level. In a survey regarding teacher competencies, Taebel (1980) found that teachers highly valued teacher modeling for purposes of teaching expressiveness. Another study compared methods of modeling instruction and verbal instruction on the performance outcomes of middle school instrumentalists (Dickey, 1991). Students receiving modeling instruction achieved significantly higher scores in ear-to-hand skills and kinesthetic response skills than did those in the verbal instructional teaching method. Modeling included imitation of pupils' incorrect responses contrasted with demonstrations of
correct examples and opportunity for students to discriminate between the two (Dickey, 1992). This research suggests that those teachers who do model and model correctly using instruments during teaching, may effectively help students to develop on their instruments and should when possible use instrumental modeling rather than verbalizations to make corrections and suggestions. Modeling instruction as compared to verbal-oriented instruction during beginning instrumental classes and middle school band classes also resulted in a greater amount of time spent in active performance.

**Observation of Teacher Behaviors**

Two of the experimental treatments in the present study are focused on observation. One group of subjects observes the teaching of subject matter specialists. The other group of subjects participates in various self-observation/self-evaluative tasks. The summary of research that immediately follows is offered in order to provide an empirical context for the teacher observation treatment. Subsequent subsections, entitled “self-observation” and “self-as-a-model,” are intended to function in support of the self-evaluation treatment.

Much learning that occurs in and outside the classroom happens vicariously (Bandura, 1969; Madsen & Yarbrough, 1985). Learning happens, either by intention or as a result of function, when the actions of a “modeler” affect the cognitive and/or affective make-up of an observer.
The extent to which one learns from a model is dependent on one's ability to process the actions of the modeler. To this end, much of the research focuses on describing observer tendencies, delimiting observer focus of attention, and testing the effects of various modes of observation.

Gonzo and Forsythe (1976) developed videotapes of choral teaching principles from numerous music rehearsals in junior high, high school, and college settings. Instructional videotapes were observed by prospective choral teachers in an experimental environment. Results indicated that, compared to students who did not observe the instructional material, students in the videotape observation group showed significantly more correct responses in observation tests. These students also indicated more positive attitudes concerning the mode of instruction than did the control group.

When using videotaped instruction to teach non-music majors how to bow a string bass, Ellsworth and Kantorski (1991) found no significant difference between observation of videotaped instruction and a live instructional approach of teaching. Results of this study suggest that observation of "videotaped instruction can be at least as effective as live instruction for selected psychomotor skills" (p. 54).

Accuracy of self-evaluation would seem to be dependent in part on one's ability to "see clearly" in any observation setting, formal or informal. Madsen and Duke (1985) found that music education and music therapy
majors, trained in observation techniques, could not estimate correctly the number of approvals, disapprovals, or amount of time teachers approved, disapproved, or instructed when observing videotaped excerpts of classroom teaching.

In a similarly structured study, Duke (1987) compared trained music students' and untrained non-music students' estimates of time spent in applied lesson activities. Those students specifically trained in focused observations were able to successfully estimate time spent in student talk and teacher talk as compared to untrained students' estimates of the same categories. There were no significant differences in the time estimates between the trained and untrained observers in lesson time spent in student performance, teacher performance, teacher approval, teacher disapproval, instructions/explanations, and performance demonstration. Time estimates by both trained and untrained groups were close to actual timings. Both groups overestimated the percentage of teacher disapproval and underestimated percentage of teacher approval. The investigator noted that observers focused their attention on teacher behaviors more than student behaviors when observation activities were not focused or structured. Following this research, Duke and Prickett (1987) structured non-music majors' observations of an applied lesson. Subjects were divided into three observation groups and assigned to focus their observations on teacher, student, or both teacher and student. Subjects
were asked to estimate the amount of approval and disapproval feedback and evaluate 10 aspects of the lesson using a music teaching evaluation form. Results indicated that subjects whose attention was focused on either the teacher or the student gave lower attitude ratings than those subjects whose attention was focused on both teacher and student. Estimates of disapproval feedback were also significantly different among groups. A greater number of disapprovals were estimated for teachers when subjects focused their attention on teachers. This research suggests that focus of attention may affect students' perceived observations of teacher disapproval and negative affect of the teacher or lesson in general. In the present study, subjects in the teacher observation treatment group are asked to focus their attention on teacher behaviors but were given specific positive aspects of teaching behaviors to observe in order to alleviate incorrect perceived observations as Duke and Prickett suggest might occur.

Standley and Madsen (1991) sought to differentiate between teaching experience and observation skills. Using 20 short teaching examples, the investigators had freshmen music education majors, junior music education majors, preservice music teachers, experienced music teachers, and expert music teachers describe in writing what they observed during these teaching examples. No other guidelines were given. Statements were analyzed according to factual or inferential content and
were weighted such that inferential information received more credit and wrong answers would deduct from the total score. Mean scores were significantly different among the groups, with the exception of the freshmen and juniors. Scores increased with each level of experience and expertise. Further analysis indicated that years of experience did not distinguish the experienced and expert teachers' scores indicating that some other variable(s) cause the distinction between these groups' scores. The authors emphasized the importance of these findings in differentiating an expertise in teaching from those in a more developmental stage or those exhibiting skills in music knowledge but not teaching.

**Self observation.** Successful behavioral changes in adult subjects have occurred as a result of self-observational techniques in several areas: mother-infant interactions and maternal self-confidence (Davis, 1989), parent training (Rosenberg & Robinson, 1983), foreign language skills of university students (Herron & Tomasello, 1988), interviewing skills (Lauver & Brody, 1975), and delivery of instructional strategies for paraeducators (Reamer, 1995). Self-observational techniques have led to improved performances in swimming by children with spina bifida (Dowrick & Dove, 1980) and the physically disabled (Scraba, 1989), in basketball shooting by university women (Gray & Fernandez, 1989), in free-throw shooting by university men and women (Melody, 1990), and in
the swings of unskilled golfers (Johnston-O’Conner & Kirschenbaum, 1986). In addition, communication apprehension has been reduced and self-efficacy improved in children (Kinzer, 1985; Johnson, C., 1993) and university students (Hallmark, 1993). After viewing themselves in successful settings subjects improved targeted communication skills and felt more self-confident.


"Seeing" with precision as opposed to a "naked eye," more general approach to observation is the aim of research in music education that focuses predominantly on videotape reproduction and use of observation forms. In music, self-evaluative techniques using videotaped examples of teaching have been successful in improving teaching skills. Surveyed practicing teachers suggest that self-evaluation is an important teaching skill for a teacher to exhibit (Taebel, 1980).

In music therapy, researchers videotaped students in clinical situations, utilized self-analysis and teacher feedback techniques, and
measured the effectiveness of the treatments (Alley, 1980; Greenfield, 1978; Hanser & Furman, 1980). Alley (1980) found that music therapy students participating in a practicum experience were able to increase their use of directions and reinforcement after utilizing self-observation forms while observing themselves on videotapes. Prior to videotaping themselves in clinical situations, the instructor provided specific definitions for the behaviors they would evaluate and specific criteria for which they would be evaluated. Alley also determined that student self-analysis is an effective means of increasing and maintaining defined skills. Greenfield (1978) compared music therapy students' self-evaluations to instructor evaluations. When rating competencies, students tended to rate themselves more competently than instructors. Greenfield concluded that trained judges serve as better evaluators of clinical/teaching behaviors than self-evaluative techniques. Hanser and Furman (1980) compared immediate instructor feedback following live therapy practicum sessions to feedback following videotaped sessions occurring within the same week. No significant differences were found on competency scores of the subjects.

In music education courses, self-evaluative techniques assisted students in eliminating nervous mannerisms (Prickett, 1987), improved targeted teaching skills (Moore, 1976), aided in the improvement of teacher intensity in appropriateness of instruction and the effectiveness of
delivery (Cassidy, 1993), and improved basic conducting skills (Johnson, 1993; Yarbrough, 1987). Killian (1981) investigated three feedback procedures: (a) systematic videotape self-observation, (b) unguided videotape self-observation, (c) instructor verbal feedback without videotape observation, and (d) no feedback as a control. Results indicated that all feedback modes led to improved teaching, though there were no significant differences among types of feedback with regard to teaching skill. More specifically, self-evaluation was at least as effective as immediate one-to-one instructor evaluations, though instructor evaluations were more accurate than student self-evaluations. Students tended to evaluate themselves higher than instructors, raising questions about the ability of students to self-evaluate accurately.

Yarbrough, Wapnick, & Kelly (1979), in a conducting class, compared two feedback techniques involving videotaped conducting excerpts. One technique utilized self-observation forms for analysis of conducting skills, while the other combined instructor feedback with self-observation forms. There was no significant difference between instructor feedback and self-observation form feedback on conducting performance. Additionally, there were no significant differences in the attitudes of students participating in the different feedback treatment groups. These results suggested that self-assessment with focused observation tasks was a viable alternative to instructor feedback. In another study focusing on
conducting, Yarbrough (1987) found that students' basic conducting skills (eight defined behaviors) could be improved after self-evaluating on a weekly basis. Subjects were given specific behaviors on which to focus each week as they self-evaluated conducting examples. Posttest data revealed that students who gave themselves higher marks during the self-evaluation procedures also had a greater number of correct responses on the final conducting evaluation.

Madsen, Standley, Byo, & Cassidy (1992) found that preservice instrumental teachers' self-ratings of the global attribute of teacher intensity compared favorably to experts' ratings of these preservice teachers. However, when self-evaluating specific behaviors, preservice instrumental teachers' ratings were not consistent with expert ratings of same. It was suggested that these students needed simultaneous feedback related to their self-evaluations until a high reliability was established.

Contrary to findings in music research, Kinzer (1985) found that self-analysis could be harmful to subjects who are communication apprehensive, shy, or unassertive. While focusing on self, some subjects experienced an increase in fear of communication, a negative self-perception, and a reduction of self-esteem. Subjects who experienced anxiety in these situations may experience intensified anxiety while viewing themselves, thereby reinforcing perceptions of failure. From his research findings, the author suggested: (a) apprehensive subjects should
be guided through the self-observation process with structured activities, (b) instructor should discuss observations with the student, and (c) subjects should view multiple tapes to familiarize themselves with the process.

Observation and imitation of exemplary teaching is very important when considering research in Bandura's (1977) social-learning theory where it was found that through observation of a model's behavior and its consequences, virtually all learning can occur vicariously. Modeling treatments were investigated in an undergraduate music course for elementary education majors where preservice teachers observed live and video recorded expert teacher models of classroom music lessons (Kelly, 1984; 1997). Results indicated that live and videotaped models were equally effective in developing selected music teaching skills of preservice teachers. Considering these results, in the present study, videotaped examples of expert teachers were utilized.

Madsen, Standley, and Cassidy (1989) found that teacher intensity could be taught and learned through contrasting examples of teachers modeling high and low intensity. Following teacher models, student teachers successfully demonstrated contrasting high and low examples of intensity while teaching a music activity. Student conductors were also successful at identifying and modeling examples of high and low intensity conducting behaviors after viewing an instructor-created videotape of
contrasting high and low intensity conducting examples and practicing contrasting examples (Byo, 1990).

Instructor modeled training treatments have been examined in other educational settings. In counselor training, one study compared three methods of instruction (Beck & Yager, 1982). One of the three methods, based upon the metacognitive theory of instruction, utilized a self-instructional format where after participating in skill training lectures, subjects viewed modeled situations where counselors “thought aloud” their process of confronting a client. Subjects then practiced the same thought processes during role-play situations. Although this study did not find significant differences among training groups, the self-instructional group did increase their confrontation skills in counselling. A computer programming course utilized a similar instructional process comparing modeling training to traditional training (Volet, 1991). The modeling treatment included guidance by field experts as well as training in the thought processes of strategy use in programming. The modeling group achieved significantly higher scores at the end of the course.

Modeled tapes of desired performance outcomes have positively influenced performance ratings of beginning and advanced musicians. Utilizing a programmed practice tape consisting of modeled music and a daily structured routine, Puopolo (1971) found that beginning trumpet and cornet students achieved greater performance skills compared to students
practicing under the same conditions without the modeled tape.

Rosenthal (1984) using verbal instructions and a performance recording of an etude by a professional violinist, compared the effects of guided model, model only, guide only, and practice only treatments on the accuracy of advanced instrumentalists’ performance. The “guided model” tape utilized a combination of verbal instruction and aural modeling examples while the “model only” tape included performance examples only. The “guide only” group listened to taped verbal instructions and the “practice only” group, used for control, utilized the six and one half minute treatment tape length to practice. Subjects in the “model only” treatment group scored significantly higher in performance areas of notes, rhythms, dynamics, and tempo.

In a subsequent study measuring the effectiveness of the following practice techniques: (a) modeled taped performance, (b) singing, (c) silent study, (d) practice on instruments, and (e) play from the Watkins-Farnum Test of Musical Performance, the modeled tape was also found to be an important contributor to better performance (Rosenthal, Wilson, Evans, & Greenwalt, 1988). Tapes were analyzed for accuracy of pitches, rhythms, articulation, and phrasing/dynamics. Significant differences were found between the modeling, silent analysis, and practice treatment groups in maintenance of steady tempo and modeling and practice groups in phrasing/dynamics. The modeled treatment group did score the highest in
correct notes and articulation, but were not statistically significant. The researchers suggested that listening to a correct model can be equally as effective in learning as practicing on one's instrument and that modeling can be an efficient teaching technique.

Further research has shown that behavior change is enhanced by models with whom the observer can identify—those whose ability level is only slightly better than the observer's behavior (Bandura, 1969; 1986; Dowrick, 1991; & Hosford & Mills, 1983). The best models are those similar to the observer in age, personality, mood, and achievement (Bandura, 1969; 1977; Thoresen & Hosford, 1973). In fact, children have rejected models whose abilities far exceed their range of achievement (Bandura, 1977). For this reason, research using self-as-a-model has been fully explored by researchers.

**Self-as-a-model.** A line of research outside the field of music has focused on using self-as-a-model to promote increased desired behavior. In support of previously stated research concerning the successful matching of model with modeler in conjunction with age, personality, mood, and achievement (Bandura, 1969; 1977; Thoresen & Hosford, 1973), it would seem that one's self would make the best match. An early example of research using self-as-a-model includes a 1970 case study of a 10-year-old boy who exhibited inappropriate aggressive behaviors (Creer & Miklich, 1970). A videotape was made of the boy in normal daily activities
and then edited into two tapes—one to show only positive behaviors and the other to show negative behaviors. After viewing the positive-only tape, inappropriate aggressive behaviors diminished, but after viewing the negative-only tape inappropriate behaviors increased. In later research, Dowrick (1983) further refined self-modeling techniques and defined this therapeutic method as videotapes involving the subject’s own positive-only behaviors, edited from videotapes of a variety of subject behaviors, used to modify his/her behavior in a positive direction. Through video editing and subject prompting, self-as-a-model tapes are created and used as a form of feedback which provides the observers with opportunities to view themselves in behaviorally acceptable ways.

Self-modeling has been effective in promoting language development of mentally (Alexander, 1988), physically, and behaviorally dysfunctional children and adults (Buggey, 1995; Haarmann & Greelis, 1982; Hepting, 1995), cognitive skill development (Schunk, 1995), on-task behavior (Clare, 1992; Davis, 1979; Dowrick & Raeburn, 1977; Fouts, 1974; McCurdy & Shapiro, 1988; Possell, 1994), positive school attitude (Conlon, 1990), daily physical tasks of disabled students (Lasater, 1993), improved anger and aggression management (Larson, 1992), computation and shopping skills (Matson & Long, 1986), and social skills for neglected children (Mehaffey, 1992). Self-modeling techniques have also been used
as tools for reducing attention-deficit hyperactivity (Woltersdorf, 1990) and in employment training for mentally retarded adults (Morgan, 1991).

Using the self-modeling observational technique, Kehle, Owen, & Cressy (1990) were able to completely remediate an elective mute through five, 5-minute treatment sessions in a school setting. Psychologists selected the self-modeling technique because of its history of success, low cost, and the unrestrictive and unobtrusive format. The child spoke freely, but softly at home but in public would only speak to his mother. He would not speak to teachers and peers at school. Researchers videotaped the selective mute child answering questions for his mother in the school building and then being asked the same questions from his teacher, for which he was silent. The videotape was edited to show the mute child responding to the teacher's questions. The child viewed the edited videotape and was reinforced with candy and baseball cards after each edited teacher-answered question. After two edited videotapes and several observations and reinforcements, the mute child spoke to the experimenters and then to his classmates.

One known study in the field of music utilized the self-as-a-model technique. Staum (1989) incorporated this technique into a clinical setting with music therapy students. In a series of four studies, Staum utilized the following treatment conditions: (a) traditional feedback, (b), focused observation form, and (c), self-as-a-model (self-modeling). She compared
the three treatments to baseline data. Results indicated that the self-as-a-model behavior modification technique in this situation did not significantly differ from other treatments. In all treatment groups subjects skills improved. Although not significant, the self-as-a-model treatment group did yield slightly better results. According to this study, Staum noted that self-as-a-model tapes can be as least as effective as other methods but suggests that perhaps a greater number of examples for each person to observe would be more effective. These results seem to be inconsistent with self-as-a-model research outside the field of music. Self-as-a-model technique is more often used in conjunction with gross behavior modifications, not slight changes that would occur in a study like this. Often changes necessitated in teaching behaviors are minor compared to speech deficiencies or physical handicaps.

Transfer

Given the fact that two of the three treatments in this study promote transfer of university classroom theory to practical application, research in transfer and how it is best accomplished in music education settings is examined. In order for courses to be applicable to teaching, instructors must encourage and teach for transfer or relate skills to teaching settings (Price, 1992b). Instructors often assume that because students can process the information they will be able to apply it to other situations (Brinson, 1988).
The possession of knowledge and the application of that knowledge are two distinct aspects of learning. Students must be given opportunities to use their information and skills. More important, they also must be guided to apply existing information in new and different situations (p. 42).

Peer teaching settings in one music therapy training situation did not transfer easily into field settings (Greenfield, 1980). Although lights were used successfully as visual feedback and reinforcement in practice sessions, skills learned did not transfer to field-teaching settings. In order to increase transfer, the investigator suggested using feedback lights in a field teaching situation. This suggestion would substantiate research in Bandura’s social learning theory suggesting that learning occurs in situations that most resemble the actual application. Practice and a conscious effort by instructors to encourage transfer will help promote the transfer of skills to new settings (Killian, 1981).

In order to better understand what influences transfer of musical practice to performance, Duke and Pierce (1991) investigated the effects of tempo and melodic context on the performance of a melodic exercise. It was found that performance tempo and melodic context significantly affected the ability of subjects to accurately transfer previously learned skills to new settings. Advanced performers practiced melodic passages and then were asked to perform them at slower, faster, and same tempi as they had practiced the exercise. The subjects were less likely to maintain a steady tempo in the slow and fast tempi compared to their practiced tempo. When the practiced excerpt was preceded by unfamiliar fast or slow
material, the tempo was less steady than when the practiced excerpt was followed by slow or fast unfamiliar material. Pitch accuracy was less accurate during the faster tempo. Subjects’ pitch and tempo accuracy were significantly affected by the context of the performance, suggesting that accurate transfer would have been more likely to occur if the practice would have been structured to be similar to the real experience. It may be inferred that a similar course of action be taken in teaching situations where the material learned in class is to be used in similar, but not the same, situations.

Subjects were successful at transferring skills learned in regard to sequential patterns in a private lesson setting when instructors encouraged transfer and subjects practiced the skills in laboratory settings before applying them in real settings (Price, 1992b). All subjects received training in the use of sequential patterns and were able to improve their skills in laboratory settings. In attempting to transfer teaching skills to a new setting, the treatment group was given specific instructions to apply sequential patterns to a private lesson situation while the other groups were not encouraged to use their practiced skills. The treatment group was more successful at applying sequential patterns in a real teaching setting than the groups who were not instructed to use their skills. It was concluded that instructors can not assume that students will automatically
transfer skills from one setting to another unless they are encouraged to do so.

Without encouraging transfer of skills, Geringer and Madsen (1987) examined the effects of a course in music education research techniques on the ability of music students to devise research projects relevant to applied music. Two groups, one taking the research course and a control group, were asked to list and design research projects related to applied instruction. The course was not intended to teach subjects how to design research projects nor did they design research projects, rather they had only read research and discussed features of research projects and how they were designed. Subjects who had taken the research course proposed significantly more investigations and listed more independent and dependent variables than did those not having taken the course. Subjects taking the research course were able to successfully transfer course material learned to other tangentially related areas without the specific direction of the instructors. The course activities seem to have been inherently beneficial transfer-materials.

Preservice teachers' opportunities and requirements for field teaching experiences vary across the country, disciplines, and institutions. In some programs, preservice teachers begin observations and or teaching experiences their first year while in others they are not afforded the opportunity until their last year. Increased monitored teaching
opportunities before student teaching will serve to better assess and prepare preservice teachers (Farrell, 1997). In the instrumental techniques courses, students are expected to perform at minimal competencies in order to prepare for “real world” teaching situations that involve these instruments. Beyond knowing how to perform, students must learn to make pedagogical decisions (Conway, 1997). Varied and authentic forms of assessment may better serve to evaluate as well as motivate students (Conway, 1997; Farrell, 1997).

The Arts PROPEL: Integrated Curricula and Assessment project, introduced by Harvard Project Zero and headed by Howard Gardner, combined with the Educational Testing Service and the Pittsburgh Public Schools, sought to design a teaching and assessment curricula plan to more authentically evaluate student progress (Gardner, 1991). Explained in Gardner’s The Unschooled Mind: How Children Think & How Schools Should Teach, the traditionally separate issues of curriculum and assessment are merged into one domain. Students engage in an activity related to the course and have opportunities to self-assess and reflect upon assessment by experts and peers. This evaluation process is a result of Gardner’s research and beliefs (or rather doubts) in the IQ testing scenario. In his keynote address titled: “Is Musical Intelligence Special?” delivered at the Ithaca Conference: Music as Intelligence, Gardner expressed that there are many different kinds of thinking and many different forms of
cognition that are independent of one another (Gardner, 1996). With this in mind, Gardner stated that it is difficult to predict successes in children with accuracy using only one form of assessment, referring to traditional standardized tests.

From this information classroom teachers must reconsider their practices of evaluation and course instruction and include tasks that evaluate and represent authentic practices of course goals. The National Standards for Arts Education expresses similar beliefs in their project. By providing opportunities for cooperative learning experiences as well as suggesting strategies for implementation of the goals of the National Standards, the preservice music educator needs to prepare preservice teachers to teach music as a core subject (Hall et al., 1997) and therefore make assessment better reflect the academic goals of the class.

The act of thinking during the educational process is important for transfer and retention of information (Boardman, 1989). "Metacognition in the study of music involves skills associated with individual awareness and personal thinking" (Pogonowski, 1989, p. 9). Students become involved in their learning as they identify problems and think through the process of fixing or accomplishing the task. Pogonowski (1989) gives an example of a pianist trying to shape a phrase. If they know how they want it to sound, they have more control of the outcome. Similarly, if a teacher knows and thinks about how an instrumentalist should physically behave
in order to produce the desired tone quality, the teacher will have a proactive approach to helping that student achieve optimum tone quality. Pogonowski states that the more students describe what they are thinking, the more they are expanding their metacognitive thinking.

In one study concerning modeling and metacognitive strategic uses in a college computer classroom, significant differences were found among students who participated in an experimental group which utilized metacognitive tasks in writing computer programs as well as a modeling situation where instructors thought aloud while they decided on programming steps and then involved students in this “thinking aloud” process (Volet, 1991). The author noted that the experimental conditions also added a social aspect in that collaborative learning during and outside of classes was integral and encouraged.

A study incorporating metacognitive thinking into the preparation of preservice teachers found that students who participated in a metacognitive strategies course prior to student teaching wrote better lesson plans and were better able to carry out these plans than those students who did not participate in the course (Neely, 1983).

**Dependent Measures**

The dependent measures for the present study involved the creation of verbatim transcripts of teacher (subject) talk during videotaped music lessons and documentation and categorization of various aspects of
subject and pupil behavior. The music education related literature on sequential patterns of instruction was used as a model in the development of definitions for categories of subject and pupil behaviors.

Sequential patterns of instruction is the systematic evaluation or hierarchical analysis of teacher instructions and student responses examined in order to more fully understand teaching and rehearsing (Benson, 1989; Jellison & Wolfe, 1987; Moore, 1981; Price, 1983, 1992a; Yarbrough & Price, 1981; 1989; Yarbrough, Price, & Bowers, 1991). The introduction of sequential patterns, first called teaching units, was posed by Becker, Englemann, & Thomas in 1971 in an applied psychology text. Researchers found sequential pattern usage present in the teaching of the most effective teachers which seemed to coincide with their successful students (Berliner & Rosenshine, 1976). The sequential pattern consists of: “(1) teacher presentation of task to be learned, (2) student interaction with the task and teacher, and (3) reinforcement by immediate praise and corrective feedback related to the task” (Price, 1992a, p. 14).

Exploration of sequential patterns in music classrooms found that band conductors displayed complete three step patterns as well as incomplete sequential patterns (Yarbrough & Price, 1981). Incomplete patterns included task presentations (step one) but with no opportunity for the students to respond. When comparing rehearsal settings that included complete sequential patterns with (a) patterns that included directions
only instead of musical (academic) information and (b) patterns with musical or academic tasks but no response, Price (1983) found that under the complete sequential pattern circumstance, students improved their performance and were more positive about the rehearsals.

In an analysis of middle school and high school music teachers, Yarbrough and Price (1989) reported that 18% of band conductors' rehearsals were comprised of complete sequential patterns. Yarbrough (1988) compared experienced school band and choir director sequential pattern usage to that of well-respected conductor Bruno Walter (from Bruno Walter Rehearses Beethoven, recorded 1958). Walter utilized a 7:3 ratio of correct to incorrect sequences while the school directors' ratio was 2:8.

In the private lesson setting, Benson (1989) analyzed sequential patterns of three violin teachers. After analyzing an initial videotaped lesson of private instructors, the researcher identified two areas in need of improvement: presentation of musical tasks and specific reinforcement. She subsequently modeled a teaching tape reinforcing and correcting these identified weaknesses. The process of identifying behaviors, self-observation, analysis, and remediation resulted in a significant increase in desired teaching behaviors.

Training students to utilize complete sequences would seem to be important given the positive research results of utilizing sequential
patterns. Price (1992a) trained subjects to utilize sequential patterns in their teaching and then videotaped subjects teaching. He found that through practice, instruction, instructor feedback, and self-evaluation, students could successfully increase their use of sequential patterns as well as increase the use of specific academic directions and reinforcement.

Yarbrough and Price (1981) suggested that sequential patterns be further examined with the inclusion of performance quality as a dependent measure. Performance quality related to each sequential pattern has not been explored but general quality or improvement on a specific work as related to sequential pattern usage has been examined (Price, 1983).

Research in the rehearsal frame concept (Duke, 1994) was another area used in formulation of category definitions for the present study. "The rehearsal frame is a model for observing and analyzing the structure of the teaching-learning process in music performance and in other complex skills" (Duke, 1994, p. 84). The conductor must often go through a series of episodes before the targeted goal is achieved. The steps included in the rehearsal frame are as follows: the conductor identifies a target; the conductor selects the student(s) with whom s/he will rehearse and reduce the difficulty of the target (decontextualization); the conductor recontextualizes, or puts the targeted rehearsal section back within the context of the full ensemble. The decontextualization process may take on
several forms of practice until the student(s) can successfully demonstrate the target. Duke conjectures that the observation using the rehearsal frame approach helps target aspects of a rehearsal that may not be observed using previous forms of observational techniques. The premise on which this approach rests is "that any useful observation framework must consider the rehearsal process in relation to the accomplishment of musical goals" (p. 78).

This suggested form of rehearsal analysis is still in its infancy with little data to support it. Buckner (1997) analyzed the behaviors of piano teachers and their students using the rehearsal frame outline. Excerpts from 40 lessons were divided into segments, or rehearsal frames, which were determined by the teachers' performance goals, and labeled as targets. The rehearsal frames were evaluated as to whether the identified target goal was successfully achieved by the student by the end of the frame. Buckner also compared successful teachers, those with a greater percentage of rehearsal frames ending with successful trials, to other dependent variables. The identified successful teachers, in addition to demonstrating a greater ratio of successful to unsuccessful trials, exhibited faster pacing, greater amounts of positive and negative feedback, and allowed for more student performance time than did the teachers identified as not having as many successful rehearsal frames. The data collection instrument introduced by Buckner (1997) in this study was a computer program.
entitled SCRIBE or Simple Computer Recording Interface for Behavioral Evaluation (Duke & Farra, 1996). This program was used in the present study and is described fully in the Method chapter.

A final consideration with regard to the literature reviewed for the present study was research on the use of time in music rehearsal and lesson settings. Dependent variables for this investigation included the amount of time spent in certain lesson events. Much research concerning time usage finds that in rehearsals where students are actively engaged in musical activity, mainly performance, students are less off-task than when classroom activities include teacher talk or getting ready. Yarbrough (1975) documented the benefits of active class participation when she found that students were more off-task during section rehearsals, non-performance segments, and instruction-giving segments of choral rehearsals.

In a similar situation, examining only the initial activities of a choral rehearsal, Brendell (1996) found that students were most attentive during the sight-reading activity yet teachers devoted the least amount of time to this initial rehearsal activity. Students were least attentive during getting ready activities. Other activities included in this examination included vocal warm-up, physical warm-up, literature instruction, and other.

Goolsby (1996) compared time usage in instrumental rehearsals of expert, novice, and student teachers. He found that student teachers talked
more (35.4%) compared to the novice (26.6%) and expert teachers (24.1%).

Expert teachers utilized more time in performance (51.2%) than did student teachers (35.5%) and novice teachers (35.1%). Interestingly, Goolsby found that expert teachers were able to involve a greater number of students in performance, accomplish more activities, and give more breaks while talking less than novice and student teachers.

Witt (1996) also explored use of class time in instrumental (band and orchestra) rehearsals but added student attentiveness to her results. Overall, 43.3% of class time was spent in student performance while 38.9% of class time was spent in teaching episodes (verbal interactions with students, teacher demonstration, and performance instructions) and 17.8% in getting ready activities (announcements, tuning, and administrative aspects). Witt further found that orchestral rehearsals included fewer but longer episodes of performance while band rehearsals included more, but of shorter duration, episodes of performance. Student attentiveness also seemed to differ between orchestra and band students. Orchestra students were significantly more off task during performance (4.35%) and non-performance episodes (24.90%) than band students were during performance (2.43%) and non-performance (10.76%) episodes.

In K-6 elementary music classrooms, Forsythe (1977) found that playing instruments and singing activities resulted in a lowest percentage of off-task behaviors. At the collegiate level, Madsen and Geringer (1989)
found that students were most attentive during music performance activities including singing and playing. Similar to the Brendell study, Madsen and Geringer found that the highest percentage of off-task behaviors occurred during the getting ready activities. Other activities observed in this study included teacher lecture, student discussion, and listening.

In private piano lessons, similar results concerning the use of performance time during lessons and student off-task have been reported. Kostka (1984) investigated several variables including time use and student attentiveness in elementary, secondary, and adult piano lessons. Results indicated that adults were off-task the least with 19% off-task during nonmusic activities and 4% during teacher talk time. Next, secondary students were off-task during 31% of nonmusic activities and 6% of teacher talk time and elementary students were off-task the most 44% during nonmusic activities and 16% during teacher talk time. Speer (1994) found that student participation (47%) occupied the greatest percentage of lesson time. Teachers presentation (42%) and teacher reinforcement (6%) completed the percentages of instructional time. Speer also found that older students spent more time in performance than younger students and less advanced students spent more time talking than advanced students.
Conclusion

The purpose of this study was to investigate the effects of three approaches to training preservice instrumental music teachers for initial teaching experiences with beginning instrumentalists. The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced teachers, and a third evidencing a performance orientation—were administered in an undergraduate brass techniques course. Review of the literature related to this topic covered teacher effectiveness, research related to the treatment groups and course content, and research for which the structure of analysis was derived. Research related specifically to this topic has not yet been fully explored but research in the area of preservice teacher preparation has found it possible to teach students to be more efficient and accurate in their presentations and correction of the subject matter.

As was discovered, specific research related to brass techniques courses is not available with the exception of a case study. The course incorporated a variety of authentic experiences but did not include teaching—a primary intention of a techniques course. Because of the lack of models found in the literature, one treatment in this study was based on the commonly used course format of performance orientation. The other two treatment groups, self-evaluation and teacher observation, were founded on positive outcomes from related literature. Self-evaluation
techniques have been found to be effective in behavioral changes in and out of the music field. Some research found that self-evaluative techniques yielded the same results as instructor evaluation, suggesting a solution for better use of instructor time. Other research found that students are not as accurate in their self-evaluations as instructors. Research in teacher observation was generally productive as instructors incorporated some form of expert teacher observation into courses.

Adjacent areas of research support various forms of course content which help to improve teacher behaviors. Literature reviewed found modeling training, authentic experiences, and metacognitive thinking practices could be important considerations for inclusion into techniques courses. Other literature explained the importance of teaching for transfer or providing experiences that would easily lend themselves to transfer situations outside of the classroom.

Instructional sequences literature was reviewed in the areas of sequential patterns and rehearsal frame analysis. Correct use of sequential patterns [(1) teacher instruction, (2) student response, (3) teacher reinforcement] in rehearsals decreased student off-task behaviors, improved overall performance evaluations, and was rated higher by students participating in the rehearsals. In piano lessons, the highest ranked teachers incorporated rehearsal frames into their teaching where students were successful at improving targeted areas before the teacher
moved on to a new target area. A combination of these structures was utilized to better understand the effects of the three treatment groups in the present study.

The existing literature formed the framework for the design, implementation, and analysis of this dissertation. Results will add to the literature in instrumental techniques courses, effectiveness of preservice teachers during initial teaching experiences, and performance outcomes of students and teachers using various modes of teacher preparation.
CHAPTER 2
METHOD

The purpose of this study was to investigate the effects of three approaches to training preservice instrumental music teachers for initial teaching experiences with elementary instrumentalists. The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced instrumental music teachers, and a third evidencing a performance orientation—were administered in an undergraduate brass techniques course. Primarily, this study was designed to answer the question: Did instructional approach differentially affect teacher behavior across two private lessons to elementary instrumentalists? Toward this end, teacher (subject) and pupil behaviors were documented and categorized according to various aspects of subject/pupil activity, various aspects of subject verbalizations, successful/unsuccessful pupil performance trials, and subjects' secondary instrument performance competency. In addition, subject and pupil post-treatment attitudes were assessed.

Subjects and Setting

Subjects for this study were instrumental music education majors (N = 22) enrolled in a one semester brass techniques course at Louisiana State University, Baton Rouge. These sophomore, junior, and senior level undergraduates were dispersed among three groups which were balanced...
according to the in-class progress of subjects at the time of the study, their major instrument, and their previous performance and teaching experience. Much of this information was gathered from subject responses to a questionnaire, which can be found in Appendix A.

Fifth and sixth grade band students (N = 22) from two Baton Rouge area schools, Istrouma Middle School and University Laboratory School, served as pupils. The band directors at these schools were asked to select pupils who would benefit from help in a private lesson setting but would also exhibit the responsibility necessary to participate across two lessons. Pupils could participate only after they had returned a parent-signed permission form, found in Appendix S, in keeping with human subject research protocol outlined by the Institutional Review Board: Oversight for Studies Conducted in Educational Settings, Louisiana State University College of Education.

After pupils had been selected by their directors, the investigator listened to all pupils perform the exercise that subjects ultimately would focus on during lesson teaching. These initial visits served as a control for pupils' level of performance. Pupils who were appropriately challenged by the music received no help from the investigator. They were accepted for participation in the study. Pupils for whom the music was initially too challenging received help from the investigator. If it was apparent in a 15-minute period that these students could be led to play the music at a
modest level of competence, they were accepted for participation in the study. They received no further help from the investigator. Two pupils were eliminated from the study because it was apparent that the music was and would continue to be too much of a challenge. Two other pupils, after having been examined as above, were enlisted in their place.

Pupils accepted for the study had one-half through one and one-half years of experience playing either the trombone or trumpet in band or some other heterogeneous instrument setting. All pupils were using the first book in either Accent on Achievement (O’Reilly, 1997) or Yamaha Band Student (Feldstein, 1988) beginning band method series and had no previous private lesson experience on their band instruments.

The three approaches to training were nested within the course syllabus of a brass techniques course, the primary objective of which was to develop each subject’s performance skills on instruments other than his/her major instrument. Self-evaluation and teacher observation treatments were compatible with the aforementioned performance skill objective and consistent with two secondary course objectives—(a) development of skills in the structuring of successful learning experiences and (b) development of observation skills.

After treatment, each subject was videotaped teaching two lessons to the same pupil. Lessons occurred in the two-week period following
treatment—each lesson occurring within two days of the other. One exception to the latter was due to pupil absence from school.

Two sixteen-measure melodies served as the musical material for the lessons. These melodies, one excerpted from a standard beginning method book and the other developed by the investigator, were selected on the basis that they provided appropriate range, fingering, articulation, and rhythm challenges for the pupils. Pilot testing showed that pupils at one school were somewhat more advanced in terms of their ability to negotiate range and articulation challenges than were pupils at the other school. The more advanced pupils were assigned a portion of the melody, American Patrol, from Essential Elements band method books (Rhodes, Bierschenk, & Lautzenheiser, 1991). The less advanced pupils were assigned the investigator-developed exercise, Big Brass, which was similar in its rhythmic and fingering challenges but more modest in range and articulation. Big Brass can be found in Appendix B.

Subjects were instructed to approach the lessons with the goal of helping the pupil "perfect" the assigned melody. Subjects were free to implement warm-up activities or use other material (e.g., material from the pupil's lesson book or band music), but priority status was to be given the one assigned melody.
Independent Variables

Self-Evaluation Group

Across a four-week, 12-class training segment on the trumpet or trombone, subjects in the self-evaluation group prepared and self-evaluated three instrument performance videotapes. The first videotape showed the subject performing instructor-selected exercises from the first week’s class assignments. Following class preparation on self-evaluation protocol, subjects completed a self-evaluation form designed to focus attention on 13 performance fundamentals. The form, included in Appendix C, directed subjects to rate their performance on four-point Likert scales for the following categories: position of left hand, position of right hand, posture, air intake, blowing airstream, breathing at appropriate places, embouchure formation, tonguing, tone quality, rhythm accuracy, fingering accuracy, and partial accuracy. The instructor provided written feedback with respect to the accuracy of subjects’ evaluations.

A second videotape, created at the midpoint of the treatment period, again showed the subject performing instructor-selected exercises chosen from the material covered subsequent to the first week of class. This videotape served as a stimulus for two self-evaluation tasks, both requiring instructor-led class preparation on self-evaluation protocol. Based on research in self-modeling (Buggey, 1995; Creer & Miklich, 1970; Dowrick, 1983) and the documented effectiveness of self-as-a-model
techniques in changing behavior (Davis, 1979; Dowrick & Raeburn, 1977; Haarmann & Greelis, 1982), the first task, a positives-only self-evaluation, necessitated that subjects watch their videotaped performance and identify their best performance attributes (chosen from among the performance fundamentals in Appendix C). This was followed by a negatives-only self-evaluation for which subjects watched the same videotape of self and identified their worst performance attributes (again chosen from among the performance fundamentals in Appendix C). For each of the selected positive and negative attributes, subjects provided detailed descriptions of what they were doing physically at the time of the videotaping. Subjects received written feedback on the accuracy of their evaluations (i.e. identification of best-worst attributes and descriptions of physical behaviors) following each evaluation task. Positives-only and negatives-only evaluation forms can be found in Appendix D.

A third performance videotape, occurring during the last week of treatment, required subjects to model contrasting examples of correct and incorrect performance attributes. Previous research has determined that the ability of a teacher to model correct and incorrect performance characteristics (or to imitate student performance) enhances one's ability to discriminate among various levels of performance quality (Sang, 1982; 1987). Based on the possibility that subjects might see performance differences more clearly when instruction includes both positive and
negative examples, rather than a positives-only approach (Sang, 1987), subjects in the present study received training in and practiced contrasting performance examples in the following areas: (a) tone quality, (b) tonguing, (c) breathing, and (d) posture/instrument position.

To illustrate, the course instructor (investigator) introduced the tone quality contrasting example by modeling a characteristic trumpet tone and contrasting that with an unsupported, unfocused negative example of tone, one that might be expected from an undeveloped player. During class, subjects took turns demonstrating contrasted examples of tone quality, tonguing, breathing, and posture/instrument position, receiving guidance from the instructor when necessary. Subjects were directed to prepare two four-measure excerpts of their choice, selected from class exercises, for each contrasting example. Subsequently, subjects prepared a videotape of themselves demonstrating positive and negative pairings for each of the performance fundamentals listed above. Appendix E describes the protocol for this task.

A final task related to this third performance videotape entailed subject self-evaluation of the contrasts videotape. Appendix F describes the protocol for this task. Subjects were directed to provide detailed written annotations for each correct and incorrect performance and include written teaching strategies aimed at solving the negative examples as if
they had been identified in a pupil. An example of one subject's annotations of contrasted examples can be found in Appendix G.

**Teacher Observation Group**

Across a four-week, 12-class training segment on trombone or trumpet, subjects in the teacher observation group on seven occasions observed large group and private instruction in both live and videotaped settings. For the large group observation—a heterogeneous middle school beginning brass class—videotapes were made in which a camera was situated such that faces, postures, and hand positions could be seen clearly. Both wide angle and close-up views of students were provided. The teacher, a female band director with 12 years of experience, was visible on a variable rate as she moved among the students and in and out of camera range. The goal in videotaping was to allow subjects to hear teacher verbalizations and view student responses. The quality of instruction demonstrated on the videotape was very high, an assessment that was the unanimous opinion of a panel of five expert observers familiar with this band director's teaching.

These large group videotapes, which had been edited from several 50-minute rehearsals, were compilations of a variety of salient teaching episodes deemed to be effective teaching examples by the investigator. The first of three large group videotapes, 20-minutes in length, was viewed during the second week of treatment. After subjects viewed portions of the
videotape without instructor commentary, the instructor directed subjects to attend to some aspect of teaching on repeat viewings. This instructor-focused observation served to alleviate incorrect perceived observations (Duke & Prickett, 1987). These aspects included teacher modeling, pacing of instruction, processes utilized when introducing new material, and methods used to guide students toward improved performance. Appendix H is a listing of salient teaching issues accessible via this videotape.

The second large group videotape, 30-minutes in length, was viewed by subjects individually outside of class also during the second week of treatment. Subjects were directed to list teaching behaviors they felt made this band director an effective teacher. This form and a compilation of these comments can be found in Appendix I.

The third large group videotape, 31-minutes in length, was viewed during the third week of treatment. The instructor again focused subjects' attention on a variety of effective teaching examples including warm-up routine, mouthpiece buzzing, teacher modeling while students silently fingered, and teacher anticipation of troublesome areas in exercises. Appendix J is a listing of all salient teaching issues accessible via this videotape. A summary of salient teaching points discussed by the instructor and subjects is listed in Appendix K.

Next, during parts of three class periods, subjects in the teacher observation group observed three videotapes of exemplary teaching in the
private lesson setting involving beginning instrumentalists performing on trombone or trumpet. Four teachers were selected based on their unequivocal reputations for having success with beginning students. Private lesson videotapes, which had been edited from several 30-minute lessons, were compilations of a variety of salient teaching episodes deemed to be effective teaching examples by the investigator. These four private lesson teachers evidenced different teaching styles, yet despite these differences, all were effective teachers. Private lesson videotapes, ranging from 14- to 25- minutes in length, were viewed during the third and fourth weeks of treatment. After subjects viewed portions of the videotapes without instructor commentary, the instructor directed subjects to attend to some aspect of teaching on repeat viewings. These aspects included teacher and student interactions, information idiomatic to trombone or trumpet, teacher modeling, pacing of instruction, processes utilized when introducing new material, and methods used to guide students toward improved performance. Appendix L is a listing of salient teaching issues accessible via these videotapes.

The final assignment for the teacher observation group entailed the observation of instruction in a university applied trombone or trumpet lesson, corresponding to subjects' current in-class instrument. Each subject observed the teaching of a university professor during one 50-minute lesson as it coordinated with subject schedules. During the lesson, subjects
completed an observation form focusing attention on teacher behaviors relevant to brass pedagogy. This observation form can be found in Appendix M.

Performance Orientation Group

Across a four-week, 12-class training segment on trombone or trumpet, performance orientation group class meetings were devoted entirely to performance on subjects’ in-class instruments. In addition, subjects received two 30-minute private lessons which occurred during the second and fourth weeks of treatment. The trumpet players were taught by the investigator—a high brass specialist, and the trombone players were taught by a low brass specialist.

Also, subjects were required to submit three practice audiotapes, due during the second, third, and fourth weeks of treatment respectively. For each audiotape, subjects performed investigator-selected exercises chosen from material covered previously in class. Subjects received written feedback from the investigator in response to each audiotape performance.

It is important to note that treatment in the performance orientation group did not include instruction geared toward teaching others. Likewise, this treatment did not entail any instructor-induced self- or teacher evaluation. Instead, instrumental performance was the sole point of emphasis.
All Groups

Throughout the four-week treatment period, instruction specific to trombone and trumpet performance was ongoing. Instruction of this type occupied entire class sessions for the performance-orientation group and at least 50 percent of class sessions for the self-evaluation and observation groups. Figure 1 is an outline specific to treatment and daily activities.

At the conclusion of treatments, subjects in all groups were given a secondary instrument (trombone or trumpet) performance examination consisting of assigned exercises and sight reading. The exams were videotaped for subsequent analysis, comparison among groups, and evaluation of subject performance for course grade contingencies.

During week five of the experimental procedure, each subject in all treatment groups taught two private lessons to a beginning band pupil whose instrument was the same as the university subject’s assigned in-class instrument. Lessons were videotaped in order to allow for verbatim scripting and documentation of subjects’ teaching behaviors as well as pupil responses. Regular class sessions were not held during this week of lesson teaching to allow for time and concentration on this teaching component of the course. Prior to each lesson, subjects submitted a lesson plan following a format that can be found in Appendix N.
### Daily Course Schedule for Treatment Groups

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Day 1</th>
<th>Week 2</th>
<th>Day 4</th>
<th>Week 3</th>
<th>Day 7</th>
<th>Week 4</th>
<th>Day 10</th>
<th>Week 5</th>
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<table>
<thead>
<tr>
<th>Self-Evaluation Group</th>
<th>Teacher-Observation Group</th>
<th>Performance-Orientation Group</th>
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<tr>
<td>Week 1 Day 1</td>
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<tr>
<td>Day 2</td>
<td></td>
<td></td>
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<tr>
<td>Day 3</td>
<td>videotaping protocol</td>
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<tr>
<td>Week 2 Day 4</td>
<td>self-video I due;</td>
<td>observe beginning band</td>
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<tr>
<td></td>
<td>prepare self-evaluation</td>
<td>videotape I;</td>
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<td></td>
<td></td>
<td>observe out-of-class</td>
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<tr>
<td></td>
<td>self-evaluation due</td>
<td>observation of beginning</td>
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<tr>
<td></td>
<td></td>
<td>band videotape II</td>
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<tr>
<td>Day 6</td>
<td>feedback to subjects:</td>
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<tr>
<td></td>
<td>self-evaluation</td>
<td></td>
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<td>Week 3 Day 7</td>
<td>self-video II due;</td>
<td>observe beginning band</td>
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<td></td>
<td>prepare positives-only</td>
<td>videotape III;</td>
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<tr>
<td></td>
<td>evaluation</td>
<td>observe private lesson</td>
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<tr>
<td></td>
<td></td>
<td>videotape I</td>
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<td></td>
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<td>make appointment for</td>
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<td></td>
<td></td>
<td>private lesson II</td>
</tr>
<tr>
<td>Day 8</td>
<td>positives-only evaluation</td>
<td>observe private lesson</td>
</tr>
<tr>
<td></td>
<td>due;</td>
<td>videotape II</td>
</tr>
<tr>
<td></td>
<td>prepare negatives-only</td>
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<td></td>
<td>evaluation</td>
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<tr>
<td>Day 9</td>
<td>negatives-only evaluation</td>
<td>observe private lesson</td>
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<tr>
<td></td>
<td>due;</td>
<td>videotape II</td>
</tr>
<tr>
<td></td>
<td>practice contrasts;</td>
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<td></td>
<td>prepare contrasts video</td>
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<td>Day 10</td>
<td>practice contrasts</td>
<td>observe private lesson</td>
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<td></td>
<td>feedback to subjects:</td>
<td>III;</td>
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<td></td>
<td>positive-only and</td>
<td></td>
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<td></td>
<td>negative-only evaluations</td>
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<td>Day 11</td>
<td>self-video III (contrasts)</td>
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<td>due;</td>
<td>videotape III</td>
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<td>Day 12</td>
<td>self-video III annotation</td>
<td>observation of applied lesson</td>
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<td></td>
<td>due;</td>
<td>due;</td>
</tr>
<tr>
<td></td>
<td>performance exam</td>
<td></td>
</tr>
</tbody>
</table>

**Weekly Activities:***

- **Week 1:** Day 3: Videotaping protocol. Week 2: Day 5: Post-evaluation due; Day 6: Feedback to subjects: self-evaluation. Week 3: Day 8: Positives-only evaluation due; Day 9: Negatives-only evaluation due; Practice contrasts; Prepare contrasts video. Week 4: Day 12: Self-video III annotation due; Performance exam.

**Monthly Activities:**

- Week 5: Teach 2 Private lessons to beginning band pupils.

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**Daily Course Schedule for Treatment Groups:**

Performance on trombone and trumpet was ongoing.
Dependent Variables and Instrumentation

The primary purpose of this study was to compare the effects of self-evaluation, teacher observation, and performance oriented treatments on the teaching behaviors exhibited by preservice music education majors across two lessons with a beginning band pupil. In order to arrive at a clear picture of the effects of instructional approach, lessons were videotaped and all verbalizations by subjects were scripted. Subsequently, subject and pupil performance was evaluated on several levels.

1. Music performance behaviors exhibited by subjects were labeled as follows: subject models with instrument, subject models without instrument, subject performs with instrument during pupil musical activity, and subject vocalizes during pupil musical activity. Subsequently, cumulative timings were obtained for each category. See Table 1 for operational definitions.

2. Pupil musical activity was labeled and cumulative timings obtained. See Table 1 for operational definitions.

3. Subject prompts were counted. See Table 1 for operational definitions.

4. Subject verbalizations were labeled as follows: an academic musical task presentation, a direction, an information-gathering remark, or an off-task remark. Subsequently, verbalizations according to category were counted. See Table 2 for operational definitions.
Performance trials, a combination of teacher presentation and pupil response, were labeled according to quality—successful, unsuccessful, or no response. Subsequently, performance trials according to quality category were counted. See Table 3 for operational definitions.

Subjects' secondary instrument performance quality was evaluated.

Subjects' attitudes were measured with regard to preparatory and lesson experience. Pupils' attitudes toward the lesson experience were measured.

Operational definitions for teacher and pupil lesson activities are reported in Table 1, teacher verbalizations in Table 2, and successful and unsuccessful performance trials in Table 3.

Table 1

**Operational Definitions: Teacher and Pupil Lesson Activities**

**Pupil Musical Activity:** Pupil is overtly engaged in activity that constitutes or is related to music performance including playing the instrument, singing, clapping, counting, fingering silently, negotiating slide positions silently, and breathing exercises.

**Subject Models Using Instrument:** Teacher performs or demonstrates alone using all or part of his/her instrument.

(table continued)
Subject Models Without Instrument: Teacher performs or demonstrates alone using his/her voice or physical movement. Vocal demonstrations may include singing melody, counting in time, chanting rhythm, or demonstrating the style of the music using a neutral syllable. Physical movement may include demonstration of a rhythm by clapping, patting leg, or tapping foot.

Subject Performs Using Instrument During Pupil Musical Activity: Teacher performs on all or part of instrument while pupil is engaged in musical activity. Examples include teacher performing simultaneously with pupil and teacher performing while pupil fingers/moves slide only.

Subject Vocalizes During Pupil Musical Activity: Teacher sings, counts, or chants for longer than one second while pupil is engaged in musical activity.

Subject Prompts While Pupil Performs: Teacher verbalizes or gestures while pupil is engaged in musical activity. Teacher verbalizations may include reinforcements such as “Good” or “Yes,” reminders such as “Don’t forget second position;” admonitions such as “Keep your cheeks in;” or directions such as “Keep going.” Gestures may include pointing, movement related to posture or breathing, and fingering/slide positions (if pupil is observing).
Table 2

Operational Definitions: Subject Verbalizations

Academic Task Presentation (A): This label includes verbalizations about musical or performance aspects. Examples include: “Put the thumb in between the first and second valves,” “Where should your tongue be hitting?” “Play the quarter notes using a legato tongue,” and “How do you finger A?”

Direction (D): This label includes verbalizations given regarding who will, or where, to sing or play. Examples include: “Start from the beginning” and “Play the last line.”

Information Gathering Question (I): This label includes verbalizations that inform the teacher about musical performance aspects. Examples include: “That’s really high, huh?”, “Are you using your tongue?”, or “Have you played this before?”. 

Off-Task Remark or Interruption (O): This label refers to verbalizations not related to musical performance aspects or direction-giving. For example, the teacher may ask the pupil if s/he likes band.

Definitions for teacher verbalizations were based on research in sequential patterns (Yarbrough, Dunn, & Baird, 1997) and the teaching behaviors of expert private piano teachers (Buckner, 1997). Teacher reinforcements, the third aspect of a complete sequential pattern in sequential pattern research, were considered part of verbalizations and were labeled as such. Definitions for quality of pupil response

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Table 3

Operational Definitions: Successful and Unsuccessful Performance Trials

Correct Pupil Response (+): The pupil response, either verbal or through instrumental performance, was accurate according to the goal defined by the related teacher verbalization, or the response was a closer approximation of the goal defined by the teacher compared to the previous pupil response.

Incorrect Pupil Response (-): The pupil response, either verbal or through instrumental performance, was not accurate according to the goal defined by the related teacher verbalization, or the response was no closer an approximation of the goal defined by the teacher compared to the preceding pupil response.

No Response (o): The pupil did not respond or the teacher did not provide an opportunity for response to a verbalization.

(successful/unsuccessful performance trials) were developed from research by Buckner (1997) and expanded for use in the present study. It is important to note that quality of pupil response was always the driving force in making successful/unsuccessful determinations. For example, if the subject gave a direction verbalization, “Play the first line again,” the pupil was considered to have responded successfully if s/he played the line well or showed improvement. To follow the direction by playing the
line again poorly or without any sign of improvement was considered an unsuccessful performance trial.

Every pupil response to teacher academic task presentations and to teacher directions was labeled as either successful or unsuccessful by the investigator. Pupil responses to information gathering and off-task remarks were not recorded. Because of the subjective nature of this labeling task, a trained reliability observer was enlisted to categorize teacher verbalizations and label quality of pupil response. The investigator and the reliability observer viewed performance trials repeatedly across 18% of lessons until 100% agreement was reached on categorization and labeling. Following this, the investigator and the reliability observer independently viewed a different 18% of lessons. Agreement for categorization of verbalizations was calculated at .96 and labeling of quality of pupil responses at .97. Reliability was computed using the formula agreements divided by agreements plus disagreements. An excerpt of one subjects' scripted lesson with verbalization categorizations and response quality labeling can be found in Appendix O.

**Simple Computer Recording Interface for Behavioral Evaluation**

The Simple Computer Recording Interface for Behavioral Evaluation (SCRIBE) developed by Duke and Farra (1996), is "a computerized observation program which enables an observer to time [and count] specified aspects of observed events" (Buckner, 1997, p. 97). In
the present study, SCRIBE was used in conjunction with subjects' videotaped lessons to record the amount of time spent in the various categories of teacher and pupil activity. SCRIBE was also used to count teacher prompts during pupil performance.

Each of the teacher and pupil behavior categories as well as teacher prompts appeared as buttons on a data input screen and were assigned a representative key on the keyboard. As each behavior occurred during the videotape, the respective keys were pushed to begin the timing or count. The space bar was depressed at the conclusion of a behavior in order to stop the timer. Since behaviors from several categories could occur simultaneously, data were recorded over a series of two to three viewings.

SCRIBE generates a summary of recorded events. Table 4 is an example of one subject's data for one lesson. The summary data page provides total frequency and total duration of each behavior, the percentage of total lesson time devoted to each behavior, the mean episode duration of each behavior with standard deviation, and the rate per minute for each behavior. Summary for counted behaviors (subject prompts) includes frequency and rate per minute.

**Subject Performance Ability**

At the conclusion of the treatment segment of this study, all subjects were given a secondary instrument (trombone or trumpet)
Table 4

**Sample Data Summary Page Using SCRIBE**

Total Lesson Time: 0:26:24

<table>
<thead>
<tr>
<th>Subject</th>
<th>Frequency</th>
<th>Rate (#/min)</th>
<th>Time (Min:Sec)</th>
<th>Time (%)</th>
<th>Mean (Min:Sec)</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Instrument</td>
<td>16</td>
<td>0.6</td>
<td>1:00</td>
<td>3.8</td>
<td>0:03.8</td>
<td>3.07</td>
</tr>
<tr>
<td>Model Vocally</td>
<td>3</td>
<td>0.1</td>
<td>0:04</td>
<td>0.3</td>
<td>0:01.3</td>
<td>0.47</td>
</tr>
<tr>
<td>Perform with Pupil</td>
<td>42</td>
<td>1.6</td>
<td>5:00</td>
<td>18.9</td>
<td>0:07.1</td>
<td>6.91</td>
</tr>
<tr>
<td>Vocalize while Pupil Performs</td>
<td>3</td>
<td>0.1</td>
<td>0:10</td>
<td>0.6</td>
<td>0:03.3</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Pupil

| Musical Activity                 | 55        | 2.1          | 6:26           | 24.4     | 0:07.0         | 6.25               |
| Teacher Prompts                  | 27        | 1.0          |                |          |                |                    |

Note: The percentage of time does not add to 100% because verbalizations are not included.

performance examination consisting of assigned exercises and sight-reading. Exams were videotaped for later evaluation by three independent judges for the purposes of this study and for course grade contingencies. Judges included the investigator and two others with extensive and reputable instrumental teaching experiences. Subjects were rated in 14 performance categories. See Appendix P for categories and evaluation form.
Subject and Pupil Attitude Surveys

Subjects completed an attitudinal survey regarding the effectiveness of the brass techniques class format during the treatment segment, their skill level development on their treatment segment instrument, their enjoyment of lesson teaching, and their confidence in teaching their instrument. Subjects were also encouraged to write free responses concerning their experiences during that class segment. This survey can be found in Appendix Q.

Pupils completed a survey, found in Appendix R, following the second lesson. The survey referred to the format of the lessons, pupils' attitude concerning the lessons, and their opinion regarding self-improvement because of participation in the lessons. Camera-operators administered the survey while subjects were not present in the room. Pupils were provided with envelopes so that they could seal the completed survey before returning it.

Procedures

This study was nested within a semester long brass techniques course taught by the investigator in the Spring of 1998. The class met three days per week for 50 minutes. All subjects were registered for course credit. Their grades were contingent upon completion of all requirements, including those associated with this study. A grade of "C" or better was
required in order for the course to count toward degree requirements for
music education majors.

Course requirements necessitated that subjects perform on five
brass instruments: trumpet, trombone, French horn, baritone, and tuba.
Instrument assignments for teaching segments that ranged in length from
two to four weeks were made according to availability of instruments and
with the aim of balancing instrumentation among subjects. For the
purposes of this study, subjects were assigned to French horn or baritone
for the first instrument segment of the semester and trumpet or trombone
for the second instrument/treatment segment.

For the treatment segment of the semester (4th through 7th week),
subjects were assigned to one of three groups: (a) self-evaluation group (n
= 8), (b) teacher observation group (n = 7), or (c) performance orientation
group (n = 7). The three treatments occurred simultaneously across a four-
week, 12-class segment. It was necessary to utilize three instructors during
several class periods. Class material and instructions pertaining to
treatments were coordinated by the investigator. The investigator, a
doctoral candidate in music education with five years experience in public
school instrumental music teaching, instructed the self-evaluation group.
An associate professor of music education instructed the teacher
observation group, and a master's candidate in brass performance with a
bachelor's degree in music education instructed the performance
orientation group. Specific daily treatments were implemented within each group according to a predetermined schedule shown in Figure 1.

On the last day of the treatment, all groups received instruction in protocol for lesson teaching by the investigator. Lesson planning procedures for the first and second lessons were explained. Planning for the first lesson involved completing a form, found in Appendix N, designed to stimulate thought concerning pupil performance problems subjects might encounter. The format of the second lesson plan directed each subject to tailor instruction specific to pupils' needs—needs that would have been apparent from the first lesson. This form can also be found in Appendix N.

Each university subject was assigned one beginning band pupil from the University Laboratory School or Istrouma Middle School. Subject/pupil pairings were made contingent upon availability of beginning band pupils, availability of transportation for university subjects, scheduling, room availability, and equity among treatment groups. Three subjects in each treatment group taught lessons at University Laboratory School. Five subjects in the self-evaluation group, four in the teacher-observation group, and four in the performance-orientation group taught at Istrouma Middle Magnet.

Lessons were videotaped by trained camera operators who had rehearsed taping procedures under the guidance of the investigator. Video
cameras were positioned so that both subject and pupil were shown and such that faces, postures, and hand positions could be seen clearly. Both wide angle and close-up views (embouchure and hand position) of subjects and pupils were provided. Due to equipment and room limitations, a maximum of four subjects taught simultaneously. Lessons were taught in practice rooms and other rooms adjacent to or near large ensemble rehearsal areas.

Federal regulations required that all research with human subjects be reviewed and approved by a duly authorized university-level committee prior to the initiation of the study. The "Application for Exemption from IRB (Institutional Review Board): Oversight for Studies Conducted in Educational Settings" application, copies of parental consent form, subject consent form, minor assent form, surveys to be used, and the required description of the study were submitted for review through the Louisiana State University College of Education and were approved prior to beginning this study. The Director of Planning, Evaluation, Research, and Development in the Office of Curriculum and Instruction with East Baton Rouge Parish Schools also approved the proposal. Principals of the individual schools were contacted and arrangements were made to visit schools. As stipulated in the research guidelines, permission from subjects, pupils, and pupils' guardians was obtained before research began. See Appendix S for copies of IRB application requirements.
Pilot Test

Segments of this study were pilot tested in a woodwind techniques course taught by the investigator during the previous semester. The primary purposes of the pilot study were to examine procedures proposed for the self-evaluation treatment group and to examine videotaping protocol. Five students served as subjects. They participated in eight class training sessions on an assigned woodwind instrument. Subjects were videotaped during a performance testing situation and completed general, positives-only, and negatives-only self-evaluation of their performance—the forms to be used with the self-evaluation treatment group in the present study.

Following the training segment on the instrument, subjects taught two lessons to elementary band pupils from the Louisiana State University Laboratory School or McKinley Middle School. Subjects self-videotaped and completed self- and pupil evaluations for both lessons. Subjects were evaluated according to course descriptions and received credit for their participation and successful completion of all requirements.

Results of the pilot study indicated changes needed in the areas of videotaping protocol, length of lessons, evaluation form instructions, and procedures for completing attitude surveys. Subjects were not able to videotape themselves adequately. One subject was not successful in
recording the first lesson and two subjects did not correctly place the camera so that the investigator could view both subject and pupil. Because of these complications, camera operators were enlisted and trained for the present study.

Although instructed to teach for 30 minutes, three subjects’ lessons approached 45 minutes in length. For this reason, subjects in the present study were instructed to plan for and teach 25 minutes per lesson. Camera operators signaled subjects when 5 minutes and 1 minute remained in each lesson.

Evaluation forms were altered to more accurately and clearly reflect the desired attributes of teaching and performance. Pilot subjects completed a survey following lesson teaching and also indicated on forms particular areas which were unclear. The pilot survey can be found in Appendix T. Rating scales were more specifically defined and reduced in scope. Because two subjects did not remember to administer the pupil attitude survey, the trained camera operators were assigned that task in this study.

Equipment

All lessons were videotaped using Panasonic VHS (Pro Line AG-188) and Sony V8 (Handycam CCD-F301) video recorders on stationary tripods. Performance testing, expert teaching videotapes, and subjects self-evaluation videotapes were recorded using a Panasonic VHS (Pro Line...
AG-188) video camera. Subjects viewed videotapes on a 20-inch color Sony
Trinitron television (KV-19TR20) and a Panasonic play back recorder (HQ
Video Cassette Recorder AG-2550P) in a secluded laboratory used for
observational purposes. A Macintosh IIx computer was utilized for
gathering data using SCRIBE and for producing verbatim transcripts.
Videotapes used for analysis were viewed on a 20-inch color Sony
Trinitron television (KV-19TR20) and a Panasonic play back recorder (HQ
Video Cassette Recorder AG-2550P) for VHS tapes and a Sony V8
(Handycam CCD-F301) video camera was used for play back of V8 tapes.
CHAPTER 3

RESULTS

The purpose of this study was to investigate the effects of three approaches to training preservice instrumental music teachers for initial teaching experiences with beginning instrumentalists on teacher verbalizations, pupil responses, time spent in lesson activities, and subject performance ability. The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced teachers, and a third evidencing a performance orientation—were administered in an undergraduate brass techniques course. Primarily, this study was designed to answer the question: Did instructional approach differentially affect teacher behavior and pupil responses? Analyses included investigation in kinds of teacher/subject verbalizations (academic, direction, information-gathering, and off-task), quality of pupil responses (successful, unsuccessful, and no response), and time spent in lesson activities. In addition, the instrument performance competency of subjects was assessed as well as subject and pupil post-treatment attitudes.

Subjects (N = 22) were enrolled in a one semester brass techniques course at Louisiana State University. Twenty-two subjects began and completed all requirements for this project. Subjects were divided into three treatment groups: self-evaluation (n = 8), teacher-observation (n = 7), and performance orientation (n = 7) where they received training specific
to each treatment group. Upon completion of training, subjects taught two private lessons to beginning band pupils in middle schools in the Baton Rouge, Louisiana area.

Subjects were instructed to teach 25 minute lessons. They were given five and one minute warnings to signal the ending of the lessons. The average length of the first lesson for all treatment groups was 24 minutes and 5 seconds with the average length of the second lesson for all treatment groups equalling 24 minutes and 10 seconds. Treatment group averages were: (a) self-evaluation \( (M = 24:02.94 \text{ minutes}) \), (b) teacher observation \( (M = 24:17.22 \text{ minutes}) \), and (c) performance orientation \( (M = 24:04.85 \text{ minutes}) \). A total of 1,061 minutes and 56 seconds were taught by subjects and analyzed by the investigator. See Table 5 for mean length of lessons one and two by treatment groups.

Subject Verbalizations

Verbatim transcripts from videotaped lessons provided the means by which to categorize subjects' verbalizations according to type (academic, direction, information-gathering, and off-task). Percentages for each category out of total verbalizations are displayed in Table 6. Individual subject data can be found in Appendix U. These data, in addition to verbalization rate per minute conversions (to account for lesson duration differences), were organized by lesson and treatment group. These data are displayed in Table 7.
Table 5

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Lesson One</th>
<th>Lesson Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td>24:04.75</td>
<td>24:01.13</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>24:46.00</td>
<td>23:48.43</td>
</tr>
<tr>
<td>Performance Orientation</td>
<td>23:26.57</td>
<td>24:43.14</td>
</tr>
</tbody>
</table>

Table 6

<table>
<thead>
<tr>
<th>Type of Verbalization</th>
<th>M</th>
<th>Direction</th>
<th>Information-Gathering</th>
<th>Off-Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>65.44</td>
<td>20.72</td>
<td>11.20</td>
<td>2.13</td>
</tr>
</tbody>
</table>

**Note.** Mean percentages do not equal 100% due to rounding.

A Three-Way Analysis of Variance (ANOVA) with Repeated Measures was calculated comparing treatment groups (self-evaluation, teacher observation, and performance orientation), across lesson (one or two) and types of verbalizations (academic, direction, information-gathering, and off-task). Results, presented in Table 8, indicated no difference in the between subject variable treatment condition \( F (2,19) = .42, p > .05 \) and the within subject variable lesson \( F (1,57) = 3.67, p > .05 \). However, a significant difference among subjects across types of verbalization was found \( F (3, 57) = 106.70, p < .0001 \). Table 9 illustrates mean rate per minute of teacher verbalizations (academic, direction, information-gathering, and off-task). As might be expected with a small
Table 7

Subject Verbalizations: Means, Standard Deviations, and Standard Errors by Lesson and Treatment Group

<table>
<thead>
<tr>
<th>Verbalization</th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Lesson One</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>2.63</td>
<td>1.08</td>
<td>.36</td>
</tr>
<tr>
<td>Direction</td>
<td>.86</td>
<td>.37</td>
<td>.12</td>
</tr>
<tr>
<td>Information-gathering</td>
<td>.42</td>
<td>.26</td>
<td>.09</td>
</tr>
<tr>
<td>Off-task</td>
<td>.08</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Lesson Two</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>2.42</td>
<td>.96</td>
<td>.32</td>
</tr>
<tr>
<td>Direction</td>
<td>.94</td>
<td>.30</td>
<td>.10</td>
</tr>
<tr>
<td>Information-gathering</td>
<td>.21</td>
<td>.11</td>
<td>.04</td>
</tr>
<tr>
<td>Off-task</td>
<td>.07</td>
<td>.05</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note: Means represent rate per minute.

number of subjects, standard deviations are large indicating wide disparity among individuals within each group. Subjects utilized a greater number of academic verbalizations per minute ($M = 2.63$) than direction verbalizations ($M = .80$), information-gathering verbalizations ($M = .42$), and off-task verbalizations ($M = .09$). This indicates that subjects verbalized...
Table 8

Three-Way Analysis of Variance: Subject Verbalizations Across Treatment, Lesson, and Type of Verbalization

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>.30</td>
<td>.15</td>
<td>.42</td>
<td>.66</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>6.71</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>.18</td>
<td>.18</td>
<td>3.67</td>
<td>.07</td>
</tr>
<tr>
<td>Verbalization</td>
<td>3</td>
<td>166.22</td>
<td>55.41</td>
<td>106.70</td>
<td>.0001</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>.02</td>
<td>.01</td>
<td>.21</td>
<td>.81</td>
</tr>
<tr>
<td>Lesson x Verbalization</td>
<td>3</td>
<td>.09</td>
<td>.03</td>
<td>.40</td>
<td>.75</td>
</tr>
<tr>
<td>Verbalizations x Treatment</td>
<td>6</td>
<td>1.68</td>
<td>.28</td>
<td>.54</td>
<td>.78</td>
</tr>
<tr>
<td>Lesson x Verbalization x Treatment</td>
<td>6</td>
<td>.31</td>
<td>.05</td>
<td>.69</td>
<td>.66</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>57</td>
<td>4.24</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

specific academic information more than three times as frequently as they did general performance directions. There were no significant two- or three-way interactions among variables (p > .05).

Subject Verbalizations and Quality of Pupil Responses

Qualities of pupil response (successful, unsuccessful, and no response) following subject academic and direction verbalizations was
and off-task verbalizations were not included as they did not require a pupil response. Pupil responses in the appropriate academic and direction verbalization categories were counted and converted to rate per minute in order to equalize differences in lesson durations. These data were further organized by treatment group and lesson and are displayed in Table 10. In order to determine differences in quality of pupil response with respect to subject verbalizations, data were analyzed using a Four-Way ANOVA with Repeated Measures (treatment group x verbalization x pupil response x lesson). Results can be found in Table 11. The between subject variable, treatment, did not yield significant results \[ F (2, 19) = .19, p > .05 \]. Similar to the previous analysis, subjects' participation in different treatment groups did not differentially affect the quality of responses elicited from pupils during lessons.

Among the within subject variables, results indicated significant differences between pupil responses to subject verbalizations \[ F (1, 19) = \]

---

Table 9

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>2.63</td>
<td>.91</td>
<td>.14</td>
</tr>
<tr>
<td>Direction</td>
<td>.80</td>
<td>.34</td>
<td>.05</td>
</tr>
<tr>
<td>Information-gathering</td>
<td>.42</td>
<td>.28</td>
<td>.04</td>
</tr>
<tr>
<td>Off-task</td>
<td>.09</td>
<td>.09</td>
<td>.01</td>
</tr>
</tbody>
</table>

---
Table 10

Quality of Pupil Response: Means, Standard Deviations, and Standard Errors by Verbalization (Academic or Direction), Lesson, and Treatment Group

<table>
<thead>
<tr>
<th>Response</th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic</td>
<td>Direction</td>
<td>Academic</td>
</tr>
<tr>
<td>Lesson One</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>1.58</td>
<td>.89</td>
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<tr>
<td>Unsuccessful</td>
<td>.77</td>
<td>.42</td>
<td>.14</td>
</tr>
<tr>
<td>No response</td>
<td>.24</td>
<td>.15</td>
<td>.05</td>
</tr>
<tr>
<td>Lesson Two</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>1.45</td>
<td>.72</td>
<td>.24</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>.72</td>
<td>.40</td>
<td>.13</td>
</tr>
<tr>
<td>No response</td>
<td>.25</td>
<td>.16</td>
<td>.05</td>
</tr>
</tbody>
</table>

**Note:** Means represent rate per minute.
Table 11

Four-Way Analysis of Variance: Pupil Responses Across Treatment, Verbalizations, Response Type, and Lesson

<table>
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<tr>
<th>Source</th>
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<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>.11</td>
<td>.06</td>
<td>.19</td>
<td>.83</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>5.68</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbalization</td>
<td>1</td>
<td>27.41</td>
<td>27.41</td>
<td>86.06</td>
<td>.0001</td>
</tr>
<tr>
<td>Response</td>
<td>2</td>
<td>18.28</td>
<td>9.14</td>
<td>27.68</td>
<td>.0001</td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>.01</td>
<td>.01</td>
<td>.11</td>
<td>.75</td>
</tr>
<tr>
<td>Verbalization x Treatment</td>
<td>2</td>
<td>.50</td>
<td>.25</td>
<td>.78</td>
<td>.47</td>
</tr>
<tr>
<td>Response x Treatment</td>
<td>4</td>
<td>1.53</td>
<td>.38</td>
<td>1.16</td>
<td>.34</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>.16</td>
<td>.08</td>
<td>.64</td>
<td>.54</td>
</tr>
<tr>
<td>Verbalization x Response</td>
<td>2</td>
<td>10.61</td>
<td>5.30</td>
<td>21.78</td>
<td>.0001</td>
</tr>
<tr>
<td>Verbalization x Lesson</td>
<td>1</td>
<td>.07</td>
<td>.07</td>
<td>.46</td>
<td>.51</td>
</tr>
<tr>
<td>Response x Lesson</td>
<td>2</td>
<td>.47</td>
<td>.24</td>
<td>2.73</td>
<td>.08</td>
</tr>
<tr>
<td>Verbalization x Response x Treatment</td>
<td>4</td>
<td>.83</td>
<td>.21</td>
<td>.85</td>
<td>.50</td>
</tr>
<tr>
<td>Verbalization x Lesson x Treatment</td>
<td>2</td>
<td>.28</td>
<td>.14</td>
<td>.98</td>
<td>.39</td>
</tr>
<tr>
<td>Response x Lesson x Treatment</td>
<td>4</td>
<td>1.17</td>
<td>.29</td>
<td>3.36</td>
<td>.02</td>
</tr>
<tr>
<td>Verbalization x Response x Lesson</td>
<td>2</td>
<td>.31</td>
<td>.16</td>
<td>1.52</td>
<td>.23</td>
</tr>
<tr>
<td>Verbalization x Response x Lesson x Treatment</td>
<td>4</td>
<td>.67</td>
<td>.17</td>
<td>1.63</td>
<td>.19</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>38</td>
<td>3.88</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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and among types of pupil responses \(F(2, 38) = 27.68, p < .0001\). Pupils responded to academic verbalizations at a rate of almost one per minute and they responded to direction verbalizations at a rate of one about every four minutes. This was expected given the frequency of academic verbalizations as compared to direction verbalizations (refer to Table 7). Table 12 displays means, standard deviations, and standard errors for pupil responses to these verbalizations.

For the response-type variable, subjects were able to structure pupil responses such that pupils experienced successful responses \((M = .90)\) more than unsuccessful responses \((M = .64)\) and no responses \((M = .23)\). Table 13 displays means, standard deviations, and standard errors for these responses. Again, large standard deviations indicate wide disparity among individual pupil’s responses.

A two-way interaction occurred in the within variables of verbalizations by responses \(F(2, 38) = 21.78, p < .0001\). Means, standard deviations, and standard errors for each verbalization and response situation are presented in Table 14. Figure 2 further illustrates this interaction. It is clear that when pupils were given academic instruction, they were nearly twice as likely to respond correctly \((M = 1.51)\) than incorrectly \((M = .79)\). When comparing responses to direction verbalizations, however, pupils were more likely to respond unsuccessfully \((M = .49)\) than successfully \((M = .29)\). The higher rate per
minute of unsuccessful responses during academic verbalizations (\(M = .79\)) than direction verbalizations (\(M = .49\)) can be accounted for in the greater percentage of total academic verbalizations (\(M = 65.43\%\)) than direction verbalizations (\(M = 20.72\%\)) expressed by subjects. There were no other significant two-way interactions (\(p > .05\)).

A significant three-way interaction also transpired in the within variables of response by lesson by treatment \([F (4, 38) = 3.36, p < .05]\]. Table 15 displays cell mean responses and Figure 3 illustrates the interaction among them. The highest means (rate per minute) are represented by successful responses in all three treatment groups for both lessons. The rate of successful responses by pupils remained fairly consistent for the second lesson in the three treatment groups (\(M = .90\) self-observation, \(M = .87\) teacher observation, \(M = .86\) performance orientation) but varied during the first lesson with the teacher observation treatment group having fewer successful responses (\(M = .81\)) during the first lesson than the second (\(M = .87\)). This was the only treatment group that improved their mean rate of successful responses during the second lesson.

Successful responses decreased from lesson one to lesson two for both the self-evaluation group [(\(M = .94\), first lesson; \(M = .90\), second lesson] and the performance orientation group [(\(M = 1.00\), first lesson; \(M = .86\), second lesson]. Similarly, for unsuccessful pupil responses, the teacher observation group was the only group in which unsuccessful responses
### Table 12
**Mean Rate Per Minute of Pupil Response to Subject Verbalizations**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>.91</td>
<td>.75</td>
<td>.07</td>
</tr>
<tr>
<td>Direction</td>
<td>.27</td>
<td>.26</td>
<td>.02</td>
</tr>
</tbody>
</table>

### Table 13
**Mean Rate Per Minute of Pupil Response**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful</td>
<td>.90</td>
<td>.78</td>
<td>.08</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>.64</td>
<td>.40</td>
<td>.04</td>
</tr>
<tr>
<td>No Response</td>
<td>.23</td>
<td>.51</td>
<td>.06</td>
</tr>
</tbody>
</table>

### Table 14
**Pupil Responses: Means, Standard Deviations, and Standard Errors by Academic and Direction Verbalizations**

<table>
<thead>
<tr>
<th>Response</th>
<th>Academic</th>
<th></th>
<th>Direction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
<td>M</td>
</tr>
<tr>
<td>Successful</td>
<td>1.51</td>
<td>.68</td>
<td>.10</td>
<td>.29</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>.79</td>
<td>.45</td>
<td>.07</td>
<td>.49</td>
</tr>
<tr>
<td>No Response</td>
<td>.43</td>
<td>.67</td>
<td>.10</td>
<td>.03</td>
</tr>
</tbody>
</table>

**Note.** Means represent rate per minute.
Figure 2

Interaction plot of subject academic and direction verbalizations and pupil responses.
Table 15

**Pupil Response: Means, Standard Deviations, and Standard Errors by Lesson and Treatment Group**

<table>
<thead>
<tr>
<th>Response</th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Lesson One</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>.94</td>
<td>.92</td>
<td>.22</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>.65</td>
<td>.36</td>
<td>.09</td>
</tr>
<tr>
<td>No Response</td>
<td>.15</td>
<td>.15</td>
<td>.03</td>
</tr>
<tr>
<td>Lesson Two</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>.90</td>
<td>.76</td>
<td>.18</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>.65</td>
<td>.31</td>
<td>.07</td>
</tr>
<tr>
<td>No Response</td>
<td>.14</td>
<td>.16</td>
<td>.04</td>
</tr>
</tbody>
</table>

**Note:** Means represent rate per minute.

decreased during the second lesson (M = .64, first lesson; M = .41, second lesson). The self-evaluation treatment group's mean rate of unsuccessful pupil responses remained the same for both lessons (M = .65, lesson one; M = .65, lesson two) and the performance oriented group increased the rate of unsuccessful pupil responses per minute during the second lesson (M = .69, first lesson; M = .76, second lesson).
Successful Pupil Response
■ Unsuccessful Pupil Response
△ No Response

Figure 3
The greatest difference occurred in the no response category. Subjects in the teacher observation treatment group experienced a dramatic increase in the no response category during the second lesson [first lesson, (M = .18); second lesson (M = 62)]. Subjects expressed academic or direction verbalizations to pupils without allowing them to respond to the information. The self-evaluation group was consistent in the no response category for both lessons [first lesson (M = .15); second lesson (M = .14)] as was the performance oriented treatment group [first lesson, (M = .21); second lesson (M = .18)].

There were no other significant three-way interactions (p > .05) and there was no significant four-way interaction (p > .05).

Lesson Activity

Certain activities were timed using the computer program SCRIBE during the subjects’ (N = 22) two lessons (1,061:56 minutes). All timed activities were calculated in seconds and then expressed as percentages of total lesson time spent in those activities. First, the amount of time subjects spent in two different types of performance (playing or singing) and the circumstance under which they performed (alone or with pupil) were analyzed and compared across treatment groups (self-evaluation, teacher observation, and performance orientation) and lesson (one or two) using a Four-Way ANOVA with Repeated Measures. A summary of these results is presented in Table 16. The main effect, treatment, did not affect
results of this analysis \[F(2,19) = .19, p > .05\]. The within variable type of teacher performance (play or sing) yielded statistically significant results \[F(1, 19) = 64.52, p < .0001\]. Subjects played or modeled using their instruments during the lessons \((M = 9.54\%)) significantly more than they sang \((M = 1.96\%)\). Means, standard deviations, and standard errors are presented in Table 17. The main effect of circumstance (performing alone or with pupil) also yielded significant results \[F(1, 19) = 17.01, p < .0006\]. This variable demonstrated that subjects were more likely to perform (play or sing) along with the pupil \((M = 8.44\%)) than to perform alone \((M = 3.05\%))\). Means, standard deviations, and standard errors are presented in Table 18. The main effect lesson (one or two) did not yield significant results \[F(1,19) = 0.14, p > .05\]. Subjects time spent performing did not differ between the first lesson \((M = 5.70\%)) and the second lesson \((M = 5.80\%))\).

A significant two-way interaction occurred between the variables type of teacher performance (play or sing) and circumstance (alone or with pupil) \[F(1, 19) = 21.90, p < .0002\]. Means, standard deviations, and standard errors are presented in Table 19. Figure 4 illustrates that subjects performed on their instruments with pupils \((M = 14.73\%)) over three times more than they played their instruments alone \((M = 4.34\%))\). Subjects sang as a model very little during lessons. When subjects did sing, they sang a greater amount of time with pupils during performance activity \((M = 2.16\%)) than they sang or demonstrated alone \((M = 1.77\%))\). There were no
Table 16

Four-Way Analysis of Variance with Repeated Measures: Lesson Activity Across Treatment, Type of Teacher Performance, Circumstance, and Lesson

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>19.40</td>
<td>9.70</td>
<td>.19</td>
<td>.83</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>959.98</td>
<td>50.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Teacher Performance</td>
<td>1</td>
<td>2508.05</td>
<td>2508.05</td>
<td>64.52</td>
<td>.0001</td>
</tr>
<tr>
<td>Circumstance</td>
<td>1</td>
<td>1233.84</td>
<td>1233.84</td>
<td>17.01</td>
<td>.0006</td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>.57</td>
<td>.57</td>
<td>.14</td>
<td>.71</td>
</tr>
<tr>
<td>Type of Teacher Performance x Treatment</td>
<td>2</td>
<td>7.85</td>
<td>3.92</td>
<td>.10</td>
<td>.90</td>
</tr>
<tr>
<td>Circumstance x Treatment</td>
<td>2</td>
<td>79.10</td>
<td>39.55</td>
<td>.55</td>
<td>.59</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>.46</td>
<td>.23</td>
<td>.06</td>
<td>.94</td>
</tr>
<tr>
<td>Type of Teacher Performance x Circumstance</td>
<td>1</td>
<td>1067.92</td>
<td>1067.92</td>
<td>21.90</td>
<td>.0002</td>
</tr>
<tr>
<td>Type of Teacher Performance x Lesson</td>
<td>1</td>
<td>.07</td>
<td>.07</td>
<td>.006</td>
<td>.94</td>
</tr>
<tr>
<td>Circumstance x Lesson</td>
<td>1</td>
<td>.60</td>
<td>.60</td>
<td>.09</td>
<td>.77</td>
</tr>
<tr>
<td>Type of Teacher Performance x Circumstance x Treatment</td>
<td>2</td>
<td>.75.98</td>
<td>37.99</td>
<td>.78</td>
<td>.47</td>
</tr>
<tr>
<td>Type of Teacher Performance x Lesson x Treatment</td>
<td>2</td>
<td>3.93</td>
<td>1.97</td>
<td>.17</td>
<td>.84</td>
</tr>
<tr>
<td>Circumstance x Lesson x Treatment</td>
<td>2</td>
<td>2.36</td>
<td>1.18</td>
<td>.17</td>
<td>.85</td>
</tr>
<tr>
<td>Type of Teacher Performance x Circumstance x Lesson</td>
<td>1</td>
<td>.13</td>
<td>.13</td>
<td>.01</td>
<td>.92</td>
</tr>
<tr>
<td>Type of Teacher Performance x Circumstance x Lesson x Treatment</td>
<td>2</td>
<td>1.94</td>
<td>.97</td>
<td>.07</td>
<td>.93</td>
</tr>
</tbody>
</table>

Subjects within groups                       | 19 | 259.74     | 13.67      |      |     |

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other significant two-way interactions and there were no significant three- or four-way interactions ($p > .05$).

Table 17

**Mean Percent of Time Spent in Types of Teacher Performance**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>9.54</td>
<td>8.78</td>
<td>.94</td>
</tr>
<tr>
<td>Sing</td>
<td>1.96</td>
<td>2.52</td>
<td>.27</td>
</tr>
</tbody>
</table>

Table 18

**Mean Percent of Time Spent in Types of Circumstance**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td>3.05</td>
<td>2.60</td>
<td>.28</td>
</tr>
<tr>
<td>With Pupil</td>
<td>8.44</td>
<td>9.54</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Table 19

**Teacher Performance: Means, Standard Deviations, and Standard Errors by Circumstance**

<table>
<thead>
<tr>
<th>Performance</th>
<th>Alone</th>
<th></th>
<th>With Pupil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Play</td>
<td>4.34</td>
<td>2.80</td>
<td>.42</td>
</tr>
<tr>
<td>Sing</td>
<td>1.77</td>
<td>1.57</td>
<td>.24</td>
</tr>
<tr>
<td></td>
<td>14.73</td>
<td>9.64</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>2.16</td>
<td>3.21</td>
<td>.48</td>
</tr>
</tbody>
</table>

Note: Means represent percent of lesson time spent in activity.
Figure 4

Interaction plot for type of teacher performance and circumstance.

Pupil Performance Activity

Pupil performance activity was defined as the total amount of time pupils were engaged in musical activity. Musical activity included pupils performing on their instruments alone; singing, chanting, counting, or clapping; and pupils performing along with subjects. This activity was timed using the computer program SCRIBE. Timing data were gathered in two categories: (a) pupil perform alone and (b) pupil perform with subject. These timings were summed and labeled pupil performance activity. Timings were expressed in seconds for each lesson and then converted to percentages of total lesson time spent in pupil performance activity. Table
20 shows results of a Two-Way ANOVA (treatment x lesson) comparing pupil performance activity across variables. The between variable treatment yielded significant results \( F (2, 19) = 4.69, p < .05 \) for total percentage of pupil performance time. Means, standard deviations, and standard errors are presented in Table 21. Findings from a Fisher's Protected LSD post hoc test demonstrated that the mean percentage time for the self-evaluation group was significantly higher than the teacher observation and performance orientation treatment groups. Subjects in the self-evaluation treatment group engaged their pupils in performance activity an average of 44.76% of the total lesson time. In contrast, subjects in the performance orientation treatment group engaged their pupils in performance activity an average of 37.28% of the total lesson time while subjects in the teacher observation group allowed an average of 34.03% of the lessons for pupil performance activity. The self-evaluation group averaged greater than 10 percentage points more pupil performance activity than the teacher observation treatment group and greater than 6 percentage points more than the performance orientation group.

The within variable lesson (one or two) did not yield significant results with pupil performance activity \( (p > .05) \) nor was there a significant two-way interaction \( (p > .05) \).
Table 20

Two-Way Analysis of Variance: Pupil Performance Activity Across Treatment and Lessons.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>917.59</td>
<td>458.80</td>
<td>4.69</td>
<td>.02</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>1857.84</td>
<td>97.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>29.94</td>
<td>29.94</td>
<td>1.32</td>
<td>.26</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>68.98</td>
<td>34.49</td>
<td>1.52</td>
<td>.24</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>19</td>
<td>430.79</td>
<td>22.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 21

Pupil Performance Time: Means, Standard Deviations, and Standard Errors for Treatment Group and Lesson

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td>44.76</td>
<td>8.01</td>
<td>2.00</td>
</tr>
<tr>
<td>Teacher Observation</td>
<td>34.03</td>
<td>7.26</td>
<td>1.94</td>
</tr>
<tr>
<td>Performance Orientation</td>
<td>37.28</td>
<td>7.58</td>
<td>2.03</td>
</tr>
</tbody>
</table>

Note: Significant difference (* p < .05) is the result of Fisher's Protected LSD. Means represent percent of lesson time spent in activity.

Subject Prompts

Subject prompts (physical motions or verbalizations executed by the subject during pupil performance which served to keep the lesson flowing...
or instruct the pupils) were counted and tallied using the computer program SCRIBE. Tallies were converted to rate per minute for each lesson. Results of a Two-Way ANOVA with Repeated Measures (presented in Table 22) indicated no significant differences in the between variable treatment (self-evaluation, teacher observation, and performance orientation) \([F (2, 19) = 2.42, \ p > .05]\) or the within variable lesson (one or two) \([F (1, 19) = .01, \ p > .05]\). A significant interaction, however, did occur between the two variables \([F (2, 19) = 6.79, \ p < .01]\). Means, standard deviations, and standard errors are displayed in Table 23. Graphic display of means in Figure 5 more clearly illustrate this significant interaction. The self-evaluation group had a higher rate of prompts for both lessons than did the other groups. The highest rate of prompts occurred during

### Table 22

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>2.87</td>
<td>1.43</td>
<td>2.42</td>
<td>.12</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>11.25</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>3.88</td>
<td>3.88</td>
<td>.01</td>
<td>.93</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>.63</td>
<td>.31</td>
<td>6.79</td>
<td>.006</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>19</td>
<td>.88</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the second lesson in the self-evaluation group \(M = .96\), making the self-evaluation group the only group to increase prompts during the second lesson. The other treatment groups (teacher observation and performance orientation) decreased in rate per minute for the second lesson. Prompts ranged from the lowest at about one for every 10 minutes of lesson time in the performance oriented group during the second lesson \(M = .11\) to almost one per minute in the self-evaluation group during the second lesson \(M = .96\).

**Subject Performance Ratings**

Subjects' instrumental performance was rated at the end of the treatment. All subjects were videotaped playing the same exercises for the purposes of course evaluation and performance evaluation. Three expert judges rated performances in 14 categories on a four-point Likert scale with extremely flawed as the lowest rating, and no mistakes as the highest. See Appendix P for the rating form. Results of the Kendall Coefficient of Concordance analysis revealed that there was significant agreement among the three judges ratings \[X^2 (2, N = 22) = 49.36, p < .001, \text{ with reliability calculated at } W = .79\] (Siegel, 1956). Mean performance averages of the three judges' ratings were subsequently calculated for each subjects' performance in each category. Group mean data are displayed in Table 24. Ratings were then compared among subjects' treatment group (self-evaluation, teacher observation, and performance orientation) using the
### Table 23

**Subject Prompts: Means, Standard Deviations, and Standard Errors by Lesson and Treatment Group**

<table>
<thead>
<tr>
<th></th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Lesson One</td>
<td>.64</td>
<td>.82</td>
<td>.29</td>
</tr>
<tr>
<td>Lesson Two</td>
<td>.96</td>
<td>.93</td>
<td>.33</td>
</tr>
</tbody>
</table>

**Note:** Means represent rate per minute.

---

**Figure 5**

*Interaction plot of treatment and lesson on subject mean rate of prompts utilized during teaching.*

---

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Kruskal-Wallis test for significance. Results indicated that treatment did not affect the performance of the subjects \(H (2, N = 22) = .5434, p > .05\). Results are presented in Table 25. Although not statistically significant, the mean rankings of the treatment groups indicate that the performance oriented group received higher performance ratings.

Further investigation compared the performance ratings of subjects to their major (brass or non-brass). Results of the Kolmogorov-Smirnov test for significance for ordinal data indicated that the brass majors did not perform statistically better than the non-brass majors \(D (2, N = 22) = 6.21, p > .05\) (Siegel, 1956). Table 26 displays mean performance ratings for treatment groups and major. The total possible score is 56 (14 categories by the highest rating, 4). Within each treatment group, the mean performance rating for brass players was consistently higher, but the difference was not substantial. Figure 6 graphically displays the performance ratings of brass and non-brass majors to treatment group (self-evaluation, teacher observation, and performance orientation). Subjects who were brass majors performed equally in all three treatment groups; however, non-brass majors who participated in the performance oriented treatment group (\(M = 42.67\)), performed better than non-brass majors participating in the self-evaluation (\(M = 38.17\)) and teacher observation (\(M = 37.89\)) treatment groups.
Table 24

<table>
<thead>
<tr>
<th>Category</th>
<th>Self-Evaluation (n = 8)</th>
<th>Teacher Observation (n = 7)</th>
<th>Performance Orientation (n = 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position of left hand</td>
<td>3.83</td>
<td>3.91</td>
<td>3.86</td>
</tr>
<tr>
<td>2. Position of right hand</td>
<td>3.42</td>
<td>3.14</td>
<td>3.33</td>
</tr>
<tr>
<td>3. Posture</td>
<td>3.79</td>
<td>3.33</td>
<td>3.34</td>
</tr>
<tr>
<td>4. Air intake</td>
<td>3.12</td>
<td>3.05</td>
<td>3.29</td>
</tr>
<tr>
<td>5. Blowing airstream</td>
<td>3.13</td>
<td>3.19</td>
<td>3.38</td>
</tr>
<tr>
<td>6. Breathing at appropriate places</td>
<td>3.50</td>
<td>3.43</td>
<td>3.72</td>
</tr>
<tr>
<td>7. Embouchure formation</td>
<td>2.88</td>
<td>3.00</td>
<td>3.19</td>
</tr>
<tr>
<td>8. Tonguing</td>
<td>2.92</td>
<td>3.14</td>
<td>2.81</td>
</tr>
<tr>
<td>9. Tone quality</td>
<td>2.29</td>
<td>2.62</td>
<td>2.76</td>
</tr>
<tr>
<td>10. Rhythm accuracy</td>
<td>3.17</td>
<td>3.00</td>
<td>3.57</td>
</tr>
<tr>
<td>11. Fingering accuracy</td>
<td>2.62</td>
<td>2.67</td>
<td>3.09</td>
</tr>
<tr>
<td>12. Intonation adjustment</td>
<td>2.04</td>
<td>2.10</td>
<td>2.48</td>
</tr>
<tr>
<td>trumpet: 3rd valve slide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trombone: slide placement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Partial accuracy</td>
<td>3.04</td>
<td>2.71</td>
<td>3.00</td>
</tr>
<tr>
<td>14. Sight-reading</td>
<td>1.96</td>
<td>1.95</td>
<td>2.18</td>
</tr>
</tbody>
</table>

Note. Three judges rated subject instrument performance using a four-point Likert scale with extremely flawed as the low rating and no mistakes as the high rating.
Table 25

Mean Ranking for Kruskal-Wallis Test for Performance Ratings with Variable Treatment (Self-Evaluation, Teacher Observation, and Performance Orientation)

<table>
<thead>
<tr>
<th></th>
<th>Self-Evaluation (n = 8)</th>
<th>Teacher Observation (n = 7)</th>
<th>Performance Orientation (n = 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Rank</td>
<td>11.00</td>
<td>9.93</td>
<td>13.64</td>
</tr>
<tr>
<td>Sum Ranks</td>
<td>88.00</td>
<td>69.50</td>
<td>95.50</td>
</tr>
</tbody>
</table>

Note: The highest possible score was 56 (14 categories x the highest score 4).

Performance Music

Subjects were given a musical exercise prior to teaching in order that they could prepare and plan for their lessons. These exercises, one for each of the schools where pupils were taught, can be found in Appendix B. Subjects were instructed to teach the exercise to their pupils until they determined it was perfected. Although not instructed to incorporate a warm-up period in the lessons, warm-up activities were included in daily treatment group preparations. Both exercise performance and warm-up performance times were calculated using the computer program SCRIBE. Timings were expressed as percentage of total lesson time in order to equalize differences in lesson lengths. A Three-Way ANOVA with Repeated Measures (treatment x lesson x performance music) was calculated on these data. Results are presented in Table 27. Means, standard deviations, and standard errors are displayed in Table 28. There
Table 26

<table>
<thead>
<tr>
<th></th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Brass</td>
<td>44.67</td>
<td>2.29</td>
<td>1.15</td>
</tr>
<tr>
<td>Non-Brass</td>
<td>38.17</td>
<td>5.35</td>
<td>2.68</td>
</tr>
</tbody>
</table>

**Note:** Mean is out of a possible 56 points.

![Bar graph comparing means of subject performance ratings by treatment group: self-evaluation (n = 8); teacher observation (n = 7); and performance orientation (n = 7); and major: brass (n = 12) and non-brass (n = 10).](image)

**Figure 6**

Bar graph comparing means of subject performance ratings by treatment group: self-evaluation (n = 8); teacher observation (n = 7); and performance orientation (n = 7); and major: brass (n = 12) and non-brass (n = 10).
Table 27

Three-Way Analysis of Variance with Repeated Measures: Treatment, Lesson, and Performance Music

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>2</td>
<td>173.78</td>
<td>86.89</td>
<td>.16</td>
<td>.85</td>
</tr>
<tr>
<td>Subjects within group</td>
<td>19</td>
<td>10097.72</td>
<td>531.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson</td>
<td>1</td>
<td>1494.49</td>
<td>1494.49</td>
<td>3.52</td>
<td>.08</td>
</tr>
<tr>
<td>Performance Music</td>
<td>1</td>
<td>33244.64</td>
<td>33244.64</td>
<td>37.23</td>
<td>.0001</td>
</tr>
<tr>
<td>Lesson x Treatment</td>
<td>2</td>
<td>1666.55</td>
<td>833.27</td>
<td>1.96</td>
<td>.17</td>
</tr>
<tr>
<td>Lesson x Performance Music</td>
<td>1</td>
<td>2330.83</td>
<td>2330.83</td>
<td>4.06</td>
<td>.05</td>
</tr>
<tr>
<td>Treatment x Performance Music</td>
<td>2</td>
<td>3767.35</td>
<td>1883.67</td>
<td>2.11</td>
<td>.15</td>
</tr>
<tr>
<td>Lesson x Performance Music x Treatment</td>
<td>2</td>
<td>959.32</td>
<td>479.66</td>
<td>.84</td>
<td>.45</td>
</tr>
<tr>
<td>Subjects within groups</td>
<td>19</td>
<td>10908.33</td>
<td>574.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

were no significant main effects with the between variable treatment (self-evaluation, teacher observation, and performance orientation) \[F (2, 19) = .16, p > .05\] or the within variable lesson (one and two) \[F (1, 19) = 3.52, p > .05\]. As would be expected, the within variable performance music (exercise performance and warm-up performance) yielded significant results \[F (1, 19) = 37.23, p < .0001\]. Subjects in all treatment groups spent significantly more time in the lesson working on the exercise (\(M = 58.60\%\)) than they spent in warm-up activities (\(M = 18.84\%\)). See Table 29 for
overall mean time spent in performance music. A significant interaction occurred between the variables lesson (one and two) and performance music (exercise performance and warm-up performance) \(F (1, 19) = 4.06, p = .05\]. Figure 7 is a graphic representation of this interaction. Overall, subjects spent a greater percentage of lesson time performing the exercise than engaged in warm-up activities. Subjects spent a greater percentage of time in exercise performance in the first lesson \(M = 68.27\%\) than they did in the second lesson \(M = 48.93\%\). The opposite is true for warm-up performance as subjects spent a slightly greater percentage of time in the second lesson in warm-up performance \(M = 19.74\%\) than the first lesson \(M = 17.94\%\). Table 30 displays means, standard deviations, and standard errors. There were no other significant two- or three-way interactions \(p > .05\).

Survey Results

Following the second lesson, pupils \(N = 22\) completed a survey concerning their lesson experience. Pupils were asked to rate several statements with regard to their lesson teacher, the lesson experiences, and the information they learned in the lessons. Pupils answered five questions using a five-point Likert scale with one representing strongly disagree, three representing no strong opinion, five representing strongly agree, and two and four representing lines along the continuum. See Appendix R for survey form. Ratings were collapsed to form three
Table 28

Performance Music: Means, Standard Deviations, and Standard Errors by Lesson and Treatment Group

<table>
<thead>
<tr>
<th></th>
<th>Self-Evaluation</th>
<th>Teacher Observation</th>
<th>Performance Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Music</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesson One</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td>M: 85.56, SD: 18.29, SE: 6.47</td>
<td>M: 60.64, SD: 27.08, SE: 10.24</td>
<td>M: 56.15, SD: 32.47, SE: 12.27</td>
</tr>
<tr>
<td>Lesson Two</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Mean represents percentage of time.

Table 29

Mean Time Spent in Performance Music

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm-up</td>
<td>18.84</td>
<td>18.19</td>
<td>2.74</td>
</tr>
<tr>
<td>Exercise</td>
<td>58.60</td>
<td>31.45</td>
<td>4.74</td>
</tr>
</tbody>
</table>

Note: Mean represents percentage of time.
Figure 7

Interaction plot of mean percentage of time spent in performance music and lesson.

Table 30

Performance Music: Means, Standard Deviations, and Standard Errors by Lesson

<table>
<thead>
<tr>
<th></th>
<th>Warm-Up</th>
<th></th>
<th></th>
<th>Exercise</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>SE</td>
<td>M</td>
<td>SD</td>
<td>SE</td>
</tr>
<tr>
<td>Lesson One</td>
<td>17.94</td>
<td>19.67</td>
<td>4.19</td>
<td>68.27</td>
<td>28.36</td>
<td>6.05</td>
</tr>
<tr>
<td>Lesson Two</td>
<td>19.74</td>
<td>16.99</td>
<td>3.62</td>
<td>48.93</td>
<td>32.01</td>
<td>6.83</td>
</tr>
</tbody>
</table>

Note: Means represent percent of time spent in activity.
categories: the two points to the left of neutral were collapsed to form the disagree category and the two points to the right were collapsed to form the agree category. The neutral point remained by itself to form no strong opinion. With 110 possible ratings (22 pupils times 5 questions), 108 ratings fell in the agree category. Twenty out of twenty-two pupils agreed with all of the statements and had a positive experience with the lessons (98.18%). Of the two pupils who did not agree 100% with the statements, one pupil, whose lesson was taught by a subject in the self-evaluation treatment group, responded to the “I have improved because of these lessons” statement with no strong opinion. A second pupil, also taught by a subject in the self-evaluation treatment group responded to the “I learned new things about playing my instrument” statement with no strong opinion. These two ratings represent 1.82% of the possible total pupil responses.

Subjects (N = 22) completed a survey following completion of the treatment and lesson teaching segment of the course. The survey can be found in Appendix Q. Subjects answered 18 questions using a five-point Likert scale with one representing strongly disagree, three representing no strong opinion, five representing strongly agree, and with two and four representing numbers along the continuum. Ratings were combined to form three categories: the two points to the left of neutral were collapsed to form the disagree category and the two points to the right were
collapsed to form the agree category. The neutral point remained by itself to form no strong opinion. Ten statements on the survey related to teaching, three to performance, three to class structure, and three to enjoyment of the class. Subjects were also given the opportunity to respond to two “free response” statements where they could express positive feelings concerning this segment of the semester (experimental treatments) as well as suggestions for changes. Results from the Likert scale portion of the survey can be found in Table 31. Results from the free response questions can be found in Appendix U.

Overall, subjects in the treatment groups (self-evaluation, teacher observation, and performance orientation) were pleased with their preparation to teach their assigned secondary instrument (trombone or trumpet) to a beginning band pupil. Of the 22 subjects, 19 (86.36%) agreed that teaching lessons to pupils in the schools helped them to make practical application of skills learned in this class. A large percentage of subjects (86.36%) agreed that their skills in teaching their instrument improved after participating in the treatment segment of the semester. Subjects in the performance oriented treatment group (n = 7) agreed 100% with this statement. Subjects participating in the self-evaluation treatment group (n = 8) agreed 100% that videotaped observation of their teaching would help them to improve teaching skills while six of the seven
Table 31

Subject Attitude Survey Results

<table>
<thead>
<tr>
<th></th>
<th>Self-Evaluation (n = 8)</th>
<th>Teacher Observation (n = 7)</th>
<th>Performance Orientation (n = 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>N</td>
<td>A</td>
</tr>
<tr>
<td>1. Teaching lessons in the</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>schools helped me to practice</td>
<td>%</td>
<td>=</td>
<td>0</td>
</tr>
<tr>
<td>skills learned in this class.</td>
<td>2</td>
<td>87.50</td>
<td>12.50</td>
</tr>
<tr>
<td>2. My skill level on this</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>instrument has increased</td>
<td>%</td>
<td>=</td>
<td>0</td>
</tr>
<tr>
<td>during the 4 week training</td>
<td>0</td>
<td>12.50</td>
<td>87.50</td>
</tr>
<tr>
<td>period.</td>
<td>2</td>
<td>87.50</td>
<td>12.50</td>
</tr>
<tr>
<td>3. Prior to training on this</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>instrument, I felt confident</td>
<td>%</td>
<td>=</td>
<td>75.00</td>
</tr>
<tr>
<td>in my teaching skills on this</td>
<td>75.00</td>
<td>25.00</td>
<td>0</td>
</tr>
<tr>
<td>instrument.</td>
<td>2</td>
<td>85.71</td>
<td>14.29</td>
</tr>
<tr>
<td>4. My teaching skills on this</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>instrument have improved.</td>
<td>%</td>
<td>=</td>
<td>0</td>
</tr>
<tr>
<td>5. Observing myself on video</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>will help me to improve my</td>
<td>%</td>
<td>=</td>
<td>0</td>
</tr>
<tr>
<td>teaching skills.</td>
<td>0</td>
<td>28.57</td>
<td>71.43</td>
</tr>
<tr>
<td>6. Observing myself on video</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>helped me to improve my</td>
<td>%</td>
<td>=</td>
<td>25.00</td>
</tr>
<tr>
<td>performance skills on this</td>
<td>25.00</td>
<td>12.50</td>
<td>62.50</td>
</tr>
</tbody>
</table>
| instrument.                    | (table continued)
<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>The structure of this class helped me to teach a beginning band student on this instrument.</td>
<td>n = 0 0 8</td>
<td>0 1 6</td>
<td>1 2 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 0 0 100</td>
<td>0 14 29 85 71</td>
<td>14 29 28 57 57 14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Class structure was effective in teaching me performance skills on this instrument.</td>
<td>n = 1 0 7</td>
<td>0 0 7</td>
<td>0 3 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 12 50 0 87 50</td>
<td>0 0 100</td>
<td>0 42 86 57 14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Class release days were an equitable balance for time spent during this instrument segment and lesson teaching.</td>
<td>n = 0 2 6</td>
<td>0 0 7</td>
<td>0 0 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 0 25 00 75 00</td>
<td>0 0 100</td>
<td>0 0 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I enjoyed teaching lessons to a beginning band student.</td>
<td>n = 0 1 7</td>
<td>1 0 6</td>
<td>1 0 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 0 12 50 87 50</td>
<td>14 29 0 85 71</td>
<td>14 29 0 85 71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>I enjoyed learning how to play this instrument.</td>
<td>n = 0 3 5</td>
<td>0 2 5</td>
<td>0 1 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 0 37 50 62 50</td>
<td>0 28 57 71 43</td>
<td>0 14 29 85 71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I enjoyed the structure of this instrument segment.</td>
<td>n = 0 1 7</td>
<td>0 0 7</td>
<td>0 1 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 0 12 50 87 50</td>
<td>0 0 100</td>
<td>0 14 29 85 71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Prior to learning how to play this instrument, I felt confident in my teaching skills of this instrument.</td>
<td>n = 5 3 0</td>
<td>3 2 2</td>
<td>5 2 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 62 50 37 50 0</td>
<td>42 86 28 57 28 57</td>
<td>71 43 28 57 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Prior to learning this instrument, I felt confident in my teaching skills with beginning band students.</td>
<td>n = 2 4 2</td>
<td>1 2 4</td>
<td>2 2 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = 25 00 50 00 25 00</td>
<td>14 29 28 57 57 14</td>
<td>28 57 28 57 42 86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table continued)
<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>N</th>
<th>D</th>
<th>N</th>
<th>N</th>
<th>A</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>After training during this instrument segment, and before teaching my lessons, I felt confident in my ability to teach a beginning band student on this instrument.</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.50</td>
<td>12.50</td>
<td>75.00</td>
<td>28.57</td>
<td>0</td>
<td>71.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.29</td>
<td>0</td>
<td>85.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>After I taught my two lessons, I felt more confident about teaching this instrument to a beginning band student.</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>14.29</td>
<td>0</td>
<td>85.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.29</td>
<td>0</td>
<td>85.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I gained confidence in my teaching skills from this instrument training segment.</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>14.29</td>
<td>85.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.29</td>
<td>28.57</td>
<td>57.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Prior to this semester, I felt confident in my teaching skills with beginning band students.</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>37.50</td>
<td>25.00</td>
<td>37.50</td>
<td>14.29</td>
<td>57.14</td>
<td>28.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28.57</td>
<td>14.29</td>
<td>57.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Subjects (N = 22) rated each statement using a Likert scale with "D" representing disagree, "N" representing no strong opinion, and "A" representing agree.
subjects (85.71%) in the teacher observation treatment group agreed with the same statement.

When rating statements associated with training and confidence level of teaching skills relevant to their instrument prior to this segment, 13 subjects (59.09%) were not confident with their teaching skills and 5 subjects (22.73%) were not confident with beginning band pupils. Seven subjects (31.82%) had no strong opinion concerning their teaching skills on the instrument and eight (36.36%) subjects had no strong opinion regarding confidence with teaching beginning band pupils. After teaching lessons to band pupils, 20 (90.91%) subjects felt more confident about teaching their assigned instrument. Eighteen (81.82%) the subjects gained confidence in their teaching skills after teaching beginning band pupils. These percentages indicate an improvement in subjects' opinions concerning skills in teaching this instrument and teaching beginning band pupils.

When rating statements pertinent to performance, 20 (90.91%) of the 22 subjects agreed that their skill level increased on their assigned instrument. Two (9.09%) subjects who did not agree stated “no strong opinion” and participated in the self-evaluation and teacher observation treatment groups. Subjects in the self-evaluation group agreed more often (62.50%) that observing themselves on videotape helped them to improve their performance. One subject in the teacher observation group and two
in the performance oriented group agreed that observation of themselves on videotape helped them to improve their performance.

When considering the structure of the treatment phase of the semester, 100% of the subjects in the self-evaluation group agreed that this segment helped prepare them to teach beginning band pupils. Subjects in the teacher observation group agreed 85.71% that the structure of the class helped them in their teaching while the performance oriented group agreed with this statement 57.14% with one subject disagreeing (14.29%).

With regard to performance skills and structure of this segment of the semester, 87.50% of subjects in the self-evaluation group and 100% of subjects in the teacher observation group agreed that they were effectively taught performance skills. Four of the seven subjects in the performance oriented group agreed that they were effectively taught performance skills.

Subjects generally agreed that they enjoyed teaching lessons. Three subjects, one representing each treatment group, disagreed with the statement or had no strong opinion concerning the statement. A greater percentage of subjects (85.71%) in the performance oriented treatment group responded agreeably to their enjoyment of playing that instrument. Five (62.50%) subjects in the self-evaluation group agreed and five (71.43%) subjects in the teacher observation group also agreed. Most of the subjects (20) agreed that they enjoyed the structure of this instrument segment. In the free response portion of the survey, subjects specifically
referred to the smaller class sizes and individual attention that was afforded them by the use of three instructors during that segment of the semester. See Appendix U for a complete listing of subject comments.

Subjects were also asked to suggest changes regarding this segment of the semester. Subjects in the self-evaluation and teacher observation treatment groups suggested peer teaching opportunities as practice before teaching the "real" pupil. Subjects in the performance oriented treatment group suggested that more teaching ideas and strategies be incorporated into the course. In the teacher observation treatment group, one subject thought too much emphasis was placed on performance. Regardless of treatment group, positive comments were made concerning adequate preparation to teach their instrument and several subjects felt no changes were necessary to the design of that segment of the course.
CHAPTER 4

DISCUSSION

Preparing instrumental preservice teachers to teach pupils at all levels is the primary goal of music education programs. The varied and diverse means of preparation are as numerous as there are institutions but little research exists to support these forms of preservice teacher preparation. The investigator was particularly interested in the instrumental techniques courses which prepare students to play and teach secondary instruments. In particular, how would different methods of preparation on secondary instruments affect preservice teachers' instrumental performance and teaching behaviors as well as pupil responses in the private lesson environment?

The significance of this dissertation lies in its authenticity. The investigator was interested in finding meaningful ways to improve preservice teachers' preparation for teaching secondary brass instruments to beginning band students; thus a required brass techniques course was utilized. Subjects and pupils were a part of the university and public school settings, respectively, and would have participated in similar assignments whether or not formal empirical procedures were employed. However, due to the authenticity of the setting as one segment of an intact course, the length of the treatment (four weeks) and the small number
of subjects \((n = 7 \text{ or } 8)\) in each of three treatment groups must be considered when processing the results.

Results of this study found that in some circumstances treatment group did affect teacher skills as in the area of time spent in musical activities. Also discovered was that overall type of verbalization affected the success of the pupil response. The level of performance was not affected by the treatment.

Subject Verbalizations

One of the goals of this study was to determine the kind of verbalizations preservice teachers utilized during initial teaching experiences with a beginning band student in a private lesson setting and then compare these findings to pupil performance outcomes in the form of successful/unsuccessful performance trials. By using verbatim transcripts of the lessons, it was possible to categorize subject verbalizations as academic information, direction giving, information-gathering, or off-task comments. Although there were no differences among treatment groups or between lessons, overall, subjects verbalized academic information greater than three times as often as directions. For example, subjects verbalized specific information related to their pupils' improvement like "Blow harder and play it one more time" and "Don't forget to got to third position." Even though subjects were teaching a secondary instrument for the first time, they were able to transfer
information of an academic nature acquired in class to this teaching environment. During initial teaching experiences some might suspect that subjects would engage pupils predominantly in performance, as direction giving verbalizations infer, or fill up the time with off-task comments. Verbalizations including "Start at the beginning again" and "Play that measure" were part of all subjects’ lessons, but were utilized much less than specific academic information.

In this study, verbalizations were not categorized as correct or incorrect. If a subject informed a pupil to play higher when they were in reality on the correct partial, that verbalization was labeled as academic. There were very few instances of incorrect information given. Quality of subject verbalizations may be a variable to consider in future research with preservice teachers.

Individual subjects who used information-gathering verbalizations more often than academic and direction verbalizations were those who seemed less secure with their abilities and were less apt to lead the lesson. These subjects allowed much of the lesson to be dictated by the pupil by asking questions like, "What do you want to play next?" or "Do you want to play that again?"

Subject Verbalizations and Quality of Pupil Responses

Verbalization results seem more important when compared with pupil responses. Previous research in sequential patterns labels subject
(teacher) verbalizations as well as the pattern of verbalizations and activities which follow the verbalizations or the kinds of feedback the teacher gives to the student(s) following the verbalizations and pupil responses (Price, 1983; Price, 1992a; Yarbrough, 1988; Yarbrough & Price, 1981; Yarbrough & Price, 1989). Because of the nature of performance trial labeling, that is the determination of pupil success as related to the verbalization, reinforcement is not labeled as such. Many verbalizations that perhaps would have been labeled as reinforcements in sequential pattern research were labeled as academic verbalizations as in “Good, you played the notes longer.” Others were considered a continuation of the previous academic information or the beginning of the next verbalization as in “Good, now try one more time and play with more air.”

In the present study, the specific pupil responses were evaluated following each subject verbalization. It was found that when subjects expressed academic information, pupils responded more successfully. In other words, when the subject gave the pupil something specific on which to focus or improve (target), the pupil was able to correct or improve that target and experience success during that trial more often than when they were simply given a direction concerning where to play. It was evident that academic verbalizations tended to be shorter in length and required shorter responses from pupils. This provided more opportunities for pupil success. Direction verbalizations were longer in length and did not
include specific targets. Subjects tended to allow pupils to perform until an error occurred. In research by Buckner (1997) it was discovered that the highest rated piano teachers had the highest number of successful rehearsal frames, which are similar to trials expressed in this study. Successful teachers were able to guide students toward improvement of targeted areas more often than the lesser rated teachers. These findings may suggest that preservice teachers in instrumental techniques courses could benefit from knowing in advance what types of verbalizations might provide opportunities for their pupils to succeed. Perhaps scripting and labeling of their own lesson teaching would be of greater benefit.

Lesson Activity

Because the main objective of the university instrumental techniques course is to develop in students performance skills on secondary instruments—brass instruments in this study—it was important to assess the amount of time subjects played their instruments during teaching experiences with beginning band pupils. Performance time was broken down into two categories: (a) perform on instrument and (b) sing. These results were compared with the circumstance under which the subjects engaged in performance activity either (a) alone, as in modeling, or (b) along with the pupil. Prior research in modeling (Puopolo, 1971; Rosenthal, 1984; Rosenthal, et al, 1988) supports the use of modeling as an effective means to improved performance.
Among all subjects in the present study, it was discovered that performance on instruments occurred during the lessons more often than singing. Subjects performed on their instrument 14.73% of the time with pupils and 4.34% of the time alone. When singing they performed with pupils 2.16% of the time and 1.77% of the time alone. When they did perform, subjects played and sang more often with pupils than alone possibly indicating a lack of confidence with individual performance skills. This type of performance does not constitute modeling in the true sense that a teacher models alone and the pupil imitates. During the lessons it was at times necessary for the subjects to play along with pupils in order to make them feel comfortable as well as to encourage them to continue playing. This information is not meant to minimize the fact that subjects were less likely to perform on their instruments alone than with pupils, but is understandable considering their minimal performance (four weeks) and teaching experience on these secondary instruments (trombone and trumpet). In order to increase modeling examples during preservice teaching assignments, it may be necessary to require students to model alone several times throughout the teaching experiences.

Research results indicate a disparity among mean time spent in modeling in teaching situations. Research by Goolsby (1996) in instrumental rehearsals found that student teachers modeled 3% of the time while experienced teachers modeled 5.4% of the time. In piano
lessons, Speer (1994) reported teacher modeling at 16.45% during the lessons. A study more closely resembling the present study of first year instrumental teachers in group settings found that the mean modeling time was 26% with 13% of that in performance and 13% in singing or movement modeling (Sang, 1987). These results are much higher than the present study. A better comparison would involve private lesson modeling times with less-experienced instrumentalists, a research setting not found in the literature. It does seem likely that subjects in the present study would not use their instruments for modeling purposes as often as experienced teachers would use their modeling skills due to lack of experience and opportunity to hone skills on that instrument.

Pupil Performance Activity

The amount of time students spend in musical activity in rehearsals and lessons has been examined as a means to define examples of good teaching. In this study, pupil performance activity included the total amount of time pupils were engaged in musical activity. Musical activity included pupils performing on their instruments alone and with subjects, singing, chanting, counting, or clapping. Across all lessons (n = 44) pupils performed an average of 38.69% of the time. Treatment did affect the results of the study with the self-evaluation treatment group initiating significantly more musical activity (44.76% of total lesson time) than the performance oriented treatment group (37.28%) and the teacher
observation treatment group (34.03%). The self-evaluation treatment group experienced the greatest amount of specific pre-teaching training in that they expressed and practiced identifying problems and suggesting remedies through self-evaluation activities. This direct training may have encouraged transfer to the teaching situation and promoted the opportunity for more musical activities instead of talking. In support of previous self-evaluation research (Creer & Miklich, 1970; Dowrick, 1983; Kehle, et al, 1990) when observing oneself, retention and improvement of an identified task (teaching in this situation) has been successful. Although the teacher observation group observed and discussed good teaching practices, transfer may not have occurred as readily because of the lack of relation to their specific situation (Brinson, 1988; Greenfield, 1980; Price, 1992b).

Examination of performance time in other musical settings shows subjects in this study to be slightly below other averages. In one study comparing time usage in music classes, Witt (1986) reported averages of performance time in elementary music classes at 34%, performance ensembles at 62.1%, and private piano lessons at 40.7%. In private piano lessons Speer (1994) reported 47.25% and Kostka (1984) reported 56.57% for performance time. More specifically, in the Kostka study, fifth and sixth grade students, similar in age to pupils in the present study, performed 52.73% of the lesson time. This indicates that subjects in the present study,
with an average of 38.69%, allowed less performance time. Speer (1994) noted that older students spent a greater amount of time in performance than did younger students. Direct relationships among the studies is not possible as both Speer and Kostka examined piano teachers who were experienced performers and ranged in teaching experience from undergraduate piano pedagogy students to 40 years of piano teaching.

When comparing time usage to first year instrumental teachers, Sang (1987) found that teachers allowed 34% of the lessons to include pupil performance. This average is slightly lower than the average in the present study but the performance time only included playing, not other activities as included in the present study. With this said, the percentage is considerably closer than other research results mentioned. Similarly, in instrumental rehearsals Goolsby (1996) reported that student teachers utilized 35.5% of rehearsals in performance time as compared to experienced teachers with 51.2%. Comparisons of these findings to the present study may suggest that preservice teachers trained with self-evaluative techniques may be better prepared to allow more performance time in lessons than those trained in a performance oriented or teacher observation situation. These findings also suggest that initial teaching experiences compare favorably to other research with student teachers and first year instrumental teachers.
Instructors working with preservice teachers should consider possible course objectives aimed at increasing pupil performance during teaching situations. It may be that instructors simply describe the need for increased performance time or they may require students to self-evaluate teaching by timing the length of their activities in videotaped situations. Self-evaluative activities may force students to take an active role in their development therefor increasing chances for improved teacher effectiveness.

Subject Prompts

In order to utilize lesson time and pupil experiences to their fullest potential, it was important to this investigator that subjects be able to teach while music was happening. During a rehearsal while students are performing, a conductor might gesture to the clarinets to play softer or vocalize to the percussion to look up to prepare for a ritardando. Similarly in private lessons, a teacher might use a gesture to help a beginner find a correct partial or encourage them to blow with more conviction. Teaching while music is occurring could be considered a mature teaching trait, and a desired habit for development of teacher effectiveness. Although not specifically taught in the three treatment groups, prompting in a sense was brought up as a solution to several identified problems in the self-evaluation group.
As subjects contrasted examples of good and bad performances and suggested solutions for the problems, often gestures or words of encouragement during performance were given as possible solutions when teaching. This may have accounted for the greater number of subject prompts occurring in the self-evaluation group. According to a Two-Way ANOVA, these results were not significant at the .05 level but during both lessons the self-evaluation group utilized more prompts. In fact, the self-evaluation group increased their use of prompts during the second lesson while the other treatment groups decreased their use of prompts, causing an interaction between treatment group and lesson. During the second lesson the self-evaluation group used prompts at a rate of almost one per minute (.96) while the performance oriented group used prompts approximately one every ten minutes (.11). Prompts also seemed to help lessons move along as well as encourage pupil performance. Prompts encouraged pupils to continue performing without stopping to give information or directions. For example, as a pupil took a breath, the subject might say “keep going” or errors might be alleviated by gesturing with the arm as to how far out a trombone slide position should extend just prior to the often-missed note. The greater number of prompts used by the self-evaluation group may have contributed to the greater amount of performance activity encountered with the self-evaluation group pupils.
Subject Performance Ratings

In order to determine if treatment group affected the performance ability of subjects, all subjects were administered the same performance test at the conclusion of the treatment segment of the semester. Tests were videotaped and evaluated by three independent experienced judges. Surprisingly, results showed no significant differences among treatment groups or between majors (brass and non-brass) in the performance ratings. Splitting the course focus between performance and teaching as was the case in both the self-evaluation and teacher observation groups did not prevent subjects from developing instrumental performance skills similar to those developed by subjects in the single focus performance oriented group. If the performance orientation were to occur for a longer period of time, an entire semester for example, perhaps significant differences would emerge, though increased time per instrument is an unlikely option in courses in which five brass instruments must be studied in a 15-week semester. This result lends support to those university music educators who acknowledge the propriety of a dual purpose to the instrumental techniques course, one addressing performance and teaching issues. It might function further to challenge performance oriented faculty who teach this course to consider the how-to-teach part of this two-part equation.
The most notable aspect of these results is the average score of the non-brass majors in the performance oriented group (42.62) was 4.73 points higher than the teacher observation non-brass group (37.89) and 3.45 points higher than the self-evaluation group (38.17). The brass major scores did not vary much greater than 1 point across groups. Regardless of time spent in performance, brass majors seemed to either rise to the situation or accept the materials placed before them. Perhaps when the end goal is determined at the onset, teachers and students are able to successfully complete tasks more efficiently and in a less amount of time. The non-brass majors' performance skills seemed to have benefitted from the saturation of performance skills, but again not significantly.

Performance Music

Music performance including warm-up activities and assigned exercise activities were evaluated to determine if there were differences among the treatment groups in the material they used in lessons. Subjects were not given a lesson format or specific content guidelines as to what to include in the lessons except they were told to "perfect" the assigned exercise before moving to other material. Warm-up and daily exercises were included in each treatment group's class but transfer of this lesson protocol to the beginning pupil lesson was neither encouraged nor discouraged. Nevertheless, lessons were analyzed with respect to how groups compared in time spent in warm-up versus exercise activity.
Subjects, as expected, spent a much greater amount of time on the exercises than they did on warm-up activities. Treatment did not significantly affect the amount of time spent in these performance activities but the self-evaluation treatment group spent the greatest amount of time on the assigned exercise in the first lesson (85.56%), whereas the performance oriented treatment group spent the greatest amount of time on the exercise in the second lesson (56.47%). Subjects in the self-evaluation treatment group spent the least amount of time in warm-up activity across both lessons. The teacher observation and the performance orientation treatment groups both increased their amount of warm-up performance music in the second lesson but the self-evaluation group decreased their warm-up time. The performance oriented treatment group remained about the same in both categories for both lessons. This could be related to the structure of their treatment which followed a daily and moderately extended performance routine including warm-up materials and exercise performance while the other treatment groups shortened routines in order to incorporate activities specific to the treatment. The teacher observation group spent the least amount of time on the performance music before changing to a new exercise. This may have been the result of observing outstanding teachers who included a variety of exercises during each lesson.
It is evident through these results that subjects understood the benefit of warm-up activities and utilized them in some fashion during the lessons. In order to keep pupils attentive during the lessons, some teachers changed exercises when pupils were no longer improving or when the subject could no longer help the pupil.

Survey Results

Subjects and pupils were administered an attitude survey following the completion of the lessons. Pupil ratings were very positive, indicating their enjoyment of the lessons. Most expressed that they had learned new things about their instrument. When pupils did not agree with the statements they noted no strong opinion. No pupils responded negatively to questions. None of the pupils had taken private lessons on their current instrument and viewed the lesson experience as a special opportunity for individual attention.

All subjects commented positively about their treatment group. This may have resulted from participation in large techniques courses (woodwind, string, and percussion) at the university. The division into much smaller groups where they received individual attention no matter which treatment group they participated in, made a big impression on the subjects. Although no specific data were gathered concerning subjects' opinions of their treatment group instructors, no comments were reported under the free response categories regarding their perception of quality of
instruction. In addition, the investigator was unaware of any concerns with treatment group instructors. Due to the authenticity of the course, teacher effect could only be controlled with the use of the best available instructors and specifically defined and organized course materials with coordinated, and monitored instruction throughout the treatment.

When looking for discrepancies in ratings, those subjects responding contrary to the majority of subjects in several instances, had specific reasons which help explain their responses—none which seemed to relate specifically to the treatment group or instructor. One such subject in the performance oriented treatment group expressed their reason for taking the course was to keep their scholarship and would not be continuing in music education. Another subject who responded contrary to most positive answers for most categories was a non-certified teacher who had been teaching string instrumental music in public schools and planned to return to a similar position. This subject expressed that they had no reason to learn brass instruments. Other comments that were not in complete support of the treatment segment, usually in the form of “no strong opinion,” included a brass player who seemed to feel very comfortable with teaching and performing on the brass instruments before entering the class, and a graduate student seeking certification.
Summary

The results of this study focusing on the effects of self-evaluation, teacher observation, and performance oriented treatments on the preparation of preservice teachers to teach beginning instrumentalists found that treatment affected the amount of musical activity pupils were engaged in during the lessons. Subjects in the self-evaluation treatment group allowed significantly more pupil musical activity to occur during the lessons. Overall, subjects utilized academic verbalizations significantly more than direction, information-gathering, or off-task comments. It was also found that when subjects utilized academic verbalizations, pupils were more likely to improve targeted areas than if given general direction verbalizations. Subject performance skills were not statistically different among the treatment groups. Although class periods in the self-evaluation and teacher observation treatment groups were spent in both performance and teacher preparation activities, evaluations indicated similar performance abilities with subjects participating in the performance oriented treatment group, which spent full class periods in performance activities.

Recommendations for Future Research

This study seems to open the door for future research in several areas and to require continuation in a similar direction. Given the small number of subjects involved in each treatment group, continuation of
similar treatments or course content as explored in the current study and its relationship to teacher preparation would seem necessary to add to the data found from this research. Because of the practical application and the authentic setting of this study, similar research in techniques course settings with varied course content would also be important.

Although not practical in an authentic techniques course setting, larger treatment groups and/or treatment groups utilizing the same instructor would further validate outcomes of this research. Similarly, although possibly not practical in a 15-week techniques course which teaches five instruments, longer treatment segments would present new prospects of the content and its effects on preservice teachers' teaching skills. Comparison of classes from different institutions using course formats which exclusively emphasize performance activities and those which incorporate teacher preparatory activities with performance skills activities may serve the purpose for longer treatments as well as support the authenticity of the research design.

Further research in the private lesson setting, including teacher verbalizations and pupil outcomes, would present examples for comparisons and therefore give greater credence to these results. In addition, continued private lesson research in the area of wind instruments would also be helpful.
Research should continue with sequential patterns and the relationship of the patterns to pupil responses. Because dependent measures in this study were adapted from the rehearsal frame paradigm (Duke, 1994) and the idea of targets in music learning environments, both still in their infancy, further research with private lessons as well as ensemble rehearsals seems appropriate.
REFERENCES


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APPENDIX A

SUBJECT DATA QUESTIONNAIRE

Brass Techniques Questionnaire

1. Name: ID No:

2. Major instrument:

3. Minor instruments (those which you have played and are somewhat proficient):

4. Year in school (Fr, Soph, etc.): Number of years in school:

5. Local address (indicate if you commute):

6. Local phone:

7. Hometown & state:

8. Describe your high school orchestra/band program:
(some works played at festival, category competed in at festival, etc.)

9. Techniques courses taken (woodwind, strings, percussion, or brass):

   Course____________________ Grade____
   a.
   b.
   c.

10. Music education courses taken:

    Course____________________ Grade____
    a.
    b.
    c.
    d.

11. Conducting courses taken:

    Course____________________ Grade____
    a.
    b.
    c.
12. Ensembles played in at LSU or the community (present and past):

<table>
<thead>
<tr>
<th>Ensemble</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td></td>
</tr>
<tr>
<td>b.</td>
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<td>g.</td>
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<td>h.</td>
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13. Instrumental teaching experience:
   (describe how long, which instruments, in what capacity)

   Private lessons -
   Sectionals -
   Full ensemble (what kind) -
   Other -

14. Other teaching experience (non-music):

15. Describe your professional goals (examples: further education; do you want to teach?; what you might like to teach; age you might want to teach; performance; etc.):

16. What do you see yourself doing after graduation?

17. What do you see yourself doing in 5 years?

18. I'm excited about this course because (must give at least one reason)... 

19. I'm apprehensive about this course because (must give at least one reason)...
Big Brass

Trombone

Allegro

L. Lethco

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APPENDIX C

SELF-EVALUATION OF PERFORMANCE

Self-Evaluation of Performance
(Group A)

Evaluate your performance by filling in the circle above the description which you feel best represents your performance. A behavior with many mistakes and major problems correctable only with practice corresponds to "extremely flawed" and a perfect behavior corresponds with "no mistakes." If the behavior could easily and quickly be corrected it would be "slightly flawed" whereas a behavior that is not as easily corrected would be "more than slightly flawed."

Your evaluation does not correspond to points or grades for this class. Evaluate yourself honestly and fairly.

Performance

1. **Position of left hand**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

2. **Position of right hand**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

3. **Posture**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

4. **Air intake**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

5. **Blowing airstream**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes
Self-Evaluation page 2

6. **Breathing at appropriate places**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

7. **Embouchure formation**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

8. **Tonguing**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

9. **Tone quality**
   - extremely flawed
   - more than slightly flawed
   - slightly flawed
   - no mistakes

10. **Rhythm accuracy**
    - extremely flawed
    - more than slightly flawed
    - slightly flawed
    - no mistakes

11. **Fingering accuracy**
    - extremely flawed
    - more than slightly flawed
    - slightly flawed
    - no mistakes

12. **Partial accuracy**
    - extremely flawed
    - more than slightly flawed
    - slightly flawed
    - no mistakes
APPENDIX D

POSITIVES- AND NEGATIVES-ONLY EVALUATION FORMS

Positives-Only Evaluation
(Group A)

While watching your videotape, describe those categories of your performance from the following list which would be considered "not flawed." For each of these unflawed categories, assume the question, why was it perfect? In other words, using your knowledge from class and other musical experiences, describe in detail what you were doing physically during each. Do this for "not flawed" categories only.

1. Position of left hand

2. Position of right hand

3. Posture

4. Air intake

5. Blowing airstream
6. Breathing at appropriate places

7. Embouchure formation

8. Tonguing

9. Tone quality

10. Rhythm accuracy

11. Fingering accuracy

12. Partial accuracy
Negatives-Only Evaluation  
(Group A)

While watching your videotape, describe those categories of your performance from the following list which were "flawed" or not perfect. For each of these "flawed" categories, assume the question, why would it not be considered perfect? In other words, using your knowledge from class and other musical experiences, describe in detail what you were doing physically during each. Do this for "flawed" categories only.

1. Position of left hand

2. Position of right hand

3. Posture

4. Air intake

5. Blowing airstream
6. Breathing at appropriate places

7. Embouchure formation

8. Tonguing

9. Tone quality

10. Rhythm accuracy

11. Fingering accuracy

12. Partial accuracy

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APPENDIX E

DIRECTIONS FOR CONTRAST EXAMPLES

Directions for Contrasts Examples
(Group A)

1. Prepare examples using excerpts of your choice from exercises in the Bailey text. Excerpts should be at least 4 measures long.

2. For each example demonstrate two problems and then a correct demonstration. You will have 8 examples when you are finished. You may use the same excerpt for each demonstration or 2, 3, or 4 different excerpts.

3. Practice your contrasts before you videotape.

4. Contrasts are to be authentic—they should represent possible problems of beginning band students.

5. Contrast examples will include:
   a. tone
   b. tonguing
   c. breathing
   d. posture/instrument position

6. You may place the correct or incorrect examples, first but place them next to each other for each category—do not put all correct and then all incorrect examples. Please identify the examples verbally on the videotape.
Detailed Annotations of Contrasted Examples
(Group A)

Describe in detail what you did physically to achieve both the correct and incorrect examples. For the incorrect description, provide prescriptive information that would help a student to correct their problem—that is give several strategies and solutions for each problem.

1. Tone

2. Tonguing

3. Breathing

4. Posture/instrument position
APPENDIX G

EXAMPLE OF ONE SUBJECT'S DETAILED ANNOTATIONS

Verbatim example of one subject’s annotations.
(Self-Evaluation Group)

1. Tone
   incorrect - too much mouthpiece above lips
   solution - have them look in a mirror and place it correctly for them. They
   should hear and feel the difference right away.
   incorrect - puffy cheeks
   solution - remind them frequently while playing, have them bite cheeks,
   say “mm”
   correct - mouthpiece half & half, cheeks in

2. Tonguing
   incorrect - no tongue, using throat muscles
   solution - have them say “tee” or “tah” first, then apply to instrument on
   one pitch whole note add it (tongue) briefly and take away. Gradually add
   it on each note (same pitch)
   incorrect - tonguing between teeth
   solution - again have them say “tah,” they cannot place it wrong and use
   the same strategy
   correct - just behind top front teeth

3. Breathing
   incorrect - using nose
   solution - have them take a large breath from stomach, hold for four
   counts gradually increase; remind them with visual cues like a clothespin
   incorrect - every few notes
   solution - have them take a larger breath from stomach, hold 2 notes rest,
   then gradually add a few notes at a time. Have them practice long tones.
   correct - breathe through mouth with stomach at ends of phrases (every 4
   bars)

4. Posture/instrument position
   incorrect - pinkie in hook - RH, no fingertips; LH - no kicker
   solution - remind them while playing. Use simple exercises that they can
   focus on hand position, or even lip slurs, anything so they can form new
   habit
   incorrect - slouching elbows on knees
   solution - raise stand, tie string from shoulders to head technique
   correct - feet flat, back straight, elbows slightly out
APPENDIX H

SALIENT TEACHING ISSUES: BEGINNING BRASS CLASS TAPE #1

(Teacher Observation Group)

Salient Teaching Topics

• Teacher does not conduct but rather moves about students.
• Teacher models with voice.
• Teacher incorporates ear training exercises which develops creativity.
• Teacher quickly transposes and knows names of scales for each instrument.
• Teacher uses students’ first names for class control as well as individual help.
• Teacher starts exercises with energetic steady tempo and indicates breath.
• Students play with a full sound.
• Teacher uses verbal reinforcement when appropriate: “good job of getting low notes, I’m proud of you.”
• Setting students up to succeed by clapping rhythms and fingering notes before attempting to play exercises.
• Alternation of fingering and playing between sections to keep students engaged and involved as well as practicing while taking a break from performance.
• Teacher practices pronunciations of musical terms with students.
• Teacher repeats technically difficult measures and exercises often.
• Teacher talks, sings, and claps during student performance in order to guide them to improvement in tone, fingerings, rhythm, and pitches.
APPENDIX I

SUBJECT COMMENTS TO BEGINNING BRASS CLASS TAPE

Outside Observation of Videotaped
Beginning Band Brass Class
(Group B)

Directions:
As you observe the remainder of this videotaped band class, write your
thoughts concerning why you think this teacher is effective.

*This is a compilation of teacher observation treatment group
comments to outside video observation of an effective teacher with
a beginning band brass class.*

Subject 8417
Gives other sections something to do when working different sections
(fingering along)
Prepares students before they play (clapping)
Moves quickly, doesn't stop
Moves around, doesn't stay in one position very long
Has students repeat things to instill in head, ex. "flat is first"
Models with students
(Teacher name) is a very effective teacher for a number of reasons—One
of the most obvious reasons is that she doesn't give the students
much time to get off task. When she does give control to the class
by asking question, she keeps it fairly brief in comparison to the
amount of playing. Another thing she does which eliminates poor
playing the first time is clapping and fingering. Students already
know the rhythms and fingerings before they start playing.

Subject 4114
She doesn't stay on the podium the entire time; makes contact with
different sections
Directions are short and concise
Gives pre rhythm exercises
Knows all the keys for different instruments (and quickly)
Has control over the class, but not to the point of being militaristic
Good pacing from one task to the next
Good use of blackboard
Models "stac."

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Lesson includes both short and long tunes plus a scale warm-up
Obviously has established class rules (3 & you’re out) (raising hands)
Has band play same phrase with different articulations
Compliments & criticism are balanced
Has students model what another student has correctly replied
Repetition of important facts by sections
Has student teacher helping someone (student) while rehearsing rest of class
Uses hand out on rest on 2 (this student is referring to the Kodaly pulsing for a rest)

**Subject 1330**
Teacher knows the positions (tromb) and the tendencies of beg. book
Teacher knows the trumpet fingerings
Not always on the podium
When she stops, she corrects them and tells them what they should be doing
Not just “that was wrong—that’s Bb”—She stops and takes the time to tell them what the exact problem is and how they can fix the problem—then gives them a chance to correct
Is polite and has control of class
“Randall” uses student as an example—to be quiet
Has students clap out rhythms before they worry about notes
She also is “speaking” the rhythms “1 e & a”
Models proper subdivision—“like a machine” great analogy
She then relates rhythmic exercise to what scale they are playing—which is the C scale. They weren’t sure they were playing the scale—but there is a def. transfer there
While she has each group play—the other groups finger along with the playing ensemble—keeps kids concentrated.
Def. Zone B teacher —teacher/class questioning and involvement
“What does this word mean?”
“Staccato”—great idea to have kids say the word the same style it is played
When she gives an instruction she is clear and thorough
Wow—three strikes and you’re out. She is very firm with children
Teaches different styles of articulation on the same phrase to show the difference—then she has them apply it
The exercise they have been working
She breathes so they can hear it
Is insistent on tempo
She warns the students of the key signatures—then stops them and doesn’t allow tbn to go on—corrects problem immediately.
She has students repeat important rules—key signature
“Flat is First” (everything you repeat you learn—good or bad)
Solves problems immediately (individual) instead of stopping ensemble
Adjusts stands to fix horn angle
Explains 2/4 w/o being complex
Makes students pay attention. "I need your eyes and ears"
Didn’t call attention to keys dropping mouthpiece—a lot of times teachers stop and lecture
Visual clapping aid to help kids understand eighth notes
Sings in tune and speaks rhythm—excellent way to speak rhythms (dotted quarter and eighth notated) dot dot

Subject 6305
She walks around the room and teaches, she does not always stand on the podium and act as a metronome
She uses a firm voice
she can single out who is making mistakes and she just doesn’t tell them to fix it, she tells them how to fix it
She tells all sections to finger along while drilling one section
She makes her voice project and be heard while the young musicians are playing so they can fix while playing
She has class interaction. For Example, while going over staccato she could have said what it means, but instead she had the students raise their hand and when called on gave an answer
She uses the name(s) of the person(s) that misbehaves rather than the whole class
She subdivides when counting off the next exercise
She gives a positive reinforcement to all answers that are close to the correct answer
On "horns up" if one person is slow she has them do it again, which lets the kids know that she means business on "horns up"
She repeats everything she says
She gives added instructions during an exercise—"more air"
She uses the dry erase board for visual learning while she is talking
She uses many repetitions during a drilling exercise to make sure everyone gets it. For example, clapping rhythm

Subject 7229
Disciplinary "I need your eyes and ears"
Asking questions “what comes after 8th rest?”
Good preparations “ready and go and”
Using clapping techniques for rhythms
Having class finger/use slide positions with rhythms before playing it
Leaves podium to walk around and check up on students
Counts out loud while students are playing
Snapping fingers to beat while playing
Complimenting - “good sound horns”
“Quiet Please” disciplinary. Saying it in firm voice
Asking for volunteers to clap 1st measure
Asks class if she was right
How everyone claps - counting aloud with students
Using examples appropriate for age—“like a machine”
Just Trumpets and have others finger along
Drawing pictures of musical symbols on board and asking what it means
Using repeating techniques until they get it right
Having them articulate different—“slur this time”
Clapping eighth notes for them
Trying to get quicker reactions, saying “horns up-horns down-horns up”
Always walking around class—not glued to podium
Always asking students how to do something instead of just telling them-testing their knowledge
Very confident untimid teacher—knew her stuff, meant business

Subject 2814
With a new scale: trombones, no 3rd position, right?; trumpets, no 1st valve, right?, no flats helps them think about what’s going on with fingers
Helps horns but still knows exactly what’s going on with the rest of the class
Uses specific names as examples of good and bad behavior
Gets kids to participate with clapping rhythms and counting
Play exercise and reminds about key signature
Helps them relate exercise by asking what scale it’s like
She continually walks around the room instead of staying on the podium
Has kids explain what (quarter with dot notated) (staccato) is instead of saying it herself to make them think
Gives vocal examples as to what she wants to hear
Has the repeat a hard part over and over giving them good practice techniques
When they rush, stops them and lets them know right away sets tempo again
Instead of saying an instruments position is wrong, goes and fixes it
Reminds about key signature when they miss it, stops and has students explain key
Has students repeat after her as to what fingers to use “flat is 1st”
While students are playing, uses visual cues for note length
Asks them how to count a pick up note. It makes them think
Writes on board to help them count pick up and to see why it happens
Gives example of how she wants them to clap the first 2 notes
Prefers them clapping together by being louder than the class
Has them tell her how to count (notated quarter note, eighth rest and eighth note)
"Give the rest values, make it important"
Has them do a rhythm exercise, clapping and using dah's then they play it on a singer note so they can hold the notes full value

Subject 7849
Very fast paced
Positive reinforcement
Moving around classroom
Good modeling
Stressed rhythmic accuracy
Getting kids to say new vocabulary
Keeps students playing the whole time, not too much talk
Making sure students have good posture and playing position
Gets all the students involved in question and answers
Didn't try to talk over the class
APPENDIX J

SALIENT TEACHING ISSUES: BEGINNING BRASS CLASS TAPE #2

Teacher Observation Group

Teaching Points
- Buzzing includes dynamics and pitches.
- Class has a routine where students quickly set up and get to work.
- Students created patterns within 4 and 8 beat patterns.
- Teacher gives specific music reinforcements (sound, steady beat, etc.).
- By allowing tuba (and other instruments) to be leader, students learn to listen to and appreciate all timbres.
- The teacher's questioning technique works for her but may not for a new teacher or a student teacher. She asks many questions and gets almost all of the students involved but this could easily allow the teacher to "lose control."
- Teacher makes sure she has students' attention by asking them to look at her and by talking directly to specific students.
- Teacher reminds students about hand/finger position often, especially for the trombones.
- Teacher varies position in room and varies proximity to students by standing in middle of ensemble to observe instruments in back of room.
- After teacher gives instructions or corrections she has the students play the exercise again.
- Students not only count but they count with energy.
- Teacher incorporates games into teaching to keep students engaged.
- Teacher stops on new notes and checks students fingerings.
- The "dot dot" counting for dotted quarters works. Almost all of the students are always correct.
- Teacher sings rhythms as students finger.
- Teacher counts challenging spots as they arise loudly over top of playing.
- Teacher is very familiar with book and does not follow page by page sequence, rather she moves around as she feels would best help the students.
- Teacher incorporates ritard into exercise during the first step of clapping. She continues to include ritard even though notes are not correct.
- Teacher anticipates high notes and talks/sings louder to indicate more energy/air needed when they get to that spot.
- Teacher uses strong students from all sections as volunteers to play music so that other students can hear it played correctly.
- Teacher does not stop entire rehearsal for one mistake. By not overtly reacting, she keeps the class from reacting and keeps the rehearsal/class going.
- Teacher incorporates playing rest periods during long 50 minute class.

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APPENDIX K

SUMMARY OF SALIENT TEACHING ISSUES AS DISCUSSED IN CLASS

Beginning Brass Class Videotapes

**Performance**
Anticipates problems
Models correctly with voice (style, pitches, volume, breaths)
Students also model correct performance
Holds students accountable for tempo and articulations
Lots of repetition
Claps, counts, and fingers before playing some exercises
Teacher counts off with energy, voice inflection, and correct style
Students play with a big sound
Teacher rehearses while students play (talks, sings, counts over students)
Uses buzzing exercises every day
Does scale work every day
Order for presentation of new material

**Classroom Management**
Fast paced
Sometimes keeps all students busy when working with another section (fingering)
Does not give students time to get off task
Compliments and criticisms balanced
Polite and firm—has control of class
Well-established and practiced rules and classroom procedures
Involves students in the learning process—not lecture oriented
Avoids interruptions so not to disrupt class
Questioning technique works for her

**Effectiveness**
Corrects students individually and praises students for improvement and correct responses
Always walking around class and observing all students
Knowledgeable about fingerings, transpositions, intonation tendencies, and embouchure formation
Students pronounce terms and repeat music “rules” during class to make sure students are listening and participating
Gives specific directions and reinforcements (sound, steady beat) not “nice job” or “very good” without being specific
Effectively incorporates rest and play
Directions are short and concise
Fixes students problems (positions, posture) by physically helping student
#1 Trumpet

Teacher gives more responsibility to student concerning breathing and starting exercises
Counting to start is much more subtle
Atmosphere is more relaxed in one on one setting. Different people will teach in many different ways and yet still be successful.
Encourages student to identify his own mistakes by asking him what he thought he missed. This strategy teaches students to be independent musicians.
Discussed third valve slide, an issue that must be emphasized at every age
Teacher sings phrases for student to illustrate better phrasing
Teacher gives student positive comment concerning his breathing efforts but then helps him to make them “make more musical sense”
Modeling strategy - teacher plays one phrase, student plays next (encourages student to match his sound and make it sound like one person)
Specific with reinforcement - i.e. “rhythm was correct”
Breathing strategy - candles on cake example
Teacher modeling used throughout lesson but in different ways.
Sometimes teacher plays example first, sometimes student plays and teacher explains how to improve, sometimes teacher plays along, sometimes teacher plays to emphasize point
Teacher uses mature musical development strategies when student has been successful with all other aspects of performance. Example - crescendo low register
Emphasis on use of 3rd valve slide again, student’s slide is stuck (as many beginners’ slides are)
Student tends to talk lots during the lesson so teacher tries to get student to “Think about improvements that need to be made and not discuss them.” This again gets student to self-analyze and therefore become more independent
Accent example - good musical teaching and explanation, student improves very quickly because of explanation
Teacher sings articulation examples
Air usage example without long explanations
“Fat Sound” analogy to Michael Jordan
#2 Trombone

Fifth grade trombone student, structure geared to less mature student
Teacher is more “serious” but successfully reaches this student
Begins lesson with friendly chit-chat to make a comfortable atmosphere
Structured beginning with warm-up
Mouthpiece buzzing, matching exact pitch (teacher is checking the level of
the student as well as his musical abilities)
Teacher checks student's ear and realizes it is good so he continues to give
more sophisticated directions concerning pitch throughout lesson
“Toe” syllable for embouchure and mouth cavity
Positive reinforcement of foot (but student does not always use the foot to
his advantage throughout the entire lesson)
Matches partials using note names
Probably too much valve/slide discussion
Continued reinforcement of “toe” because student has a small, stuffy
sound
Teacher sets tempos on scale and give specific directions
Reminder about 2nd position A - but this student has over-compensated
for the “closer 2nd positions”
Specific compliment on 4th position being in tune “Good Ear on 4th”
Because student is advanced and exhibits an inner pulse, teacher lets
student start himself on prepared exercise
Notice student’s foot - no help
Reinforces correct 3rd position (teacher is continually listening for in-tune
positions)
Reminds student to take repeats
Buzzing strategy - has student first buzz difficult passages such as tonguing
syllable
Breathing strategy - “how” for breath, incorporates this idea into an
exercise and then gradually works student back to correct length of
notes, reminding him that he had held the notes correctly the first
time
Teaching strategy - different syllables during repeated rhythmic exercises
“tongue twister”
Student gets to select something he wants to work on
Band music is too difficult for a 5th grader - teacher can only work on
notes and rhythms
Teacher uses analogies to describe style of music throughout lesson. He
relates the music to everyday occurrences and reminds student
throughout
Plays duets at end for fun
Tries to get student to start the duet but this is a new experience for him
and they are not successful. Teacher does not point this out because
this is fun playing time

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#3 Trumpet

Fourth grade student, began in October (tape is Dec.), one lesson per week (none in school)
Begins with typical warm-up (buzzing, imitation)
Introducing performance of 8th notes in warm-up (does not read them until March)
Student has a hard time remembering note names, fingerings, and values.
  Teacher used flash cards for a while. Student took them home and practiced and teacher gave him candy when he met the goal they set together. At this point in the process the teacher is just verbally quizzing student and making a transfer to the music.
This student has trouble playing independently at this point. By the last video clip he is able to play more independently (March).
Jingle Bells was not perfect but the student had been working on it for weeks - a star-worthy performance - teacher gave student a star for his book
Several months later:
Student plays songs on mouthpiece (stump the teacher)
Student’s tone and articulations have improved (has tendency not to tongue)
Continuation of 8th notes in warm-up (they are just introduced in book that week)
Review fingers, teacher sings notes, anticipates trouble fingerling and partial areas
Skip several practice fingering run-throughs
Student still cannot play exercise (it is an improvement just for him to read the music and not look at teacher’s fingers!) It is reassigned
Later lesson:
Holding student more accountable for better buzzing (fuller, pitch matching)
Introduce upper register before book
Rote teaching examples
Eighth note exercise - student is successful by himself

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APPENDIX M

TEACHER BEHAVIOR OBSERVATION FORM

Teacher observed: _________________________________
Instrument: _______________________________________
Date and time of observation: _______________________

Signature of Applied Lesson Teacher:

Name Date

Complete the following questions while observing the teacher:

1. How did the teacher begin the lesson?

2. Did the teacher use an instrument to model? If yes, in what ways did s/he use the instrument? [stylistic examples, tone quality, correct rhythms, demonstrate correct overall performance, play with student(s), maintain steady pulse, correction of partials, etc.]

3. Did the teacher praise the student for good performances? If yes, give one example the teacher said or did. The teacher said or did what when the student did what well.
4. What performance issue(s) did the teacher focus on? VERY IMPORTANT—What teaching strategy or strategies did the teacher use to help these performance issue(s)?

5. What were ideas discussed by the teacher that you had never thought about?

6. What did the teacher say that was unfamiliar or new to you?

7. Write any questions or comments you have regarding this teaching situation observation.

8. Estimate the amount of time the teacher talked or gave instructions during the lesson.
Lesson Plan for First Lesson - Part 1

Before teaching your first lesson consider the following performance issues and anticipate possible problems. Discuss possible strategies you might use to correct these problems.

1. Posture and instrument position

2. Air usage

3. Embouchure formation

4. Articulation

5. Rhythm accuracy

6. Fingering/note accuracy
Lesson Plan for First Lesson - Part 2

1. The goal for this first lesson is to teach the attached exercise to the best of the student’s ability by the end of the lesson. With this in mind, write your lesson plan for a 25 minute session incorporating the attached exercise. You may use this form or attach your plan to this form.

2. Students will have seen the exercise and played through it with a minimal amount of success.

3. The second exercise is included for you to use if you need more material. You may also work out of the student’s band book. Do not use either of these until after you feel the first exercise is finished.

4. The student must perform the exercise (or portion of exercise) at the end of the lesson or before moving to new material.
Lesson Plan for Second Lesson
*(due at beginning of second lesson-give to camera operator)*

1. The goal for this second lesson is to review or continue teaching the attached exercise to the best of the student's ability. With this in mind, write your lesson plan for a 25 minute session based upon outcomes in the first lesson. You may use this form or attach your plan to this form.

2. You may use the second attached exercise and then the student's band book for additional material. Again, use the materials after you feel the first exercise is finished.

3. Again, the student must perform the exercise (or portion of exercise) at the end of the lesson or before moving to new material.
APPENDIX O

EXAMPLE OF LESSON SCRIPTING WITH VERBALIZATION IDENTIFICATION AND PUPIL RESPONSE CATEGORIZATION

Lethco Dissertation Scripting Data
Subject Teaching: LessonTape #1
Total Lesson Length: 24:11 (1,451 seconds)
Start Scribe: "Open C" on 7:47

A t play
+...s... play
AAA t Ok, Go ahead and hold your horn up. And, just put your put your see this thumb, just put it right in between the, yah right there, your pinky on top of that little ring. Yah, try it again. C

A t play
++...s... play
AA t Go ahead and sit up, back off the chair, back off the, sit up here in the front of the chair. Yah, you'll get good breath support. All right, now play F

A t play
++...s... play
A t Don't forget about that thumb.

A t play
AAA t Good, very good, very good. Um, I'm gonna play a rhythm and you play it back to me. Play it on on a open C

A t play
++...s... play
A t Good. Are you are puff, are you um stoppin your air with your tongue or are you using your tongue?

AAA t Sometimes I'm tryin to use my tongue.

A t Yah, just try to keep that air moving all the time your tongue just kinda chops at it.

A t play
AAA t I can see you kinda takin a new breath every time. It's not, what you gotta do is do is go, (blows) your tongue just kinda hits it but you're always blowin no matter what.

A t play
AAA t Yah, that sounds really good. Yah, that's a lot better. Very good. Let's take a look at our our song here. American Patrol. You've played this before right?

AAA t Um, Not really

A t play
AAA t Yah, did you play it with Ms. Liske in a lesson?

AAA t nods head

A t play
(Prompt) (t Keep goin)

AAA t That's good.

AAA t I couldn't get that high note right there.

A 0 t Yah, that's ok, it's a little it's a high note. It's a little harder to get out. That's pretty good though. Have you ever heard this song before? It's an old, it's a it's a jazz big band song, like
APPENDIX P

EVALUATION OF SUBJECT PERFORMANCE FORM

Evaluation of Subject Performance
(Instructor/Expert)

Using the rating scale below, fill in the circle which you feel best represents the subject's performance on their instrument. A behavior with many mistakes and major problems correctable only with practice corresponds with "extremely flawed" and a perfect behavior corresponds with "no mistakes." If the behavior could easily and quickly be corrected it would be "slightly flawed" whereas a behavior that is not as easily correctable would be "more than slightly flawed."

Performance

1. Position of left hand
   extremely flawed
   more than slightly flawed
   slightly flawed
   no mistakes

2. Position of right hand
   extremely flawed
   more than slightly flawed
   slightly flawed
   no mistakes

3. Posture
   extremely flawed
   more than slightly flawed
   slightly flawed
   no mistakes

4. Air intake
   extremely flawed
   more than slightly flawed
   slightly flawed
   no mistakes

5. Blowing airstream
   extremely flawed
   more than slightly flawed
   slightly flawed
   no mistakes

ID No:
| 6. **Breathing at appropriate places** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 7. **Embouchure formation** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 8. **Tonguing** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 9. **Tone quality** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 10. **Rhythm accuracy** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 11. **Fingering accuracy** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 12. **Intonation adjustment: trumpet-3rd valve slide trombone-slide placement** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 13. **Partial accuracy** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
| 14. **Sight reading** | extremely flawed | more than slightly flawed | slightly flawed | no mistakes |
APPENDIX Q

SUBJECT ATTITUDE SURVEY

Subject Attitude Survey
(Groups A, B, & C)

Please complete this survey concerning your preparation to teach a beginning band student lessons and the lesson teaching experiences. Your responses should reflect your second instrument of the semester. Fill in the circle above the words which best represent your opinion concerning the statements.

Your answers will help the instructor to evaluate the structure of this course. Please be honest with your opinions—they will not affect your points or grade for this course.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Teaching lessons in the schools helped me to practice skills learned in this class.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
<tr>
<td>2. <strong>My skill level on this instrument has increased during the 4 week training period.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
<tr>
<td>3. <strong>Prior to training on this instrument, I felt confident in my teaching skills on this instrument.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
<tr>
<td>4. <strong>My teaching skills on this instrument have improved.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
<tr>
<td>5. <strong>Observing myself on video will help me to improve my teaching skills.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
<tr>
<td>6. <strong>Observing myself on video helped me to improve my performance skills on this instrument.</strong></td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
<td>![Circle]</td>
</tr>
</tbody>
</table>
### Subject Attitude Survey page 2

**7.** The structure of this class helped me to teach a beginning band student on this instrument.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**8.** Class structure was effective in teaching me performance skills on this instrument.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**9.** Class release days were an equitable balance for time spent during this instrument segment and lesson teaching.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**10.** I enjoyed teaching lessons to a beginning band student.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**11.** I enjoyed learning how to play this instrument.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**12.** I enjoyed the structure of this instrument segment.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**13.** Prior to learning how to play this instrument, I felt confident in my teaching skills of this instrument.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**14.** Prior to learning this instrument, I felt confident in my teaching skills with beginning band students.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No strong opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>
Subject Attitude Survey page 3

15. **After training during this instrument segment, and before teaching my lessons, I felt confident in my ability to teach a beginning band student on this instrument.**

   - Strongly disagree
   - Disagree
   - No strong opinion
   - Agree
   - Strongly agree

16. **After I taught my two lessons, I felt more confident about teaching this instrument to a beginning band student.**

   - Strongly disagree
   - Disagree
   - No strong opinion
   - Agree
   - Strongly agree

17. **I gained confidence in my teaching skills from this instrument training segment.**

   - Strongly disagree
   - Disagree
   - No strong opinion
   - Agree
   - Strongly agree

18. **Prior to this semester, I felt confident in my teaching skills with beginning band students.**

   - Strongly disagree
   - Disagree
   - No strong opinion
   - Agree
   - Strongly agree

19. **Free Response: What changes would you recommend for preparation to teach lessons on your class instrument?**

20. **Free Response: What did you enjoy most about this instrument segment?**
APPENDIX R

PUPIL ATTITUDE SURVEY

Attitude Survey (Pupil)

Please answer these questions about your lessons with your LSU teacher. Your teacher will not read your answers so please be honest.

Thank you for completing this form!

Your name: ____________________________________________
Your instrument: _______ School: ___________________________
Grade: _______ LSU teacher: ________________________________
How long have you been playing your instrument? ________________

DIRECTIONS: For each of the following statements fill in the circle that best matches your feeling. You may fill in any of the circles but only choose one! Remember, your LSU teacher and your band teacher will not see your answers.

1. I enjoyed my two lessons with my LSU teacher.

2. I wish my LSU teacher could give me more lessons.

3. I have improved because of these lessons.

4. I learned new things about playing my instrument.

5. My LSU teacher was a good teacher.

ID No: ______________________
APPENDIX S

APPLICATION MATERIALS FOR EXEMPTION FROM INSTITUTIONAL REVIEW BOARD OVERSIGHT FOR STUDIES CONDUCTED IN EDUCATIONAL SETTINGS

Application for Exemption from IRB (Institutional Review Board) Oversight for Studies Conducted in Educational Settings
LSU COLLEGE OF EDUCATION

Title of Study: Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-Evaluation, Teacher Observation, and Performance-Based Instruction

Principal Investigator: Dr. LeAnn Lethco, Doctoral Candidate (767-7915)

Faculty Supervisor: Dr. James L. Bye, Associate Professor of Music (office 388-2593)

(if student project)

Dates of proposed project period: From February 16, 1998 To April 15, 1998 (course requirements)

Dates of proposed project period: From March 31, 1998 To April 15, 1998 (in school)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This study will be conducted in an established or commonly accepted educational setting (schools, universities, summer programs, etc.)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2. This study will involve children under the age of 18.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3. This study will involve educational practices such as instructional strategies or comparison among educational techniques, curricula, or classroom management strategies.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4. This study will involve educational testing (cognitive, diagnostic, aptitude, achievement).</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5. This study will use data, documents, or records that existed prior to the study.</td>
<td>X</td>
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<td>6. This study will use surveys or interviews.</td>
<td>X</td>
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<tr>
<td>7. This study will involve procedures other than those described in numbers 3, 4, 5, or 6. If yes, describe:</td>
<td>X</td>
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<td>8. This study will deal with sensitive aspects of subjects' and/or subjects' families' lives, such as sexual behavior or use of alcohol or other drugs.</td>
<td>X</td>
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<td>9. Data will be recorded so that the subjects cannot be identified by anyone other than the researcher.</td>
<td>X</td>
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<td>10. Informed consent of subject 18 and older, and/or of the parents/guardian of minor children, will be obtained.</td>
<td>X</td>
<td></td>
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<td>11. Assent of minors (under age 18) will be obtained. (Answer if #2 above is YES)</td>
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<td>12. Approval for this study will be obtained from the appropriate authority in the educational setting.</td>
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Attach an abstract of the study and a copy of the consent form(s) to be used. Also, attach a copy of any surveys, interview protocols, or other procedures to be used.
ASSURANCES

As the principal investigator for the proposed research study, I assure that the following conditions will be met:

1. The human subjects are volunteers.
2. Subjects know that they have the freedom to withdraw at any time.
3. The data collected will not be used for any purpose not approved by the subjects.
4. The subjects are guaranteed confidentiality.
5. The subjects will be informed beforehand as to the nature of their activity.
6. The nature of the activity will not cause any physical or psychological harm to the subjects.
7. Individual performances will not be disclosed to persons other than those involved in the research and authorized by the subject.
8. If minors are to participate in this research, valid consent will be obtained beforehand from parents or guardians.
9. All questions will be answered to the satisfaction of the subjects.
10. Volunteers will consent by signature if over the age of 18.

Principal Investigator Statement:

I have read and agree to abide by the Louisiana State University policy on the use of human subjects. This project will be conducted in accordance with federal guidelines for Human Protection. I will advise the Office of the Dean and the University's Human Subject Committee in writing of any significant changes in the procedures detailed above.

Signature: [Signature]
Date: [January 6, 1998]

Faculty Supervisor Statement (for student research projects):

I have read and agree to abide by the Louisiana State University policy on the use of human subjects. I will supervise the conduct of the proposed project in accordance with federal guidelines for Human Protection. I will advise the Office of the Dean and the University's Human Subject Committee in writing of any significant changes in the procedures detailed above.

Signature: [Signature]
Date: [1-15-98]

Reviewer recommendation:

- exemption from IRB oversight. (File this signed application in the Dean's Office.)
- expedited review. (Follow IRB regulations and submit 2 copies to the Dean's Office.)
- full review. (Follow IRB regulations and submit 12 copies to the Dean's Office.)

Name of Authorized Reviewer (Print): [Signature]
Date: [11/4/98]

* Please indicate on the consent forms what will be done with the data once the study is completed.
MEMO TO: Leigh-Ann Lethco, Graduate Student LSU
9989 Burbank Dr. #174
Baton Rouge, La. 70810

FROM: Dr. Bernadette Morris, Director
Planning, Evaluation, Research, and Development
Curriculum and Instruction

SUBJECT: Letter of Permission to Conduct Study

Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-evaluation, Teacher Observation, and Performance-based Instructional Approached In a Brass Techniques Course

After reviewing your request to conduct the investigation described in your proposal, you have permission to begin your study. Authorization to conduct this study is granted with the following stipulations:

1. The principals of the schools agree to participate. The principal must be given a copy of this memo. Provide this office the names of schools agreeing to participate immediately.

2. Written permission is granted by the parents/guardian allowing their child/children to participate in the study. A copy of the permission form must be housed at the school.

3. The information obtained from the students will be anonymous and will remain confidential.

4. This department will receive two (2) copies of the completed study.

This authorization is based on the information submitted to this office. If you should deviate from the proposal, please contact this office.

If you have any questions, contact me at 922-5464.

Approved:

Don Mercer, Associate Superintendent
Office of Curriculum and Instruction

xc: Dr. Gary Mathews

Quality and Equity: Our Children Are the Reason
Abstract
Exemption from IRB Oversight

1. Title: "Effects of Self-Evaluation, Teacher Observation, and Performance-Based Instructional Approaches on Undergraduate Music Majors Teaching Abilities"

2. Investigators: Leigh-Ann Lethco, Doctoral Candidate
James Byo, Associate Professor, Faculty Advisor Serving as Principal Investigator

3. Description of Study:
   a. purpose of study
      The purpose of this study is to investigate the effects of three approaches to training preservice instrumental music teachers for initial teaching experiences with beginning instrumentalists. The three approaches—one involving intensive self-evaluation activities, a second focusing on observation of experienced teachers, and a third evidencing a performance-orientation—will be administered in an undergraduate brass techniques course. Primarily, this study is designed to answer the question: Does instructional approach differentially affect teacher behavior? Teacher behavior will be documented and evaluated on several levels: (a) lesson planning, (b) behaviors occurring during private lessons, and (c) post-lesson self- and pupil evaluation by subjects. In addition, the instrument performance competency of subjects will be assessed as well as subject and pupil post-treatment attitudes.

   b. description of subjects
      Subjects for this study will be instrumental music education majors (n=22) enrolled in a one semester brass techniques course at Louisiana State University, Baton Rouge. Elementary band students (n=22) from selected public schools within the Baton Rouge area will serve as pupils. University subjects will be sophomore and junior level undergraduates whose academic backgrounds and class performance at the time of the study will be considered as means of equating experimental groups. Elementary pupils in 5th and 6th grade will have had one-half through one and one-half years of experience playing an instrument in school settings spanning various combinations of full band, heterogeneous groupings, homogeneous groupings, and individual instruction.

   c. justification for using this subject population
      Instrumental music education students (subjects) enrolled in Music 2300, brass techniques, are at a point in their degree program where they begin to practice and utilize learned teaching skills in authentic settings. The course involves teaching the subjects how to play and teach all brass
instruments. It is an essential aspect of the course that the subjects practice these skills, under organized supervision, with beginning band pupils. By utilizing beginning pupils, the subjects practice their new skills in a safe, one-on-one environment.

d. subject recruitment procedures
Experimental treatments will occur in a brass techniques course, the primary objective of which is to develop each subject’s performance skills on instruments other than his/her major instrument. Experimental treatments will be nested within the course syllabus and as such will be a part of grade contingencies. Treatments are compatible with the aforementioned performance skill objective and consistent with two other course objectives—(a) development of skills in the structuring of successful learning experiences and (b) development of observation skills. This teaching assignment has been part of course requirements in the past but has not been utilized in a research study.

Pupils are selected by their band directors as a reward or because they might benefit from extra help. The band directors inform the pupils of the upcoming lessons.

e. detailed description of the procedures to be used

Self-evaluation group.

Across a four week, 12-class training segment on the trumpet or trombone subjects will prepare and self-evaluate three instrument performance videotapes as well as receive instructor feedback on these self-evaluations. The first videotape will show the subject performing instructor-selected exercises from the first week’s class assignments and will be submitted after the first week of training. Following class preparation on self-evaluation protocol, subjects will complete a general self-evaluation form related to performance fundamentals idiomatic to their instrument. The instructor will provide written feedback with respect to the accuracy of subjects’ evaluations.

A second videotape will again show the subject performing instructor-selected exercises chosen from the material covered subsequent to the first videotape and will be due at the midpoint of the training process. Two self-evaluations will follow; both will require class preparation on self-evaluation protocol by the instructor. The first, a positives-only self-evaluation will necessitate that subjects identify the best performance attributes on the second performance videotape. This will be followed by a negatives-only self-evaluation for which subjects will identify the worst performance attributes. For each of the positive and negative attributes, subjects will provide a written response to the statement, “Describe in as much detail as possible what you were doing physically”. Subjects will receive written feedback on the accuracy of their evaluations following submission of both.

A third performance videotape will require subjects to model
contrasting examples of correct and incorrect performance attributes. Previous research has determined that the ability of a teacher to model desired performance characteristics or imitate student performance enhances the ability to discriminate between correct and incorrect performances (Sang, 1982; 1987). In the present study, subjects will receive training in and practice contrasting examples before preparing the videotape. Self-evaluation of the contrastis videotape will require subjects to provide detailed written annotations for each correct and incorrect performance and include prescriptive information for incorrect examples. For the latter, subjects will state in prose teaching strategies and other solutions to problems.

Observation group

Subjects in this group will observe several videotaped or live teaching situations. After the first week of performance instruction, subjects will observe a live or videotaped elementary band class in a heterogeneous instructional setting. A week later subjects will observe a live or videotaped elementary band class in a homogeneous instructional setting. Next, during parts of four class periods, subjects will observe an instructor-developed videotape of exemplary teaching in a private lesson involving a beginning instrumentalist performing on same instruments as subjects in-class instruments. After viewing the model lesson videotape, instructor-stimulated discussions will focus on salient aspects of the lesson format and teacher behaviors. The final assignment will include the observation of instruction in a university applied trombone or trumpet lesson, corresponding to the subject's current in-class instrument. Subjects will complete observation forms focusing attention on teacher behaviors for live heterogeneous, homogeneous, and applied experiences.

Performance-oriented group

Subjects will participate in a four week, 12-class performance training segment on trombone or trumpet, receive one private lesson, and submit three practice tapes. Half way through the training, subjects will submit an audio practice tape of instructor-selected exercises chosen from material covered prior to the first practice tape. Subjects will receive written feedback from the instructor. In addition to class training, subjects will receive one private lesson from the instructor during the mid-point of the training segment. A second practice tape of assigned exercises will be due during the third week of instruction with instructor written feedback to follow. The final practice tape will be due the last day of instruction for that instrument segment.

All groups

During week five of the experimental procedure, subjects in all treatment groups will teach two private lessons to a beginning band pupil whose instrument is the same as the university subject's assigned in-class instrument. Lessons will be videotaped for the purpose of subjects' self-evaluation of teaching performance, subjects' evaluation of pupil performance, and instructor/expert evaluations. Regular classes will not be
held during this week to allow for time and concentration on the teaching aspects of the course. Prior to each lesson, subjects will submit a lesson plan according to instructor guidelines. Self-analysis forms for both lessons will be due in class no more than two class meetings following teaching.

Throughout the four week training segment, instruction specific to trumpet and trombone performance will be ongoing. Instruction of this type will occupy half to full class periods depending upon information related specifically to each treatment. A detailed outline of specific treatment and training details can be found in enclosed packet of forms and surveys.

A final instrument performance exam, consisting of assigned exercises representing the four week training segment, will be videotaped for subsequent analysis, comparison among groups, and evaluation of subject performance for course grade contingency.

f. description of the procedure for obtaining consent of parents/guardians and assent of minor subjects

Parental consent forms will be sent home with pupils selected by their band directors to receive private lessons from LSU students. Before the first lesson begins, the observer/camera-operator will read to the pupil the assent form. Subjects will teach the lesson after the pupil signs the form.

g. description of the procedures that will be used to protect the identity and privacy of participants

Subjects and pupils will be assigned identification numbers which will be used on all data sheets. Subjects' and pupils' names and personal information will never occur in the written form of the study. Upon publication of the study, video tapes will be used for verification purposes only.

h. procedures to be used in the study

Same as letter "e."

i. debriefing procedures

Subjects will complete self-evaluation forms. Pupils will complete an attitude survey.

j. any potential risks to subjects and measures that will be used to minimize risks

None
Assent of Minors

Camera Operator:

The following description must be read to the pupil before teaching the first lesson:

Over the next week you will take two private lessons with an LSU music student. The LSU student will use their knowledge and teaching skills to help you improve on your instrument. This is a school assignment for your teacher because s/he is studying to be a music teacher like your band director. The two lessons will be videotaped by me, a helper. The videotape is part of your LSU teacher’s assignment so that their instructor can help them to improve their teaching. The videotape will also be viewed by their instructor as part of a study about music teachers. Please pretend the camera is not in the room. Nothing you do will affect your LSU teacher’s grade or your grade. Please sign your name on this page if you understand this explanation and agree to participate in two private lessons.

Pupil Subject (signature): ______________________________

Pupil Subject (print name): ______________________________

Age: ______________________________

Researcher (signature): ______________________________

Observer (signature): ______________________________

School: ______________________________

Date: ______________________________

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Consent Form to Participate in Research Study
(LSU Students)

As part of the course requirements for Music 2300 Brass Techniques you will be teaching two lessons on either trombone or trumpet as assigned to a beginning band student. These two lessons will be videotaped for evaluation purposes. You will view the video tape and complete self-evaluation forms. Your instructor and expert observers will view the video tape to evaluate your teaching behaviors. The videotapes and self-evaluation forms will be used as data for the instructor's doctoral dissertation. Of primary interest are your teaching behaviors during the two lessons.

Because the tapes will be used for a research study, your signature for consent is necessary before your video tape and forms can be included in the study. Please sign at the bottom after reading the following description of the study.

Title: Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-Evaluation, Teacher Observation, and Performance Oriented Instructional Approaches on Teaching Behaviors and Pupil Responses

Investigators: Leigh-Ann Lethco, Researcher, Doctoral Candidate, Teacher of LSU Student Teachers (home 767-2515) and James Byo, Associate Professor of Music at LSU, Faculty Advisor (office 388-2593)

Purpose of the Research: The researcher hopes to find out which method of teaching best prepared the LSU students to teach beginning band pupils.

Procedures of the Research: After learning to play and teach trombone or trumpet, you will teach two private lessons to beginning band pupils in the East Baton Rouge Schools and complete required evaluation forms and lesson plans. The two lessons will be video taped by the researcher or research assistant.

Potential Risks: There are none. Please feel free to call or contact either person above with questions.

Potential Benefits: You will benefit from the experience of teaching students in the schools. The goal of the study is to determine which method of preparation helped you to be better prepared to teach beginning instrumentalists.
Alternative Procedures: Your participation is entirely voluntary and you may withdraw consent and terminate participation at any time without consequence.

Protection of Confidentiality: You will be referred to by name during the lesson and course requirements but all written descriptions in the study will refer to you by a number. No personal information will be used in the final written study. Upon publication of this study, video tapes will be stored for verification purposes only.

Signature: I have been fully informed of the above-described procedure with its possible benefits and risks and I give my permission for my videotaped teaching to be used in this study.

______________________________
Signature

______________________________
Name Printed

______________________________
Age

______________________________
Date
Consent Form For Band Students To Receive Two Free Private Lessons From an LSU Student Teacher
Due by March 16, 1998

Dear Parent/Guardian,

Your child has been selected by her/his band director to receive two free private lessons during band class. Your band director is very excited about these lessons. Louisiana State University (LSU) music students will come to your school and help your child with their instrument. Not only will these lessons help your child to improve, but it will also give the LSU students the opportunity to improve and practice their teaching skills.

The two lessons will be video taped so that their instructor at LSU can watch the lessons and help the LSU students improve their teaching. This information will also be used in a research study concerning the teaching behaviors of the LSU students. Your child will not be evaluated in this study. Because the tapes will be used for a study, your signature for consent is necessary before your child can participate in the lessons. Please sign at the bottom after reading the following information about the study.

Title: Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-Evaluation, Teacher Observation, and Performance Oriented Instructional Approaches on Teaching Behaviors and Pupil Responses

Investigators: Leigh-Ann Lethco, Researcher, Doctoral Candidate, Teacher of LSU Student Teachers (home 767-2515) and James Byo, Associate Professor of Music at LSU, Faculty Advisor (office 388-2593)

Purpose of the Research: In a class at LSU, university students will be taught to teach and play brass instruments. The researcher is studying how the LSU students teach beginners on their instrument.

Procedures of the Research: Your child will receive two private lessons with an LSU student teacher. At the end of the second lesson your child will fill out a survey about the two lessons and their teacher. The LSU teacher is the actual person being studied not your child.

Potential Risks: There are none. Please feel free to call either number above with questions.
Parental Consent Form page 2

Potential Benefits: Your child will receive individual lessons on his/her instrument which should help them improve their playing. Students always enjoy the individual attention and the fun playing that occurs during the lessons.

Alternative Procedures: Your participation is entirely voluntary and you may withdraw consent and terminate participation at any time without consequence.

Protection of Confidentiality: Your child will be referred to by name during the lesson but all written descriptions will be kept confidential. No personal information will be used in the final written study. Again, your child is not being observed, the LSU student is. Upon publication of this study, tapes will be used for verification purposes only.

Signature: I have been fully informed of the above-described procedure with its possible benefits and risks and I give my permission for participation of my child in this study. At the first lesson your child will also sign an assent form assuring their understanding of the lessons and study.

________________________________________________________
Parent/Guardian Signature

________________________________________________________
Parent/Guardian Name Printed

________________________________________________________
Child Name Printed

________________________________________________________
School Attending

________________________________________________________
Date

Please return this form to your child's band director as soon as possible or by March 16, 1998. Your child will not be able to receive private lessons without this signed form.
APPENDIX T

PILOT SUBJECT SURVEY

Pilot Survey

Thank you for your help in filling out this survey. Please complete the following questions concerning your lesson teaching experiences and procedures. Your answers will help me to improve forms, procedures, and directions for future lesson teaching in techniques courses as well as future research in music education.

School where you taught: __________________________________________
Area in school where you taught: _________________________________

1. Was the video camera easy to use? (circle one)
   Yes       No
   If no, please explain.

2. Were you able to easily get the video camera from LSU? (circle one)
   Yes       No
   If no, please explain.

3. Were the directions on the forms easy to understand? (circle one)
   Yes       No
   If no, please be specific about which form and why.

4. Were you able to easily observe your videotape?
   Yes       No
   If no, please explain.
5. Was your teaching "area" adequate for video taping?
   Yes   No
   If no, please explain.

6. Were you ever confused about what was expected of you?
   Yes   No
   If yes, please explain when.

7. Describe anything else that would be helpful to improve lesson procedures or anything you were asked to do for this project.
19. What changes would you recommend for preparation to teach lessons on your class instrument?

**Self-Evaluation Group**
- Have a 5 minute in-class segment where we could have a practice lesson with our classmate, then people could tell us how we did and what to improve on.
- Preparation was good.
- Review even more solutions to problems that may occur, but not technical solutions, ones a beginning band student would understand. Creating my own solutions would probably help me.
- I was a little worried about remembering all of the material for my lessons at first, but after my first lesson I was relaxed. I don't think any changes are necessary.
- Have a little more time showing us how to talk to kids on their level and how and when to compliment.

**Teacher Observation Group**
- Maybe the class time could have been more tailored to each students' playing ability.
- I feel well prepared. I don't know if I would change anything.
- Too much emphasis on a high level of performance.
- Maybe right before we teach, we could try to teach each other the instrument in class. This would help non-brass majors.
- Recommend that in the smaller classroom situations the student (college) could lead the rest of the college students how to tongue or how to breathe. There they could hear several explanations to a solution.
- A little more time on instrument to be taught. More depth into "strategies" than just teaching us to play. More discussion while watching videos. Maybe stop the video periodically to discuss.

**Performance Oriented Group**
- More teaching strategy suggestions.
- Give more teaching techniques with the increased playing. Less time can be taken singling out players in class and repeating and more time teaching.
- Nothing, the method worked great.
- If we had touched on the strengths of teaching.
- I liked the way it was done, but some more tips on teaching would help better.
I felt very prepared to teach my instrument, trombone. I feel that by playing so much I was able to transfer it to my student. I personally think that becoming somewhat proficient on the trombone helped me teach it better. I don't have any changes to recommend.

20. What did you enjoy most about this instrument segment?

**Self-Evaluation Group**
- With the small group, I enjoyed playing trombone more.
- The smaller class sizes.
- Learning the instrument and being able to help someone else learn it.
- Small Class Sizes. Short quizzes each week.
- The individual attention was nice. It was a great idea to split the class into groups and make the classes more personal.
- I enjoyed the second lesson with my trombone student. It wasn't gold, but it was a lot better than the first lesson.
- Smaller groups-more attention.
- Getting out into the schools.

**Teacher Observation Group**
- Teaching the kid.
- Watching videos and learning new teaching ideas. Seeing and hearing them being used helped me more than just hearing about them.
- Learning something new.
- I enjoyed the small group. I put the student in a position where he/she had to practice just so he/she would not get embarrassed. Also, the student/teacher ratio was great.
- I liked not having to walk across the street! No, really, I like the more individual attention.
- Probably viewing the videotapes and the length of time spent on the instrument. I would feel more confident if we spent this much time on all instruments.
- Individualized instruction.

**Performance Oriented Group**
- I enjoyed the increased playing time, but I wish I had learned more about teaching the instrument. We are going to be teachers not brass players.
- There was more individual attention for me, things were improved that may have been missed in our regular class sessions.
- I liked being in a smaller group. More individual attention was given and if you messed up people knew it was you so you had to keep your stuff together.
• Lots of playing.
• I enjoyed the small classes most because it put you on the spot and forced you to get on your information.
• I became fairly proficient on trombone and I enjoyed being able to do that.
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**Note.** SE = Self-Evaluation, TO = Teacher Observation and, PO = Performance Orientation.
VITA

Leigh-Ann Marie Lethco was born June 23, 1966, in Euclid, Ohio. She attended public schools in Brunswick, Ohio, and Medina, Ohio, graduating from Medina High School in 1984. She attended Ohio University as a music education major with trumpet as her principal instrument. After graduating in 1988 with a degree of Bachelor of Music in music education, Ms. Lethco taught 5-12 instrumental music and K-6 general music in the Logan-Hocking school district as an Assistant Band Director.

In 1988 Leigh-Ann returned to Ohio University and completed her degree of Master of Music in music education in 1992. While working towards her master's degree, she served as a graduate assistant with the band and music education departments assisting with the marching and university bands, as well as teaching courses in music education and music theory.

Ms. Lethco accepted the position of Head Band Director at Tiffin Columbian High School, Tiffin, Ohio, in the fall of 1992 where she administered all aspects of the instrumental music program and taught 5-12 instrumental music. While teaching in both public schools, Leigh-Ann directed wind ensemble, concert bands, marching bands, jazz bands, pep bands, instrumental ensembles, middle school bands, and elementary
bands. Throughout her teaching career Leigh-Ann has continually performed, maintained a private studio, and served as an adjudicator.

Ms. Lethco began her doctoral work in music education with a minor in wind conducting at Louisiana State University in 1995. As a graduate assistant she taught instrumental techniques courses and an elementary music methods course. In addition, she assisted with other music education courses. She will complete the requirements for the degree of Doctor of Philosophy in music education in May, 1999.

In August, 1998, Ms. Lethco was appointed Lecturer in Music Education at Baylor University where she teaches courses in elementary and instrumental music education, supervises student teachers, supervises master's degree projects, advises the student chapter of Music Educators National Conference, and coordinates the Music Education Resource Center.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Leigh-Ann Marie Lethco

Major Field: Music Education

Title of Dissertation: Preparing Undergraduate Music Majors to Teach Beginning Instrumentalists: The Effects of Self-evaluation, Teacher Observation, and Performance Oriented Instructional Approaches on Teacher Behaviors and Pupil Responses

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Jane W. Cassidy

C. Gerald Valenza

Jack B. Wecht

Conrado Curry

Date of Examination: November 11, 1998