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THE EFFECTS OF VIDEO TAPE FEEDBACK ON THE ACQUISITION OF SELECTED BASIC CONDUCTING SKILLS

The Ohio State University

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DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Jeffrey Charles Keller, B.M.E., M.A.

* * * * * *

The Ohio State University
1979

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CHAPTER I

INTRODUCTION

The process by which one becomes a conductor lies in a combination of many learned skills. When a student who is preparing to become a music teacher begins instruction in conducting, he brings to that classroom an accumulation of several years of musical experiences. Those experiences may be through the study of a particular instrument or instruments, the study of music history, plus the many listening experiences one encounters through the stimuli of radio, television, and live performances. The student's development in the necessary techniques of conducting relies greatly on all those previous and future musical experiences, but these cannot be transmitted until one learns the basic baton technique. In Elizabeth Green's book, *The Modern Conductor*, Eugene Ormandy states:

> The art of conducting, one of the most complex and demanding activities in the realm of music, comprises both the visual public performance and the constant application of technique.\(^1\)

The application of technique depends upon the presence of certain basic fundamentals. Those basic fundamentals are gestures that indicate starting and stopping, the meter and tempo of the music, and gestures of cues, holds, and dynamic changes. The simple execution of those gestures, however, cannot be considered sufficient for one to become a conductor. This application of technique would be considered only time beating. Rudolf comments that:

... mere time beating is not enough, the appropriate gesture for each musical expression must be mastered, before we can speak of conducting.2

It should be the goal of anyone who teaches beginning conducting to establish objectives which will initiate activities and experiences that provide the opportunity for development of the basic conducting skills. The development of new materials or techniques for the acquisition of such skills will greatly facilitate the learning process.

Need for the Study

The technological advances in the area of teaching have provided the present-day educational system with devices in the form of electronic equipment and computer assisted programs. These devices are accessible to schools

and permit the educator to use them to supplement and strengthen the teaching in the existing curriculum.

One of the devices that has been valuable in the field of education in recent years has been the video tape recorder. Studies in the various areas of education, athletics, agriculture, and music have supported the use of video tape feedback as a useful tool to augment traditional classroom procedures and practices. Significant results were not found in several of the studies, but in each case the investigators reported the use of video tape feedback contributed to the interest and motivation of the students involved. There is a continuing need, however, to investigate the most efficient and effective way to provide video tape feedback to students for their growth and achievement in the study of conducting.

In the field of conducting, the use of the video tape recorder as an educational tool has made possible the

---


Wilbert A. King, "The Effects of Video Tape Feedback on the Achievement of Students in a Beginning Conducting Class" (Ph.D. dissertation, University of Maryland, 1971).


observation and examination of all aspects of conducting. An athlete and a conductor have much in common, in that they define and refine movements which are most important to the specific skills of each profession. The successful use of video tape in the field of athletics$^4$ shows a strong relationship to, and indicates success for, the field of conducting. Both disciplines deal with the acquisition of fundamental movements. Those movements represent certain skills and present a form to be modeled by the beginning athlete or beginning conductor. When a student receives video tape feedback, he realizes the impact of his gestures. He sees himself as would any member of his ensemble or audience. The beginning conductor therefore has the opportunity through video tape feedback to analyze weaknesses and take steps toward improvement. Indefinite repetition of the tape enables the teacher to make a very detailed analysis of student behaviors.

Traditionally, students in a conducting class have received criticism and feedback from the instructor. By supplementing this instruction with the use of video tape feedback, another possibility for the training of

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conductors is provided. In gaining the basic skills of conducting, feedback is one of the most important factors in shaping behaviors of inexperienced conductors.

Concerning feedback, Zdzinski states:

The learner must be aware of whether or not he is reaching his goals. This information comes to him only by feedback.\(^5\)

That feedback can come from the instructor and other students in a traditionally oriented classroom. However, there may be limitations as to how much feedback information one is able to comprehend through standard classroom procedures. The student's intelligence and degree of understanding of the technique involved may be limiting factors. Also, the student's attitude toward the teacher and his willingness to accept criticism may limit the amount of feedback attainable.

Through exposure to video tape feedback, the student becomes aware of many new factors. For an experienced conductor, feedback is usually derived from the musical performance of the ensemble's response to his gestures. However, ineffective conducting skills of the experienced conductor may be overcome in rehearsal by verbal instructions or several repetitions of the musical passage. This

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premise is supported and was truly the case in observations made by this investigator at various band contests.

Prior to the use of filmed records or video tape in the classroom, the only way for a student to observe himself was to conduct in front of a mirror. This practice is supported by many teachers of conducting and is recommended in exercises for practice by Green. The main drawback with this type of feedback is that the student must be a conductor and an observer at the same time. More direct knowledge may be gained, but neither conducting nor observation receives full attention. By using video tape feedback, the instructor, the class, and the individual all have the opportunity to view the taped example and study and evaluate all elements of the individual's conducting skills.

Grose proposes that the use of the video tape recorder holds promise in making a contribution to conducting in the following ways:

1. Increased efficiency and quality of instruction.
2. Focusing the student's attention on musical detail in conducting techniques.
3. Providing the student and instructor visual and audio record of performance for in-depth study and evaluation.

---

6 Green, op. cit., pp. 34, 82.

This investigation was an attempt to determine whether video tape feedback is effective for the training of students in the basic skills of conducting as it is taught at The Ohio State University.

**Purpose of the Study**

This study examined the effects of using the video tape recorder in the field of conducting. The purpose of this study was to investigate the effects of teacher-student feedback through video tape upon the acquisition of selected basic conducting skills. It was thought that through this study a more efficient and useful method of using the video tape recorder may be found, thereby improving the quality of instruction and effectiveness of video tape usage in the classroom.

**Hypothesis**

As a result of observations made during four quarters of teaching beginning conducting, this writer concluded that video tape feedback, in any form, was a positive tool in the development of basic skills in beginning conductors. The influence of those experiences can be translated into the following research hypothesis:

The procedure of using video tape replay with teacher-student feedback will significantly improve the development of basic skills in beginning conductors.
Null Hypotheses

1. There will be no significant difference in pretest results between the control group and experimental group in overall conducting skills.

2. There will be no significant difference in posttest results between the control group and experimental group in overall conducting skills.

3. Students who receive video tape feedback will not show any significant difference in any of the six selected skills from students who do not have video tape feedback.

Definition of Terms

Feedback —

The process by which an individual receives knowledge of correctness of conducting behaviors while viewing those behaviors through video tape.

Basic Skills of Conducting

1. Posture and Baton Position —

the weight of the body is equally distributed on both feet, elbows are away from the sides, and arms are extended slightly forward; the grip of the stick shall place the baton in such a position that a direct extension of the forearm is achieved.

2. Preparatory Beat —

the motion of a conductor which signals the group to prepare to perform; the gesture is given
rhythmically and with eye contact. It must also describe the style and dynamic indicated.

3. Ictus --

the point at which a conductor indicates the exact placement of the beat; the placement should be given with clarity, consistency, and correct style.

4. Cueing --

the motion by which a conductor signals an entrance of the individual or small group; the gesture is given with the left or right hand, preceded by eye contact, consistent with the style and dynamics of the piece.

5. Phrase Indication --

the motion of a conductor which indicates a slight lift or pause between musical phrases, accompanied by eye contact.

6. Fermata --

the gesture of a conductor which indicates a sustained tone with no rhythmic pulsation; the gesture is given with the baton, eye contact, and clarity of release.

Limitations

This study will be limited to investigating the effects of video tape feedback in acquisition of the following basic skills of conducting:

- Posture and Baton Position
- Preparatory Beat
- Ictus
- Cueing
- Phrase Indication
- Fermata

The subjects used in this study were limited to the beginning conducting students enrolled Spring Quarter, 1979, at The Ohio State University.
CHAPTER II

REVIEW OF THE LITERATURE

The Teaching of Conducting

A study of the literature on conducting and the teaching of conducting reveals many texts dealing with the subject. These texts are primarily based upon the authors' experiences in teaching conducting, or are texts written by professional conductors. Many of these authors are in agreement that the most basic requirement for being a conductor is an adequate baton technique. Elizabeth Green comments that the baton is the conductor's technical instrument, and the technique of conducting is based upon the gesture made by the hand and/or baton.\(^1\) In her text, Green refers to the conducting techniques as the manual technique and within that category are the following topics:

The Baton
Time Beating: Traditional Patterns
Time Beating: Modern Patterns and Their Variations
The Expressive Gestures
The Development of the Left Hand
The Fermata
Hints on Miscellaneous Topics\(^2\)


\(^2\)Ibid., Chapters 2-8.
In his text, Max Rudolf approaches the teaching of conducting by emphasizing the technique of conducting basic beat patterns within a variety of styles. Those listed are:

1. Non-espressivo
2. Staccato - light and full
3. Expressivo legato
4. Marcato
5. Tenuto

In an attempt to research the various methods and techniques used in the teaching of conducting, several studies have surveyed the practices present at that particular time. Flueckiger, in a Master's thesis, surveyed five tax-supported training schools in Ohio. He was interested in, and collected data on, such things as how many conducting courses were offered; what year the student studied conducting; what, if any, texts were used; and what the basic content of the courses was at the five selected colleges. Several years later, a study by Dahlin investigated the same general areas as Flueckiger, but he was particularly interested in the relationship between the conducting needs of school music teachers and the present practices in the teaching of conducting.

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In another effort to study the teaching of conducting, Getchell explored the practices among teachers of conducting. He was concerned with three basic areas: (1) the current status of the beginning conducting class in the colleges of this country, (2) the most common problems encountered by beginning conductors and recommended solutions to those problems, and (3) the development of a one-semester course outline for the beginning conducting class. Getchell based his study on the 120 responses of college conducting teachers to his questionnaire. From the analysis of those responses and a review of the literature, Getchell designed a course of study for the beginning student.

Mathewes prepared two slightly different forms of a questionnaire and sent one to a group of school music conductors and the other to a group of professors of conducting. The responses indicated that the following items are essential for the training of school music conductors:

1. Preparatory beat and starting
2. Cut-offs and releases
3. Actual group conducting
4. Dynamics, changes in volume, accents
5. Drill on beat patterns
6. Change in tempo

---


7 Ibid., pp. 269-270.
7. Knowledge of expression terms

In his dissertation, Labuta summarizes the skills necessary for a conductor and indicates those which should be achieved in a college class. Of the nine skills he lists, four are applicable to the skills selected for this investigation:

1. The student has the ability to solve technical problems associated with time beating and ensemble.

2. The student exemplifies the expression of the music in his gestures.

3. The student interprets the music in a manner consistent with the style.

4. The student is able to lead musical groups effectively.  

In a more recent study conducted by Ray, a questionnaire was sent to past presidents of ACDA to record their approaches to the teaching of conducting. Results of the investigation indicated that applied study outside the area of conducting was essential. Time beating and gestural motor skills were felt to be identical for both choral and instrumental conductors. The learning of patterns from

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charts combined with immitating a teacher was thought to be the best method. Teaching score preparation and providing opportunities for conducting ensembles were necessary. Other responses included: (1) emphasizing study of the piano, (2) allowing the left handed student to beat time with his left hand rather than the right, and (3) the possible use of dance movements to assist in muscular coordination and physical expression.  

The research of Clark and Liles are two examples of studies that have investigated the possibility of developing supplementary teaching material which could facilitate the growth of conducting skills. The purpose of Clark's study was to provide musical examples for use in laboratory classes of elementary instrumental conducting. A list of conducting techniques was compiled and, for each technique, musical examples were selected or composed. There was no attempt to see if the material significantly improved the students' conducting skills.  

In a similar study, Liles extracted musical excerpts of band literature taken from the OMEA contest list, 1978-1979.


1979, and compiled them in the form of a conductor's workbook. The excerpts were typical examples of the kinds of conducting problems one would encounter in the literature. Students in an advanced conducting class were video taped on a pretest example and then introduced to the conductor's workbook. At the completion of the workbook, students were video taped on a posttest example. The pretest/posttest tapes were rated by a panel of judges, and the data received showed that there was significant improvement between pretest and posttest scores.¹²

Studies in Error Detection

The investigators of several studies have concerned themselves with developing materials to improve the student conductor's listening ability. One area of concern has been the student's ability to detect pitch errors while reading a score. Costanza, using the technique of programmed instruction, developed a course of study in score reading skills. Musical examples were taken from the scores of the Pennsylvania Music Educators Association district festival list and other compositions. The examples were then arranged for a brass quartet and clarinet quartet. Errors in the melodic line or harmonic structure

were programed into the Score Reading Test. The Score Reading Test was designed as a pretest/posttest measure of harmonic and melodic score reading skills. It was determined that the melodic and harmonic reading skills could be taught by the programed instruction, and that the Score Reading Test was an effective instrument in measuring those skills.\(^\text{13}\)

Other approaches to the development of detecting pitch errors have been researched by Gonzo,\(^\text{14}\) Michels,\(^\text{15}\) and Collings.\(^\text{16}\) In each study, the results obtained supported the concept that the listening skills in detecting pitch errors can be improved by developing appropriate materials.

A second area of investigation has been in the conductor's ability to detect rhythmic errors while reading a


\(^{16}\)David Stuart Collings, "Development and Evaluation of Techniques to Improve Skills of Student Conductors in Detecting Errors of Pitch in Musical Performance While Reading Five-Part and Six-Part Conductor's Scores" (Ph.D. dissertation, University of Southern Mississippi, 1973).
score. The research conducted by Shaw has investigated this topic. Shaw's study was aimed at developing an instrument to test the student's ability to detect rhythmic errors and evaluating a program of self-instruction to improve that ability. He concluded that the program developed significantly improved rhythmic error detection ability.¹⁷

A third area of research in error detection and the development of related materials has been in the student's ability to detect both pitch and rhythmic errors. An investigation done by Sidnell was designed to develop and test self-instructional drill materials for improving the ability to detect and identify pitch and rhythmic errors in instrumental performance. In this study, the sight reading performances of seven junior high and senior high bands were recorded and labeled as having "typical student errors." Other excerpts were recorded by advanced college players in such a way that single errors of pitch or rhythm were controlled. Experimental and control groups were set up, and the experimental group was given programed material; the control group, nonprogramed material. The results of the experiment showed the experimental group using the

¹⁷Thomas Shaw, "A Program to Improve Choral Conducting Students' Ability to Detect Rhythmic Errors in Choral Rehearsal" (Ph.D. dissertation, North Texas State University, 1971), Dissertation Abstracts, 32, p. 7034-A.
programed drill material achieved a higher mean gain than the control group. 18

In a study by Ramsey, the purposes were to construct and evaluate a programed instructional sequence that would develop students' pitch and rhythm detection skill through the use of full-score band literature and to determine the optimum length of a program designed to train the skill of error detection. Three forms of the Program in Error Detection (PED) were developed, along with a Test in Error Detection (TIED). Several excerpts of medium difficulty band literature were recorded for the program items. Of the 135 excerpts selected, 20 were used for the TIED, and the other 115 were used to develop the three forms of the PED. One pitch or rhythm error was recorded in each excerpt. Subjects using the programed material and test were to identify the measure in which the error occurred, what instrument committed the error, and whether it was a pitch or rhythm error. The results of the study indicated that:

1. Significant gains in error detection ability occurred with students trained with the PED, regardless of the length of the program.
2. Subjects who completed the longer forms of the PED exhibited significantly greater error detection skills than those students receiving minimal or no training at all.

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3. The longer the form of the PED, the greater the posttest mean scores on the TIED.19

Studies in Observational Systems

Recent studies of conductor effectiveness in a rehearsal situation have shown that conductor behaviors can be observed, measured, and evaluated. A technique for categorizing and analyzing the behaviors of conductors and students was developed by Erbes. He developed the Rehearsal Interaction Observational System (RIOS) which recorded the verbal interaction between conductor and students during rehearsals. Recordings were taken from sixteen teachers who were responsible for rehearsing large instrumental and choral groups. A 26 category system was derived from various types of interaction systems. The RIOS technique required the recording of conductor-student behaviors every three seconds. The reliability of the system was reported as ranging from .63 to .83, depending upon how much training the investigator had with the system.20

The RIOS was adapted for research conducted by Hicks. The purpose of this research was to collect information


regarding the effect of instruction in interaction analysis upon the verbal teaching behaviors and attitudes of university conducting students. Two groups of beginning conductors were used to study the effect of the RIOS. One section utilized a standard text and conventional techniques of conducting. Weekly video taping was done of each student conducting a lab band or orchestra, and this was critiqued by the instructor. A second section received the same instruction in conducting, except that instruction was given in the techniques of interaction analysis. The results of the study indicated that students with RIOS training were more aware of a greater variety of verbal behaviors, and used more of the verbal behaviors than those students who received no interaction analysis training.21

A study investigating the development of another observational system was conducted by Ervin. In his study, video tape recordings of 37 junior high, senior high, and college level instrumental and vocal conductors were made, and each conductor was rated on his ability to produce short term improvements in performance. A list of 11 variables was selected on the basis of their properties of discrimination between good and bad conductors. These

21Charles E. Hicks, "The Effect of Training in Interaction Analysis Teaching on the Verbal Teaching Behaviors and Attitudes of Prospective School Instrumental Music Education Students Studying Conducting" (Ph.D. dissertation, Michigan State University, 1976), Dissertation Abstracts, 37, p. 5671-A.
variables were then incorporated into a system of observation. Judges' rankings were compared and there was agreement in 84 percent of the cases.22

A similar technique was examined by Lewis with choral conductors. Lewis was concerned with feedback and how to provide a system of observation and analysis for students viewing themselves conducting through video tape. To provide a more specific form of feedback, the Choral Conductors Observational System (CCOS) was developed. The system consists of 17 categories which describe the specific gestures used by conductors of musical organizations. Forty-two students were equally divided into control and experimental groups. The experimental group received instructor comments with their video tape feedback plus the use of the CCOS. A CCOS Training Manual was used by students in the experimental group to help them code their conducting. The results indicated that conducting gestures could be coded and the CCOS was a reliable and useful system.23


Other studies in observation of conductors have analyzed body movements, facial expressions, eye contact, and speech characteristics. Yarbrough developed a form so observers could record the frequency of conductor behavior in the following categories:

- activity
- body movement
- conducting gestures
- eye contact
- facial expressions
- speech speed
- voice pitch
- voice volume

The form is best used with video tape feedback so each category can be analyzed adequately; however, it has also been used successfully in live rehearsals. The use of the form helps students become aware of each area of conducting behavior.24

Research completed by Roshong dealt with developing an observational instrument that could specifically record the nonverbal communication of conductors. An observational form was developed to record nonverbal behaviors in six categories. That form was used in analyzing the video tape rehearsal of three Ohio college band conductors. The


instructor concluded that the observation form developed for the study was easy to use and proved to be a successful means of recording the nonverbal behavior of the video tape examples. Some common behaviors observed during the study were facial approval and forward movement during starting, stopping, and sustaining events; and facial disapproval, eye contact with the group, and movement away during instruction.\textsuperscript{26}

\textbf{Use of Video Tape in Education}

The instant replay and erasing capabilities of the video tape recorder make it a very useful and efficient tool for education. The video tape recorder has been used to train teachers, athletes, and musicians. The studies reported in this review of the literature are only but a selected few of the investigations conducted which experiment with the use of the video tape recorder.

In a study by Hedges, 39 student teachers were divided into three groups. One group received video tape micro-teaching during a regular methods course, plus video tape review during student teaching. A second group received the regular methods course in teaching, plus video tape review during student teaching. The third group received

the regular methods class and no video tape review during student teaching. Results of the study indicated that the use of the video tape recorder did not significantly improve the teaching performances of the student teachers. Hedges did report, however, that it did contribute to the interest and motivation of the student teachers.27

Investigations conducted by Collie28 and Tuttle29 have attempted to improve teachers' ability to self evaluate themselves through video tape. Neither found significant improvement in teacher self evaluation skills from pretest to posttest, but did report that the students exposed to self-analysis through video tape were more positive in their evaluation of themselves.

The use of the video tape recorder has been most widely applied in the field of athletics. The advantage of instant replay gives a coach as well as the athlete the ability to study the form or specific fundamental relating to that particular sport. In his article, "Videotape for Coaching,"


Speed described the value video tape teaching has had in tennis, track, gymnastics, golf, baseball, and other sports.  

In a study conducted by Plese, a design similar to this author's study was used to determine the effect of video tape feedback. The purpose of the study was to compare the results of teaching selected gymnastic skills using video tape replay with the traditional approach. Junior high students were divided into control and experimental groups. The control group was given the traditional approach to teaching the selected skills, and the experimental group was taught by the same method but was exposed to video tape replay. The results indicated that video tape feedback significantly increased the excellent performances while decreasing the poor performances of the experimental group.  

**Use of Video Tape in Music**  
A pioneer in the application of video tape in music has been Charles Daellenbach. Daellenbach reported on video tape recording equipment in use since the fall of 1966 at the Eastman School of Music. In that report, the equipment

---

was being used in teaching and research situations which included conductor training, student teacher evaluation, studio teaching, marching band, and identification of teaching and learning behaviors.\textsuperscript{32}

Two of the earliest studies using replayed feedback in the field of conducting were Zdzinski at Columbia University and Hunter at North Texas State University. Zdzinski attempted to find out whether visual records would offer conducting students an opportunity for increased awareness of factors involved in conducting skills. In his study, students were filmed with an 8mm movie camera. Procedures were set up to contrast the feedback developed by the standard classroom routine used during the first two-thirds of a semester, and feedback which was given through the use of filmed records during the last third of the semester. It was found that students were able to identify a significant amount of information concerning their conducting which would not have been possible through the standard classroom routine. His study made no attempt to determine if the "increased awareness" actually improved the conducting skill.\textsuperscript{33}


Hunter's study was designed to use the instant replay feature of video tape recording. In his experiment, a control group was taught the traditional method, while an experimental group was exposed to video tape replay of their conducting. Following the replay, there was discussion by the class members and the instructor. Ten skills were identified and used for evaluation of the conductors:

- preparatory beat
- basic beat movement
- dynamic indication
- cueing
- independence of hands
- cut-offs
- facial expression
- posture
- attention to musical detail
- overall achievement

Although the experimental group scored higher than the control group in nine of the ten categories, the difference between the groups was not significant. One problem Hunter presented was that the ten week period was not long enough to allow each student of the experimental group more than one appearance before the camera.

An experiment conducted by Grose studied the effectiveness of video tape recording on the skills of beginning instrumental conductors. Control and experimental groups

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34John R. Hunter, "Instant Replay Television as a Method for Teaching Certain Physical Aspects of Choral Conducting" (Ph.D. dissertation, North Texas State University, 1968), pp. 57, 58.

35Ibid., p. 69.
were set up, and students in each group were given four laboratory conducting experiences. The conducting of students in the experimental group was video taped during each lab period. After each taping, class viewing and discussion followed. The control group, which was not video taped, did participate in class discussions. Six areas of evaluation were selected and used by students in both groups for self-evaluation and class discussion. Grose found no significant difference between the experimental and control groups.³⁶

The research conducted by King produced significant results with the use of the video tape recorder in the teaching of conducting skills. His problem was to see if students who study and evaluate themselves conducting through video tape acquire more skill than those who do not have access to video tape recordings. Two groups of beginning conducting students were taught identically, except that the experimental group was video taped five times during the course. Students in that group then viewed and evaluated themselves individually after each taping. A pretest/posttest design was set up and three judges rated each student's conducting. The judges rated the following items:

preparatory beat
attack
basic beat movement
dynamic indication
cueing
independence of hands
release
posture
use of face and eyes
attention to musical detail

The analysis of the data indicated that the video tape feedback used had a significantly positive effect on the student in a beginning conducting class.\(^{37}\)

The success of the video tape recorder as a feedback mechanism has created interest in its usage in the development of teaching materials, evaluation of rehearsal behaviors, and the teaching of rehearsal techniques and principles. The project conducted by Gonzo and Forsythe and a study by Fleming are examples of research that has looked at the development of teaching materials for video tape usage.

The Gonzo and Forsythe study developed and used video tapes of junior high, high school, and college choral organizations to teach students in an introductory music education course the principles and techniques of rehearsal procedures. A posttest control group design was used to see if a group of students receiving the video tape material


\(^{38}\)Ibid., p. 75.
would be significantly different from a group of students who did not. The investigators were concerned with the student's observational skills, knowledge of behavior principles, and attitudes toward the course. Results indicated the following:

1. Video tape material had a significant effect upon the ability to perform an observational task.
2. Video tape materials had no significant effect upon the understanding of behavior principles.
3. Use of video tape material had considerable potential for reinforcing subject matter and also creating a higher level of interest for the course.39

Fleming's study looked at the effect of guided practice materials used with the video tape recorder. In this study, two groups of beginning choral conducting students were taught in the same manner, with the exception that the experimental group was allowed two private video practice sessions each week. During those sessions, the individuals were given guided practice materials which consisted of (1) a score study guide, (2) special conducting considerations, and (3) a self evaluation guide.40 As a part of the course, all students were taped; this was followed by individual


40Rhonda J. Fleming, "The Effects of Guided Practice Materials with the Video Tape Recorder in Developing Choral Conducting Skill" (Ph.D. dissertation, Florida State University, 1977), p. 34.
playback and discussion. The results showed that those students having the guided practice material with video tape feedback indicated a significant difference in the conducting skills acquired.41

The research conducted by Cornelia Yarbrough has investigated the development and use of observational forms which have identified some of the rehearsal behavior of both conductor and performer. These forms have been used in a recent study (1976) with video tapes of student conductors. In this study, senior music education majors enrolled in basic conducting at Syracuse University were randomly assigned to one of two groups. Students in an experimental group were video taped while conducting in a rehearsal setting. This was followed by self-observation and evaluation through video tape feedback. The control group observed the video taping sessions but were not taped themselves. The data demonstrated a significant difference between the experimental and control groups. The experimental group had more body movement, more expressive conducting, more group and individual eye contact, more facial approval, less facial disapproval, less verbal disapproval, and more verbal approval.42

41Ibid., p. 74.

The most recent study reported by Yarbrough was done comparing the effect of instructor feedback versus observation form feedback. The areas of behavior that were observed and recorded included the use of rehearsal time, the conductor's verbal responses, and the conductor's non-verbal behavior. Results of the study indicated no significant difference between the two kinds of feedback, thereby supporting the use of observational forms as an alternative to instructor feedback.43

Summary

Research in the field of conducting has investigated course content, methods and materials, the ability of a conductor to detect errors while reading a score, observation systems for analysis, and several techniques for giving feedback to conductors. The investigation of the effects of video tape feedback on the beginning conductor's ability to improve in selected basic skills has received limited attention in the literature. The research has provided mixed results with some studies supporting the use of video tape feedback and others not showing any significant gain.

through its usage. Therefore, the purpose of this study was to investigate the effects of teacher-student feedback through video tape upon the acquisition of selected basic conducting skills.
CHAPTER III

PROCEDURES AND MATERIALS

Subjects
The subjects for the experiment were those students enrolled in Music 261.11 beginning conducting during Spring Quarter 1979 at The Ohio State University. Initially, a total of 23 students were enrolled in two sections. One section had a total of 13 students, and the second section had an enrollment of 10. Two students, one in each section, dropped the course during the quarter and two students, one in each section, failed to complete the requirements for the study; therefore, they were deleted from the experiment. This gave a total number for the experiment of 19 students.

A majority of the students held the class rank of sophomore; the rest were freshmen and juniors. A total of 14 of 19 were in the Bachelor of Music Education program, 11 of them with an instrumental emphasis. Three of the remaining five were in the Bachelor of Music program, two vocal, one instrumental, and the remaining two students were in the jazz study program.

Twelve of 19 students reported that they had some previous conducting experience. That experience was found
to be mainly at the public school level. Those students had experienced some conducting, helping with groups at school and summer music camp. A few students had experience conducting with church choirs. However, none of the students reported any prior training in conducting.

Groups

Prior to the beginning of the experiment, it was decided to assign one class as the control group and the other class as the experimental group. Because of scheduling problems that existed, the randomization of subjects into groups was not possible. Using the intact groups, it was decided that the 2:00 section would be the control group (N=11), and the 3:00 section would be the experimental group (N=8). Table 1 is a summary of background and experience levels of the students in the control and experimental groups.

A different instructor taught each group. Both instructors\(^1\) based their teaching methods on the same objectives for the course. A course outline of Music 261.11 can be seen in Appendix C. During the first week of instruction, students in each group were introduced to the study by a letter explaining the procedures (see Appendix A).

\(^1\)Mr. William Baker and Dr. Jere Forsythe, The Ohio State University, School of Music.
<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Experimental</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td><strong>Class</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
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<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Junior</td>
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<td>2</td>
<td>4</td>
</tr>
<tr>
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<td>19</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td>6</td>
<td>11</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vocal</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Jazz Studies</td>
<td></td>
<td>2</td>
<td>0</td>
</tr>
<tr>
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<td>19</td>
</tr>
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</tr>
<tr>
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<td>8</td>
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<tr>
<td>Vocal</td>
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<td>2</td>
<td>4</td>
</tr>
<tr>
<td>No Experience</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>8</td>
<td>19</td>
</tr>
</tbody>
</table>
Conducting Evaluation Form

The Conducting Evaluation Form (CEF) was designed to measure each fundamental conducting behavior that had been selected and secondary areas of considerations that are to be used in the evaluation process of the overall basic skills. The CEF was developed by this author and was used to score the pretest/posttest performances and used in the experimental group for scoring each one of the five taping sessions where feedback was given. The CEF (see Figure 1) was adapted from other evaluation forms previously used in the beginning conducting class by instructors Woods, Forsythe, and this investigator. The skills that were video taped and evaluated were selected on the basis of their importance to the overall development of basic fundamentals in a beginning conducting student. These skills were:

- Posture and Baton Position
- Preparatory Beat
- Ictus
- Phrase Indication
- Cueing
- Fermata

These skills are considered to be the very beginning skills that should be mastered so that future development of advanced techniques can be possible. These basic skills are most frequently listed in conducting texts of authors such as Green and Rudolf (cf.-Chap. 2). They are mentioned in the research and supported by the studies of Getchell, Mathewes, and Labuta (cf.-Chap. 2).
### Conducting Evaluation Form

1. **Posture & Baton Position**
   - 1 2 3 4 5 6 7 8 9 10
   - head & arm position
   - baton grip

2. **Preparatory Beat**
   - 1 2 3 4 5 6 7 8 9 10
   - eye contact
   - rhythmic
   - style, dynamics

3. **Ictus**
   - 1 2 3 4 5 6 7 8 9 10
   - pattern clarity
   - pattern consistency
   - style

4. **Cueing**
   - 1 2 3 4 5 6 7 8 9 10
   - eye contact
   - independence of hands
   - style, dynamics

5. **Phrase Indication**
   - 1 2 3 4 5 6 7 8 9 10
   - eye contact
   - release, attack

6. **Fermata**
   - 1 2 3 4 5 6 7 8 9 10
   - eye contact
   - release

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**Fig. 1. Conducting Evaluation Form**
The directions for using the CEF were adapted from the video tape evaluation points used by King\textsuperscript{2} (see Appendix D). These form directions were considered as the basis for rating the basic skills.

The beginning conducting course at The Ohio State University is designed to train the student conductor in the fundamental techniques of conducting, with an emphasis on baton technique. The techniques gained in the six areas selected should give the beginning conducting student a foundation in basic conducting skills.

\textbf{Selection of Pretest/Posttest Example}

The brass quartet arrangement (see Appendix F) by James Swearingen of "March On" from \textit{Aida} was used to test the basic skills to be measured in the study. The arrangement was designed so it would require from the conductor skills in demonstrating a basic $4$ pattern with appropriate style and dynamics, execution of a preparatory beat, places where basic cues should be given, clear phrasing points, and execution of a fermata. All the skills required to conduct successfully on the pretest/posttest composition are taught as part of the beginning conducting class.

Content validity of the musical example was established by a panel of judges. The judges were given the score of the pretest/posttest example with the Conducting Evaluation Form. Each judge was asked to study the score and to determine if the music contained passages where the skills of the CEF could be evaluated. Each judge agreed that a student's conducting of the pretest/posttest example should show all of the six skills on the CEF.

Procedures for Implementing Pretest/Posttest

After three classes of instruction, each student selected a time to be video taped conducting the pretest/posttest example. The interval of time given to each student was five minutes, which proved to be sufficient for all procedures to take place.

A brass quartet comprised of two trumpets and two trombones was assembled and rehearsed enough to adequately perform the composition for the beginning conductors. Each student, upon entering the room, took his place in front of the ensemble. At that time, the conductor found in front of him instructions (see Appendix E) for the procedures to be followed, and the score of the musical example that would be conducted. After reading the instructions and

[3]Dr. James Major, Dr. Jon Woods, The Ohio State University, School of Music; Timothy Russell, Graduate Student, The Ohio State University.
studying the score, each student conducted the ensemble as best he could. After the experimental treatment was completed and all classroom instruction had been given to both groups, students, following the same procedures as presented in the pretest, conducted the ensemble playing the same composition for the posttest taping.

**Equipment**

The equipment used in the study consisted of the following materials:

1. Sony Video Cassette Recorder, Model No. VO-2600
2. Sony Trinitron Television/Monitor Model No. KV-1711D
3. Sony Video Camera and Tripod, Model No. AVC-3210 with Cosmicar lens 25mm 1:1.4
4. Microphone
5. 3 Scotch U-Matic 60 minute cassettes

All taping of student conductors was done in the room adjacent to the equipment storage room, therefore little time was needed to transport and set up equipment for any taping session. All procedures necessary for the success of the study—those being pretest/posttest procedures, use of equipment, feedback procedures—were tested and analyzed during Winter Quarter in the investigator's class. All setting up of equipment and taping was done by this investigator.
During the taping sessions, all equipment was placed slightly to the conductor's left in the back of the room approximately 15 feet from the conductor. The video tape recorder/monitor was placed alongside the camera, allowing a single technician to operate all equipment. The performing ensemble for the pretest/posttest taping was seated in a semicircle. The performing group (other class members) for the five taping sessions was also seated in a semicircle (see Figure 2). Feedback sessions were scheduled in the room where the equipment was kept.

**Experimental Treatment**

The treatment to which all subjects in the experiment were exposed consisted of one approach which will be referred to as the "traditional approach." The other approach will be called "experimental" and used only for the experimental group.

The traditional approach may be characterized by any one or combination of the following methods of instruction:

1. Teacher demonstrates, class imitates.

2. Teacher criticizes student conducting, verbally or by written comment.

3. Class criticizes student conducting, verbally or by written comment.

A = Conductor
B = Piano
C = Brass Quartet
D = Class Ensemble
E = Camera
F = Monitor/Recorder
G = Technician

Fig. 2. Classroom Set-Up.
5. Teacher manipulates arm of student to show correct execution.

Therefore, through the traditional approach, the student may receive immediate feedback while conducting, or delayed feedback through written comment given by the instructor or other class members.

The experimental procedure devised for this study includes the traditional approach plus teacher evaluation given with video tape feedback. Therefore, the treatment of the subjects in either group was alike except that the video tape recorder was used as an added feedback tool for subjects in the experimental group.

Figure 3 is a summary of the schedule of events which took place during the experiment. On five days during the quarter, at two week intervals, the subjects in the experimental group had their conducting recorded on video tape. In all five taping sessions, students were asked to conduct all or part of what they had been assigned as part of their regular class routine. The first session started with the use of short familiar tunes and progressed during successive sessions to musical examples taken from the text used in the class.

The procedure for viewing the tapes was structured so the student would make an appointment with the instructor to view his conducting and receive feedback. The feedback sessions ranged in length from a minimum of five minutes
March 28  Letter to class, students fill out information sheets. Sign up for pretaping.

March 30  Pretaping of all students, both sections.

April 4  Taping Session I

April 5, 6  Feedback Session I
           Rated fundamentals
           1, 2, 3 on CEF

April 19, 23  Taping Session II

April 20, 23  Feedback Session II
           Rated fundamentals
           1, 2, 3, 6 on CEF

May 3, 7  Taping Session III

May 4, 7  Feedback Session III
           Rated fundamentals
           1, 2, 3, 4, 6 on CEF

May 17  Taping Session IV

May 21  Feedback Session IV
           Rated all fundamentals

May 29, 30  Taping Session V

May 30, 31  Feedback Session V
           All fundamentals rated

June 1  Post taping, all students, both sections.

Fig. 3. Schedule of Testing and Taping Sessions.
for the first few sessions when musical examples were shorter and only three or four of the six fundamentals were evaluated, to a maximum of ten minutes when musical examples were longer and all basic skills selected received feedback.

The instructor, guided by the conducting evaluation directions, gave feedback to each student while watching the video tape example. This was recorded on the Conducting Evaluation Form and given to the student at the conclusion of each feedback session. The instructor rated the execution of the fundamentals observed on the basis of the level at which they should be executed by the end of the quarter. At the conclusion of the feedback sessions, each student was able to see which skills were improving and which were weak and needed more attention and further practice. The CEF was employed in all evaluations of the students in the pretest/posttest by a panel of judges and by the instructor of the experimental group using the video tape feedback.

A panel of three judges\(^4\) scored each student's performance on both the pretest and posttest. All three judges have had conducting experience at the public school and college level. Each judge represents a specific

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\(^4\)Dr. James Major, Dr. Jon Woods, The Ohio State University, School of Music; Timothy Russell, Graduate Student, The Ohio State University.
background area of conducting experience, i.e., band, choral, and orchestral conducting. Two of the three judges have taught conducting, specifically, Music 261.11 at The Ohio State University.

The panel of judges observed each student's performance on the pretest/posttest example and scored each of the six basic skills on a rating scale of one to ten, indicating a range of weak to strong, unclear to clear. The highest possible score was sixty. The judges rated the video tape performance not knowing which was the pretest or posttest because of randomization of the taped examples. Prior to the rating of the performance, the investigator informed the judges on the scoring procedures, presented the conducting evaluation form directions, and provided a score of the composition for analysis of where certain basic fundamentals may be used.
CHAPTER IV

ANALYSIS OF DATA

Data Treatment

The data collected from the judges' ratings on the pretest and posttest for all students in both groups were subjected to the following:

1. A t-test was carried out to test for any significant difference between experimental and control groups on the pretest on the six dependent variables and sum of those variables.

2. Inter-judge reliability on both the pretest and posttest scores was accomplished by means of the Pearson Product Moment Correlation Coefficient.

3. A t-test was performed to test for any significant gains between pretest and posttest scores for the control group.

4. A t-test was performed to test for any significant gains between pretest and posttest scores for the experimental group.

5. The test for significance for any difference found between the two groups on the six dependent variables and
sum of those variables was accomplished by an analysis of variance.

The first statistical analysis conducted tested for any difference between the experimental and control groups at pretest time on the six selected fundamental conducting skills. Since subjects were not randomly assigned into control and experimental groups, it was necessary to see how equivalent they were on the selected skills at the beginning of the experiment.

**Null Hypothesis 1**

There will be no significant difference in pretest scores between the control group and the experimental group in overall conducting skills.

**Results**

The pretest scores of the three judges were used to compile means and standard deviations for each of the six dependent variables as well as the total variables for each group.

A t-test was then computed to determine if there was any significant difference between the groups on the six skills and their totals. The .05 level of significance was established as the criterion level. A t value of 2.110 was needed for rejecting the null hypothesis. Table 2 presents the results.
<table>
<thead>
<tr>
<th>Fundamental Skill</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degrees of Freedom</th>
<th>t Value</th>
<th>Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posture &amp; Baton Position</td>
<td>Group 1</td>
<td>8</td>
<td>16.2500</td>
<td>4.683</td>
<td>17</td>
<td>1.18</td>
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<td></td>
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<td>13.6364</td>
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<td></td>
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<tr>
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<td>1.17</td>
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<td>11</td>
<td>11.0000</td>
<td>3.899</td>
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<td></td>
</tr>
<tr>
<td>Ictus</td>
<td>Group 1</td>
<td>8</td>
<td>14.6250</td>
<td>7.009</td>
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<td>1.00</td>
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</table>
Discussion

$T$ values ranging from 1.00 to 1.85 were obtained, thus, the null hypothesis was retained. Therefore, this indicated that the groups were not significantly different in conducting skills at the beginning of the experiment.

Inter-Judge Reliability

The Pearson Product Moment Correlation Coefficient was used to compute the agreement among the three judges. (Raw scores by each judge for each student, both pretest and posttest, appear in Appendix G.) Table 3 presents the obtained correlations and levels of significance from the pretest results.

TABLE 3
INTER-JUDGE RELIABILITY FOR PRETEST SCORES

<table>
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<th>Judge 3</th>
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Table 4 presents the obtained correlations and levels of significance from the posttest results.
TABLE 4
INTER-JUDGE RELIABILITY FOR POSTTEST SCORES

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<tr>
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<tr>
<td>Judge 3</td>
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<td>1.000</td>
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</table>

Discussion
Agreement of the three judges on the pretest ranged from .623 to .774 and from .488 to .842 on the posttest. The highest agreement on the posttest scores was found between judges 1 and 2. Both of these judges have taught the beginning class and therefore, have had experience in seeing what level of accomplishment the students in a beginning class normally achieve.

Null Hypothesis 2
There will be no significant difference in posttest scores between the control group and experimental group in overall conducting skills.

Results
An analysis of variance of conducting ratings by group and time of testing was conducted to determine any significant difference in the groups on the posttest. The .05
level was established as the criterion level. An F value of 4.45 was required for rejecting the null hypothesis. Table 5 presents the obtained results.

TABLE 5
ANOVA ON SCORES FOR CONDUCTING

<table>
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<tr>
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<th>MS</th>
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<th>Prob.</th>
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<td>Total</td>
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</table>

Discussion

An F-value of 4.90 at the .04 level of significance was obtained, thus the null hypothesis was rejected. This therefore indicates that the experimental group performed significantly better than the control group on the post-test.
Null Hypothesis 3

Students who receive video tape feedback will not show any significant difference in any of the six selected skills from students who do not have video tape feedback.

Results

An analysis of variance of conducting ratings by group and time of testing was conducted for each of the six skills to determine any significant difference in the groups at posttest time.

The .05 level of significance was established as the criterion level. An $f$-value of 4.45 was required for rejecting the null hypothesis. Tables 6-11 present the obtained results on each of the skills selected.

Discussion

The ANOVA for the skills of preparatory beat, ictus, and phrase indication provided $f$-values of 3.95, 2.95, and 3.76 respectively, thus the null hypothesis for these three skills was retained. The ANOVA for the skills of posture and baton position, cueing, and fermata provided $f$-values of 4.82, 5.28 and 5.73, thus the null hypothesis for these particular skills was rejected.
### TABLE 6
ANOVA ON SCORES FOR POSTURE & BATON POSITION

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### TABLE 7

**ANOVA ON SCORES FOR PREPARATORY BEAT**

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ANOVA ON SCORES FOR ICTUS

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TABLE 10
ANOVA ON SCORES FOR PHRASE INDICATION

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<td>.38</td>
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TABLE 11
ANOVA ON SCORES FOR FERMATA

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</table>
The most significant difference recorded between the groups was with the skill of fermata, while the least amount of difference was found with the skill of ictus.

A final statistical analysis was made of the gain scores for each group. A comparison of the fundamental skills was made according to where the most and least amount of improvement took place for each group.

A t-test was performed to test for any significant gains between the pretest and posttest scores for the control group. Table 12 presents the obtained results.

A t-test was performed to test for any significant gains between the pretest and posttest scores for the experimental group. Table 13 presents the obtained results.

Discussion

For the control group, all fundamentals recorded significant gains beyond the .05 level. The most significance occurred for the skill of ictus and the least amount of significance was found for posture and baton position.

The experimental group showed significant gains in five of the six skills, ranging from .032 to .004. The most significant gain occurred for the skill of posture and baton position, and the least amount was found for the skill of fermata.
<table>
<thead>
<tr>
<th>Fundamental Skill</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degrees of Freedom</th>
<th>t Value</th>
<th>Probabilities</th>
</tr>
</thead>
<tbody>
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<td>Posture &amp; Baton Position</td>
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<td>13.6364</td>
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<tr>
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<td>Pre</td>
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<td>-3.55</td>
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<td>Pre</td>
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<td>12.0909</td>
<td>4.011</td>
<td>10</td>
<td>-5.29</td>
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<tr>
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<td>4.262</td>
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</tr>
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<td>Pre</td>
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<td>10.6364</td>
<td>3.355</td>
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<td>-3.50</td>
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<td>3.849</td>
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<td>Fermata</td>
<td>Pre</td>
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<td>10.8182</td>
<td>3.188</td>
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<td>-3.34</td>
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### TABLE 13
**PRE TO POST - EXPERIMENTAL GROUP GAIN SCORES**

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<th>Fundamental Skill</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Degrees of Freedom</th>
<th>t Value</th>
<th>Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posture &amp; Baton Position</td>
<td>Pre</td>
<td>8</td>
<td>16.250</td>
<td>4.683</td>
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<td></td>
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<tr>
<td></td>
<td>Post</td>
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<td>21.625</td>
<td>2.264</td>
<td>-4.15</td>
<td>.004</td>
</tr>
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<td>Preparatory Beat</td>
<td>Pre</td>
<td>8</td>
<td>13.750</td>
<td>6.364</td>
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<tr>
<td></td>
<td>Post</td>
<td>8</td>
<td>21.250</td>
<td>5.175</td>
<td>-3.13</td>
<td>.017</td>
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<tr>
<td>Ictus</td>
<td>Pre</td>
<td>8</td>
<td>14.625</td>
<td>7.009</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
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<td>22.125</td>
<td>4.155</td>
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<td>Pre</td>
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<td>5.617</td>
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<td>5.999</td>
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<td>.032</td>
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<td>Pre</td>
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<td>14.875</td>
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<td>19.375</td>
<td>5.290</td>
<td>-1.96</td>
<td>.091</td>
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</table>
A comparison of significance of gain scores (see Figure 4) between the groups showed little difference in the rankings of cueing, preparatory beat, phrasing, and fermata. However, a great deal of difference occurred for the skills of posture and baton position and ictus.

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
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</thead>
<tbody>
<tr>
<td>1. Posture &amp; Baton Position</td>
<td>1. Ictus</td>
</tr>
<tr>
<td>2. Cueing</td>
<td>2. Cueing</td>
</tr>
<tr>
<td>3. Preparatory Beat</td>
<td>3. Preparatory Beat</td>
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<td>4. Ictus</td>
<td>4. Phrasing</td>
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<tr>
<td>5. Phrasing</td>
<td>5. Fermata</td>
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</tbody>
</table>

Figure 4. Ranking of Gain Scores

The experimental group recorded the most gain for posture and baton position, whereas the control group recorded the least amount of gain in this category. The control group showed the most gain for the skill of ictus, whereas, for the experimental group, ictus ranked fourth.
CHAPTER V

SUMMARY AND CONCLUSIONS

Introduction

The use of the video tape recorder in the field of education has provided the educator with a device which promises to have potential for the training of students. This device, used in a lab or rehearsal environment, provides feedback possibilities not only for the student or students being taped, but also for the instructor who wishes to study and analyze the behaviors of students.

In the field of conducting, the use of the video tape recorder as a feedback tool has made possible the observation and analysis of all facets of conducting. The beginning conducting student therefore has the opportunity to analyze his basic conducting skills and can take steps toward the improvement of those skills.

Purpose of the Study

The purpose of this research study was to investigate the effects of teacher-student feedback through video tape upon the acquisition of selected basic conducting skills.
Subjects

The subjects for the study were those students enrolled in Music 261.11, beginning conducting, during Spring Quarter 1979 at The Ohio State University. A total of 19 students participated in the study. Eleven students were in the control group, and 8 students were in the experimental group. Twelve of 19 students reported that they had some previous conducting experience; however, none of the students reported any prior training.

Conducting Evaluation Form

The Conducting Evaluation Form (CEF) was designed to measure each fundamental conducting behavior that had been selected as well as secondary areas of consideration that were used in the evaluation process of the overall basic skills. The skills that were selected for the study and appear on the form were:

- Posture and Baton Position
- Preparatory Beat
- Ictus
- Phrase Indication
- Cueing
- Fermata

Directions for using the CEF were considered as the basis for rating the basic skills.

Pretest/Posttest Example

A brass quartet arrangement of "March On" from Aida was used to test the basic skills to be evaluated.
The arrangement was designed to contain passages where all the skills on the CEF could be evaluated. Content validity of the pretest/posttest example was established by a panel of three judges who agreed that a student's conducting of the musical example would demonstrate all of the six skills on the CEF.

At the beginning of the course, all students in both groups were video taped conducting the pretest/posttest example. At the conclusion of the course, all students were again video taped conducting the pretest/posttest example. A panel of three judges scored each student's performance on the pretest and posttest.

**Procedures**

All subjects in both groups were taught with what is considered to be the "traditional approach"; i.e., students receive feedback in the form of teacher criticism and class comments. The experimental procedure devised for the study included the use of the video tape recorder in providing additional feedback to the students in the experimental group.

On five days during the quarter at two week intervals, the subjects in the experimental group had their conducting recorded on video tape. The students then viewed their taped examples individually with the instructor. The instructor gave feedback to each student while watching the video tape example. The evaluation was
recorded on the CEF and given to the student at the conclusion of each feedback session.

Results

Null Hypothesis 1

There will be no significant difference in pretest results between the control group and experimental group in overall conducting skills.

T-values ranging from 1.00 to 1.85 were obtained with a t-value of 2.10 needed for rejecting the null hypothesis. This indicates that the groups were not significantly different at the beginning of the experiment.

Null Hypothesis 2

There will be no significant difference in posttest results between the control group and experimental group in overall conducting skills.

An analysis of variance was conducted with an F-value of 4.45 needed for rejecting the null hypothesis. An F-value of 4.90 at the .04 level of significance was obtained, thus, the null hypothesis was rejected. This indicates that the experimental group performed significantly better than the control group on the posttest.

Null Hypothesis 3

Students who receive video tape feedback will not show any significant difference in any of the six selected skills from students who do not have video tape feedback.
An analysis of variance was conducted with an $F$-value of 4.45 required for rejecting the null hypothesis. The ANOVA for the skills of preparatory beat, ictus, and phrase indication provided $F$-values of 3.95, 2.95, and 3.76 respectively; thus, the null hypothesis for these skills was retained. The ANOVA for the skills of posture and baton position, cueing, and fermata provided $F$-values of 4.82, 5.28, and 5.73; thus, the null hypothesis for these skills was rejected.

**Pearson Correlation Coefficient**

Significant agreement among the three judges on the pretest ranged from .623 to .774, and from .488 to .842 on the posttest.

**Analysis of Gain Scores**

$T$-tests were performed to test for any significant gains between the pretest and posttest scores for both groups. The control group recorded significant gains beyond the .05 level with the most significance occurring for the skill of ictus; the least amount of significance was found for posture and baton position. The experimental group recorded significant gains in five of the six skills. The most gain occurred for the skill of posture and baton position, and the least amount was found for the skill of fermata.
Conclusions

Based on the results of the study, the following conclusions are offered.

1. Video tape feedback was an effective technique in the teaching of basic conducting skills.

2. Video tape feedback was most effective in improving the skills of fermata, cueing, and posture and baton position. Video tape feedback was least effective for the skills of preparatory beat, phrase indication, and ictus.

3. The pretest/posttest example, as indicated by the significance of the judges' ratings, proved to be a reliable testing instrument.

4. Students receiving video tape feedback showed the greatest amount of improvement in the skill of posture and baton position. Students not receiving video tape feedback showed the greatest amount of improvement in the skill of ictus.

5. The use of the Conducting Evaluation Form proved it to be an effective instrument in providing feedback to subjects.

Implications

Based on the conclusions of this study, the following implications are offered for the teaching of beginning conducting.
1. This study indicates that video tape feedback should be included in the beginning conducting class.

2. Feedback techniques utilizing the video tape recorder may only be significantly effective for certain fundamental skills.

3. Success of the study depends upon the importance of having an effective evaluation process and a reliable pretest/posttest example.

Recommendations for Future Research

The following recommendations are suggested for future research.

1. A study should be devised to measure the effect of the frequency of feedback sessions.

2. A study should be devised to isolate the effectiveness of the video tape when feedback is given to the subject by the class, the instructor, or the individual.

3. A study should be devised to test the effectiveness of various evaluation forms when giving feedback.

4. A study should utilize video tape feedback techniques with students during practice sessions.
5. A study should be devised that measures the effectiveness of using video taped examples and the feedback techniques of this study with experienced conductors as models.
APPENDIX A

LETTER TO SUBJECTS IN BOTH GROUPS
Dear Student:

As a part of my dissertation work I shall be working with the members of this class as a group representing beginning conductors enrolled in Music 261.11, Spring Quarter.

It is my plan to investigate the effects of video tape feedback on the acquisition of selected basic conducting skills. There are two sections of this class offered this quarter. All members from both sections will be video taped near the beginning and end of the quarter. Only the members from one section will be video taped an additional five times at two week intervals. The students in this section will be given the opportunity to view the tapes, with your instructor providing comments and evaluation.

It is very important that you do not miss any of the taping or observation sessions. I am very pleased to have you be a part of this project. If you have any questions, please call me at 457-9152.

Thank you for your help.

Jeffrey C. Keller
APPENDIX B

INFORMATION SHEET
INFORMATION SHEET
Music 261.11

Name _____________________________ Year ____________________

Degree Program __________________________________________

Major Instrument ________________________________________

Conducting Experience (check one) _____ yes _____ no

If yes, check area of experience:
    _____ choral _____ instrumental

Specifically:
    _____ church _____ camp
    _____ school _____ community

Phone Number ___________________________
APPENDIX C

261.11 COURSE OUTLINE
BASIC CONDUCTING LABORATORY

Music 261.11 2 cr. hours

4 cl. hours

Course Description and Rationale

This course is designed as the initial experience for students in the basic fundamentals of conducting. The emphasis is upon the development of the physical coordination needed in conducting. The baton will be used to emphasize a clear ictus.

Objectives of the Course

The student will be expected to:

1. Hold the baton correctly and show good body posture for the attention position.

2. Develop technique with the baton, emphasizing the ictus, rebound, and clear preparatory beats (on any beat or portion thereof).

3. Maintain a steady beat at slow, moderate, and fast tempos.

4. Gradually change tempos -- slow to fast, fast to slow.

5. Conduct various meter patterns including 1 (waltz), 2, 3, 4, 5, and 6.

6. Communicate appropriate dynamic and style changes with the baton, including:

   a. dynamics -- soft-loud, crescendo–decrescendo
   b. style -- legato, tenuto, marcato, staccato, accents, syncopation, neutral or "dead" gestures.

7. Indicate cutoffs to individuals and groups on any beat (or portion) of the basic patterns (in context and at the end).

8. Stop and hold (fermata) on any beat of the basic patterns.
9. Continue following a fermata three ways --
   a. with caesura (complete stop, new prep. given)
   b. with brief break (cutoff is the prep.)
   c. with no break (carry over with no breath).

10. Provide entrance cues where needed and appropriate, employing eye contact, breath and/or left hand.

11. Demonstrate independent functions of the right and left hands simultaneously.

12. Demonstrate rise and fall of phrase lines and appropriate phrase endings.

13. Demonstrate adequate knowledge of the score.

14. Demonstrate an adequate level of musicality through a synthesis of the skills described above.

Evaluation

Evaluation of students will be based on the level of accomplishment of the above objectives as rated by the instructor.
APPENDIX D

CONDUCTING EVALUATION FORM

DIRECTIONS
Conducting Evaluation Form Directions

When using the CEF, consider the following as the basis for rating the basic skills.

Posture and Baton Position

1. Is the conductor standing equally on both feet?
2. Are the elbows away from the sides of the body?
3. Does the baton grip permit the stick to be a direct extension of the forearm?
4. Does the posture create a presence of leadership and control?

Preparatory Beats

1. Did the conductor have the attention of the group before giving the preparatory beat?
2. Was there eye contact with the group or individual being cued?
3. Is the tempo of the preparatory beat consistent with the tempo of the first measure?
4. Was the preparatory beat given in the right direction?
5. Does the preparatory beat indicate the style and dynamics of the beginning of the music?

Ictus

1. Is the point of each beat clearly defined?
2. Is the pattern consistent?
3. Is it clear what beat pattern is being used?
4. Does the ictus describe the style as dictated by the music?
Cueing

1. Was there eye contact with the group or individual being cued?
2. Was the cue given in the correct tempo?
3. Did the cue with the left hand affect the right hand?
4. Was the cue consistent with the style and dynamics of the piece?

Phrase Indications

1. Was the phrase release clearly shown?
2. Was there eye contact during the release and attack of the next phrase?

Fermatas

1. Is the fermata given with eye contact?
2. Is the release clear?
APPENDIX E

PRETEST/POSTTEST INSTRUCTIONS
Instructions for Student Conductors

Pre-Tape and Post-Tape

Today your conducting will be recorded on video tape. To make sure all students have the same opportunity to conduct, the procedures listed below will be followed.

1. The composition you are about to conduct is a brass quartet arrangement of the Triumphal March from "Aida".

2. You will have one minute to study the score. During that time examine such things as: tempo, how it starts, phrasing, places where cues may be needed, dynamics, style, and fermatas.

3. When your time is up prepare to start. Do what you must to start the group, keep it going until the end, and stop it.

4. If you are not sure of the proper technique of conducting this example, simply accomplish it the best way you know how.
APPENDIX F

PRETEST/POSTTEST EXAMPLE
Allegro $d=120$

MARCH ON!
APPENDIX G

PRETEST/POSTTEST RAW SCORES
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