6-2001

The Effect of Student Self-Evaluation Using Multimedia Computer Software to Improve Rhythm Performance Skills in Elementary Band

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THE EFFECT OF STUDENT SELF-EVALUATION USING MULTIMEDIA COMPUTER SOFTWARE TO IMPROVE RHYTHM PERFORMANCE SKILLS IN ELEMENTARY BAND

by

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B.S., St. Cloud State University, 1989

A Thesis

Submitted to the Graduate Faculty

of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Master of Music

St. Cloud, Minnesota

June, 2001

This thesis submitted by Kimberly K. Salo in partial fulfillment of the requirements for the Degree of Master of Music at St. Cloud State University is hereby approved by the final evaluation committee.

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In this study, I investigated using a tool to help my sixth grade band students improve their rhythm reading skills to achieve a content standard concerning reading musical notation. I chose self-evaluation for that tool, and the multimedia computer software Grady Profile to teach the students self-evaluation skills. I investigated the effect of the multimedia computer software as a tool for student self-evaluation on rhythm reading scores.

The students in the study were divided into an experimental group and a control. All students recorded a pretest and a posttest onto the computer using Grady Profile, and recorded an assigned selection at their weekly band lesson during the fourteen-week treatment period. Those students in the experimental group listened to their recording, self-evaluated using a checklist, received my evaluation, and participated in a discussion with me about their performance. The students in the control group listened to their recordings and received my verbal evaluation. Two elementary band instructors were selected to evaluate the recorded tests.

The judges reevaluated the test of the first three students after evaluating all tests to determine intra-reliability. The correlation coefficient for these scores was $r = .85$. I compared the scores of the two judges to determine inter-reliability. The correlation coefficient was $r = .95$ on the pretest. The correlation coefficient for the posttest was $r = .85$.

Because of the size of the sample, non-parametric tests were used to compare scores. The Wilcoxon Matched Pairs Test showed a significant difference in all students from pretest to posttest ($Z=3.5$, $p = .001$). The Kruskal-Wallace ANOVA by

ranks showed a significant difference between the scores of the control and experimental groups on the pretest ($H = 3.9$, $p = .047$). It did not show a significant difference in the scores between the two groups on the posttest ($H = 3.6$, $p = .054$).

Analysis of the scores determined that the use of the self-evaluation and the multimedia computer software did not have a statistically significant effect on the student's rhythm reading scores. While a statistical difference was not shown, anecdotal evidence suggested a positive effect in the students overall performance and understanding of musical performance. Analysis of attendance records demonstrated that use of the Grady Profile and self-evaluation had a significant positive effect on student lesson attendance ($X^2 = 8.6$, $p = .004$).

June, 2001

Approved by Research Committee:

Marcelyn Smale

Marcelyn Smale Chairperson

ACKNOWLEDGMENTS

I would like to dedicate this paper to all of my family and friends who have supported me while I have worked on this project. My children, Eli and Erin, for letting Mom have the computer to type when they really wanted to play computer games. My friends Anita McLaughlin and Mary Rehaume for listening to all of those recordings, and for all of the encouragement and advice. My advisor Marcelyn Smale for all of the help, and for having an incredible amount of patience with me. My sixth grade band students for all of their recording and hard work. Last, but not least, my husband Daniel for just putting up with me for the six months that I took me to write this paper.

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Chapter 1

INTRODUCTION

A current trend in education involves standards based education. In addition to the traditional paper and pencil test, emphasis has been placed on standards based performance tests. The question has been asked, "Can students use their knowledge in practical situations?" Music education has traditionally been performance based. However, current trends ask for teachers to translate their own personal observational assessment into an assessment that uses measurable rubrics or benchmarks based upon content standards. Music Educators National Conference has provided music educators with rubrics and benchmarks (Music Educators National Conference, 1994b) to measure the developmentally appropriate music content standards set for the students of this country in the National Standards for Arts Education (Music Educators National Conference, 1994a).

For students in grades five through eight there are nine content standards, which encompass performing, reading, listening, composing and relating music to other disciplines.

Students should achieve these content standards by grade eight. The Arts portion of the Minnesota Graduation Rule (Minnesota Department of Children, Families and Learning, 1998), which all Minnesota students are required to complete for graduation, is based upon the National Standards for Arts Education.

One Middle-level Content Standard for Art in the Minnesota Graduation Rule concerns artistic creativity and performance and reads, "Students shall demonstrate knowledge of at least three art forms through artistic process and presentation by...demonstrating fundamental skills" (Minnesota Department of Children, Families and Learning, 1998). The National Standards for Arts Education, on which this content standard is based, are more specific, detailing what students should be able to perform and at what level. The standard that I have chosen to concentrate on in this study, Content Standard 5 of the National Standards for Arts Education, concerns "reading and notating music" (Music Educators National Conference, 1994a, p.19). Part of the Achievement Standard reads, "Students...read whole, half, quarter, eighth, sixteenth, and dotted notes and rests in 2/4, 3/4, 4/4, 6/8, 3/8 and alla breve meter signatures" (Music Educators National Conference, 1994a, p.19). Though most band students in their first two years of instruction can read and understand note and rest values, most students are unable to perform rhythm patterns composed of the required note and rest values to the needed level of accuracy on their band instruments.

Background

Students in my classes work towards achieving these standards by performing musical selections in their small group band lessons and in large group rehearsals. My students begin band in grade five and, according to the school district defined time-line, students must achieve this standard by the end of grade six. As this Middle-Level content standard is intended to be achieved in eighth grade, two years later than my students must be assessed, my sixth grade students have difficulty achieving this standard. I wanted to investigate a way to help my students to not only read, but also perform rhythm patterns using the required note and rest values to achieve this standard.

With my beginning band students I spend a great deal of time counting and playing rhythm patterns as a group. The counting, usually paired with clapping, is an extension of the skills that the students have learned in classroom music during their primary grades. I have developed a routine that I follow with the students. We begin with a rhythm pattern, written either on the board or in their books, and the students count it out loud. Next they clap the rhythm while counting out loud. Finally, the students play the rhythm on a unison pitch.

My beginning band students seem to be wonderful followers, but struggle to both translate written rhythm patterns into the correct rhythm sounds when asked to play individually, and to evaluate whether or not they have played the rhythm patterns correctly. Two or three students,

usually those students with a piano background, serve as leaders for the entire group in playing rhythms during full band instruction. I have noticed that although the students can clap and count the rhythm, as soon as the aspect of playing their instrument is added, many of them are unable to perform the rhythm correctly.

Though the band students have acquired knowledge of counting and subdivision of the beat, they fail to apply it when performing on their instrument. They fail to transfer knowledge learned in one situation to another.

In this study, I investigated using a tool to help the students improve their rhythm reading skills to the point that they had adequate skills to achieve the content standard concerning reading musical notation. Teaching the students self-evaluation skills through the use of a multi-media computer program is the tool that I chose to aid in this task. It would seem that self-evaluation could be a useful tool in the transfer of the knowledge of counting and subdivision of the beat into performance on the student's instrument, as well as improving other musical and technical skills. To guide my research in this study I have asked three questions:

1. What is the effect of student self-evaluation on their performance of rhythms?
2. What effect does multimedia computer software have as a tool for self-evaluation on students' performance of rhythms?

3. Will the use of the computer during band lessons improve lesson attendance?

Chapter 2

REVIEW OF LITERATURE

For this study I reviewed literature that discussed views on assessment and self-evaluation. I also searched for literature concerning the use of computer-based multimedia and multimedia software in the music classroom. In this chapter I will discuss my findings in this reseach.

Assessment

While students' musical skills, such as rhythm reading, are usually measured by the teacher's observation (Junda, 1994), researchers have noted the difficulty in accurately measuring rhythmic performance because of the subjectivity of the teacher's observation. The reliability of teachers' assessments are frequently impaired because teachers commonly

> (a) are too lenient, (b) tend to be influenced by each other, c) are unable to cope with the complexity of the behaviors to be evaluated, (d) are influenced by the "halo" effect, and (e) tend to avoid the use of the extreme position on a rating scale (Schmalstieg, 1972).

Radocy (1995) views all teacher assessments as being inherently subjective because of the individuality of the feelings, consciousness and perceptions each of us has as

human beings. Development of a comprehensive computerized method for measuring rhythmic performance has been suggested to avoid this subjectivity (Grieshaber, 1993/1994).

Student Self-Evaluation

Self-evaluation has been suggested as a tool to help students transfer previously learned knowledge (Brown, 1990); transfer is an important ingredient in the skills needed to perform music (Pierce, 1992). Self-evaluation is also one way in which the Minnesota Graduation Rule promotes improved student performance. The Minnesota Graduation Rule requires self-evaluation as an integral part of the assessment of student performance. A tool is needed to help the students learn how to self-evaluate their performances.

Computer-based Multimedia

Computer-based multimedia is becoming an important and powerful instructional tool (Hardy and Jost, 1996). King (1989) reported that seventh grade students who used commercial computer-assisted instruction (CAI) software to study fundamentals of music theory as a supplement to traditional instruction in general music, band and orchestra classes showed higher levels of achievement than did control groups in each area. Music researchers have also studied the use of CAI software in developing skills that are then expected to transfer to other situations (Berz & Bowman, 1994).

There are many new approaches for using computers in evaluation. CAI software can be employed to record student behaviors, as well as to collect and analyze data. Students may learn significantly from using CAI software, but instructional organization is not inherently present in the software. In many CAI programs either the learning is strictly discovery based, or the student must receive guidance from the teacher on the skills to be learned from the software (Berz & Bowman, 1994). Also, computerized measurement in CAI programs does not allow the student to learn from the evaluation process in any way, as they are simply informed of the correctness of their responses (Grieshaber, 1993/1994).

Studies have researched CAI in such wide ranging uses as the effect of an interactive audio CD-ROM on the musical achievement of students with various learning styles (Fortney, 1995), to using CAI a tool for drill and practice (Higgens, 1995; McArthur, 1992). Because of rapid changes in technology, many researchers are opting to participate in the development of new technologies rather than conducting research on the effects of CAI on student performance (Higgens, 1995).

Multimedia Software

Multimedia software allows the user to manipulate sound, graphics, video and text files in a multitude of ways. Multimedia presentations have been shown to be effective with a generation of students who have grown up surrounded by

highly visual media such as television and video games (Doucette, 1994). Research by Orman (1998), using interactive multimedia computer software to instruct beginning saxophonists in saxophone pedagogy, indicates that students using the computer are more successful in applying their acquired knowledge than students who did not use the computer.

Although few researchers have investigated multimedia as tool for assessment, they have found that multimedia was a very valuable tool in assessing music performance data. Peters (1992) developed sophisticated hardware that allowed students to sing into a micorphone interfaced with a DOS-based computer. The student performances were evaluated by means of the computer and appropriate software. Berz and Bowman (1994) describe a study by Venn using Hypercard to create a test that assessed melody, rhythm, texture, and tonality among students in grades four through eleven.

Summary

A review of the literature shows that researchers view teacher' observational assessments to be inherently subjective. While the nature of computerized assessment is not subjective, neither does it allow students to learn from their mistakes. Self-evaluation has been suggested as a tool for student learning. While computers and computer-assisted instruction software have shown to be useful in the music classroom, few researchers have investigated the possibility

of using multimedia as a tool to teach self-evaluation skills to improve student performance.

Given my desire to improve student performance of rhythm patterns to achieve the Middle Level Content Standard, I chose to engage my students in this study to determine whether computerized multi-media would be a useful tool. I wanted to find a tool that would enable my students to transfer previously learned knowledge about counting and the subdivision of the beat into performance on their band instruments.

Purpose

The purpose of this study was to examine the effect of self-evaluation, using multimedia computer software, on the rhythm performance skills of my sixth grade band students. I compared the achievement of those students who recorded, then heard and self-evaluated their own performance on the computer to those students who received only my verbal evaluation after listening to their recordings. A secondary purpose was to see if use of the computer during their band lessons had an effect on student attendance at band lessons.

Chapter 3

METHOD

In this study I investigated the effect of student self-evaluation on their performance of rhythms. A multi-media computer program is the tool that I chose to aid in this task of teaching the students self-evaluation skills. I also wanted to see if use of the computer during band lessons improved lesson attendance.

In this chapter I will discuss the participants of this study, the computer program "Grady Profile" (Aurbach, 1991) and student training in the use of Grady Profile. I will also describe the treatment period and the procedure carried out during the study. Finally, I will discuss the judges and their evaluation responsibilities.

The School

The target school where this study took place is in a consolidated school district of two rural communities in Central Minnesota. The consolidation of the school district occurred thirty years ago. Though this is a single school district, there is a definite division of social groups

between students from each community. The major industry in these two communities is farming, though the students in the northwest corner of the school district live on a chain of lakes with a booming resort industry. The student population of the entire school district, preschool through grade 12, is 851 students. The school district has three buildings: two elementary schools, one in each community, and a junior/senior high school.

The target school in this study was the larger elementary school; the second elementary school houses only kindergarten and preschool classes. The staff in this building consists of one principal, one secretary, thirty-six full and part-time teachers and fourteen teaching assistants. Twelve of these teachers, including 2.9 music teachers, are shared with the other two buildings. This elementary school provides instruction to 382 students in kindergarten through grade six. The ethnic background of the students in this building is 98.69% Caucasian, .52% African-American, and .79% Asian-American. Ninety-eight, or 25.65%, of the students are enrolled in the free lunch program, and sixty, or 15.7%, are enrolled in the reduced lunch program.

The students receive general music instruction for thirty minutes, two or three times per week from kindergarten through grade four. In grade five the students must make a choice between joining band or remaining in general music. The students who join band no longer receive general music instruction; band is their sole music class. Like general music, band is curricular and is graded. Band students at

the fifth and sixth grade level also have the opportunity to participate in Summer Marching Band, and all fifth and sixth grade students have the opportunity to join choir. Because marching band is extra-curricular and choir is a co-curricular offering, the students do not receive a grade for these activities, only a record of participation.

Grady Profile

The multimedia computer software Grady Profile (Aurbach, 1991) is the tool that I have chosen to aid in teaching students to self-evaluate in order to transfer their knowledge of rhythm counting into performance. "Grady Profile" is a HyperCard-based program[1] designed to track and record a student's work in an electronic portfolio. It is capable of recording a student's performance directly through a computer's built-in or external microphone. Researchers have noted that HyperCard-based software is "particularly useful for music instruction" (Mobley, 1996, p. 23) because it allows the user or programmer to incorporate sound very easily. Sound, text, graphics and video can all be stored on the same "card". Klinger (1993) indicates that a single computer should be sufficient for implementing this technology in a music classroom since only one student uses the computer at a time.

Grady Profile allows the user to record up to two minutes of sound. The student's performance can be immediately played back for purposes of student self-evaluation and evaluation by the instructor, making this

medium much more efficient than the traditional audiotape and tape recorder. Also, this reduces storage space for the performances and evaluations from multiple cassettes to computer disk space.

An evaluation checklist can be placed on the card in which the student records the performance. This checklist is entirely instructor generated. It can be as concept specific as the teacher wishes it to be. The instructor can generate many different checklists to choose from, but only one can be applied to each specific performance as the performance and checklist are recorded onto the same exhibit card. Both the student and the instructor may evaluate the performance on this checklist.

While this checklist is meant to be a tool for evaluation, the checklist itself can also become a tool for instruction. As the student and instructor each complete the checklist, they convey to each other their opinions and understanding of how well the performance has met expectations. The resultant discussion of these two evaluations leads the student to understand which aspects of their performance have met the instructor's expectations and how to improve those aspects that do not. Students can then transfer their understanding of musical concepts, such as rhythm, into performance on their instruments.

Although application programs, such as Grady Profile, can be used with great success in the classroom, its design is not intended for teaching (Berz & Bowman, 1994). Grady Profile is not meant to be a basis for instrumental music

instruction, but it can be used as a tool to ease the task of teaching self-evaluation.

Training in Software Use

For the past three years, fifth grade band curriculum for my band program has included instruction in the use of Grady Profile. This involves instruction in the use of the self-evaluation checklist and in my expectations concerning their performance. I begin using Grady Profile with my students soon after they have begun to study their instruments. A recording made during their third or fourth band lesson serves to introduce the students to the concept of making a recording on the computer. Two or three more recordings are made during the first half of the school year to ease the student's anxieties about recording individually.

For the third quarter of the school year, I record students' solo performances onto the computer weekly during their band lessons. Because the students are generally in lesson groups of two or three students, not all, but most, of the students record every week. All of the students in the lesson group are included in the discussion of each performance, whether it is theirs or not. I complete the checklist, sharing my reasons for each evaluation on the checklist. This period of time is used to introduce the checklist to the students and to acquaint them with my expectations of their performance.

The students continue to make recordings using Grady Profile during the fourth quarter of the school year, but now

the students are required to complete the checklist before I give my evaluation. By the end of their first year of band instruction the students are acquainted with my expectations of their performance. They are also accustomed to recording onto the computer and filling out a computerized checklist as a form of self-evaluation.

Participants

The population of this study was the students of the sixth grade band in the target school, twenty-nine students. One more student had intended to participate in the study but moved out of the school district before the treatment period began. The sixth grade band students participate in a thirty minute ensemble rehearsal every Tuesday, Thursday and alternate Fridays. The students also receive an individual or small group lesson for twenty minutes once a week; these are scheduled on Tuesdays and Thursdays. Students are divided according to their instrument, so that students in the same lesson group study either the same instrument or very closely related instruments (ie., clarinet and bass clarinet). Then students are further divided into groups of one, two or three students of similar ability, with the majority of students in groups of two. All the students in this study began band instruction in the fifth grade; thus all of the students had been in my class for one year.

Parental permission was requested from all of the students in the sixth grade band (see Appendix A). The letter that accompanied the permission form described the

intent of the study and what would be required of the students. The parents were informed that their children would remain anonymous in the study, as numbers and not their names would identify them. As sixth grade students are old enough to decide for themselves whether they wished to be a part of this study, each student also received a student permission form (see Appendix B).

Of the twenty-nine students in the second year band, seventeen returned permission slips to participate in the study. Those seventeen names were put into a hat and fourteen drawn to make up the experimental group. The experimental group consisted of fourteen students, eleven girls and three boys. The control group consisted of fifteen students, eleven girls and four boys.

Six of the twenty-nine students switched instruments at the beginning of the school year: two trumpet players switched to baritone, one trombone player switched to trumpet, one flute player and one baritone player switched to percussion. Also, one alto saxophone player had switched to trumpet over the summer and had taken private lessons from another instructor. These students received extra band lessons during the beginning of the school year in which no recordings on Grady Profile were made. As all of the students were acquainted with recording on the computer using Grady Profile and had been trained in the use the evaluation checklist during their first year of instruction, I chose to include these students in the study. The technical aspects of one instrument tend to transfer easily to another

instrument, i.e., the brass players had to learn to play on a different size mouthpiece, but the concept of tone production is the same. Thus I did not feel that I was forcing the students to deal with two new concepts at the same time: tone production and evaluation. Of these five students, only the two new percussionists were included in the experimental group. As both of these students had been studying piano for at least two years, I did not foresee the aspect of learning percussion technique as interfering with the recording and evaluation process.

Because of instrumentation and constraints in scheduling I was unable to completely separate the control group and experimental groups when placing students into lesson groups. Thus, in the experimental group five students had their band lesson alone, four students were teamed with another member of the experimental group, and five students shared their band lesson time with a member of the control group. In the control group two students had their band lesson alone, eight students were teamed with another member of the control group, and five students shared their band lesson with a member of the experimental group.

Pretest and Posttest

All of the students took a pretest and a posttest on selected rhythmic patterns. The patterns were chosen from typical rhythms in beginning band literature, the *Essential Elements 2000* (1999) band method series, *The Watkins-Farnum Performance Scale for Band Instruments* (1962) and from the

Fussell *Exercises for Ensemble* (1939). The tests were actually two versions of the same test, with the lines on test B in a different order than test A. Fourteen students took test A as a pretest, and fifteen students took test B as a pretest.

I instructed the students to play the tests on any note of their chosing, so that the students could play on a note that was comfortably within their ability range. The students were told not to deliberately change pitch while recording each line, but could play each line on a different pitch if they so chose. The students were instructed to continue playing, even if they knew they had made a mistake. I counted off "one, two, three and play" to each student so that the students would know when the computer would begin recording.

Because the pretests were recorded very early in the school year and the students had not yet returned their permission slips, the students had not been divided into the experimental and control groups. After the students had been divided into groups it was determined that five students in the experimental group had taken test A as the pretest, and nine had taken test B. In the control group, nine had taken test A and six had taken Test B as a pretest. In every case, students took one version for pretest and the other for posttest.

Each test consisted of twelve lines of non-pitched, rhythmic notation in common time, each eight measures in length (thirty-two beats) (see Appendix C). Only measures in

common time were used so that meter would not be a factor and so that the scoring units would be equal. The first two lines of each test were written at a primary level of difficulty to lower student anxiety level, thus they were not judged. The students each played, on a pitch of their own choosing, and recorded both the pretest and posttest onto Grady Profile.

Because of a transcription error, one line was omitted from test B. This line and the corresponding line in the A version of the test were consequently not included in test results.

Recorded Selections

I chose specific selections from each page in the students' method books, either *Essential Elements 2000 Book 1* or *Essential Elements 2000 Book 2* (Rhodes, Bierschenk, & Lautzenheiser, 1999), before the treatment period so that a uniformity of recordings could be maintained. The selections chosen were of sufficient difficulty to merit discussion about the performance, but not so difficult that a student would struggle to play the selection. These selections were generally more difficult than the lines of the pretest and posttest that were evaluated by the judges, as the assigned selections incorporated pitch, dynamics and articulation markings along with rhythm. At the previous week's lesson, the students were made aware of which selection from their assignment they would record. Because the treatment period

ended just as the students performed in their winter concert, some of the later recordings were of the concert selections.

Checklist

The checklist that I entered is taken from the Task Checklist of the Graduation Standard Assessment Package that I have written for sixth grade band.

- Pitches are played accurately
- Rhythm is played accurately
- Tempo is consistently maintained
- Articulations are played accurately
- Produces a proper tone
- Dynamics are performed accurately
- Analyzes music accurately (Salo, 1998)(see Appendix D)

This checklist was chosen, rather than creating a new checklist specifically for this study, so that the students could transfer the self-evaluation skills learned in this study to the Middle Level Arts Graduation Standard that they completed later in the school year.

Schedule of the Study

The implementation of this study was scheduled over a fourteen-week period, with a twelve-week treatment period, and a pretest in week one and a posttest in week fourteen. Twelve weeks was chosen as an appropriate length of time to make sure all of the students received ten band lessons during the treatment period. As some of the students have their band lessons on Thursdays, twelve weeks were needed because of two scheduled vacations on Thursdays during the

treatment period. The pretests were recorded during each student's first lesson of the school year. This first lesson took place during the second week of school in the fall. During the treatment period, each of the twenty-nine students recorded a specific selection from their lesson assignment onto the computer in each of the twelve intervening weeks until they reached a total of ten recordings. The study ended before the mid-winter vacation.

Procedure

All recordings were made at the beginning of the students' band lessons. The students were given a chance to warm-up their instruments and play through the assigned selection before they actually recorded onto the computer. The entire sequence of warming up, recording, listening and evaluating generally took between seven and ten minutes during each band lesson. In the case of the students in the five mixed lesson groups, the student in the control group always recorded first and received only my verbal response. My response was always based on the checklist, which appeared on the computer screen whenever the students listened to their recordings.

At the beginning of their lesson, the students in the experimental group recorded, listened to the recording, and then completed the self-evaluation checklist on the computer. After they had completed this, I filled out the teacher evaluation on the computer. Then the student and I would discuss the performance. Unlike my procedure with the

control group, and to a much greater extent than I had done in fifth grade band, I encouraged the students to find their errors independently and to suggest possible improvements.

Rhythm would be the main topic of discussion, but other aspects of performance, i.e. correct pitches, dynamics or articulation markings, where discussed too. Often the discussion would include the student or myself performing parts of the selection again to better the student's understanding of mistakes made. I instigated and led the discussions at the beginning of the treatment period, but as the study progressed the discussions became more student led. This part of the lesson also became more extensive as the treatment period progressed.

The students in the control group recorded, listened to their recording and received only my verbal evaluation. Though the checklist was visible on the computer screen, neither the students or I actually filled out the checklist. It was intended that these students would receive only my verbal feedback. I did not deliberately draw the students in the control group into a discussion about the performance.

I kept an observational journal on my computer throughout the treatment period and for the following five months. I entered anecdotes into the journal concerning students' reactions to the treatment, my observations of the students' behaviors, and sometimes direct quotes from the students. These entries would be made as the students were putting their instruments away at the end of the lesson, or at the end of the school day, as time permitted.

I had two ten minute make-up lesson times, on both Tuesday and Thursday, for any students who missed, for whatever reason, their band lesson that week. During this make-up time, the student would only make and listen to their recording, and engage in the appropriate evaluation process. Time constraints did not allow for me to listen to the student's entire lesson as well as doing the recording process in these make-up lessons.

Judges

Following the fourteen-week treatment period, two independent judges, elementary band directors from the Twin Cities metropolitan area, evaluated all of the tests. Using recordings of the first two lines of the test, which were not intended to be evaluated and included in the score, I trained the judges in the evaluation process. The judges were asked to evaluate the student recordings just as they would evaluate their own students. I monitored the evaluation of the tests and operated the computer so that the judges could not see the computer screen. In this way the judges were unable to see any information which would tell them whether the recordings that they were listening to were pretests or posttests.

For each line recorded, the judges were asked to evaluate two elements, rhythm and tempo, in each measure. The four-beat measure was the scoring unit and counted wrong if any rhythmic errors occurred within the measure. Only one error per measure was scored, thus the measure was marked

wrong whether there were six errors or only one error. If any note within the measure was not given its correct value, the measure was marked wrong. If there was an obvious increase or decrease in tempo, twelve or more beats per minute, the measure was marked wrong.

The judges were to evaluate the recordings and mark errors. I tabulated all the scores later. All measures marked wrong were totaled and subtracted from a total possible score of seventy-two.

The judges listened to and evaluated all of test A for Student 01, then all of test A for Student 02, and so on, until all of the recordings of test A had been assessed. After evaluating all of test A, the judges reevaluated the tests for the first three students to determine intra-reliability. The judges then repeated the process for test B. Because of time constraints, the judging of the tests occurred on a single day and took approximately ten hours. The judges listened to the tests for forty-five to sixty minutes and then took a fifteen-minute break, as well as thirty-minute lunch and supper breaks.

Chapter 4

RESULTS AND DISCUSSION

The intent of this study was to investigate the effect of self-evaluation on rhythm reading scores. Furthermore, what was the effect of the use of multimedia computer software as a tool for self-evaluation on rhythm reading scores? A secondary purpose was to see if the use of the computer during band lessons improved attendance.

Reliability

I compared the scores given by each judge for the first three students at the beginning of the evaluation time with those given after all students had been evaluated. The correlation coefficient for the scores is $r = .85$.

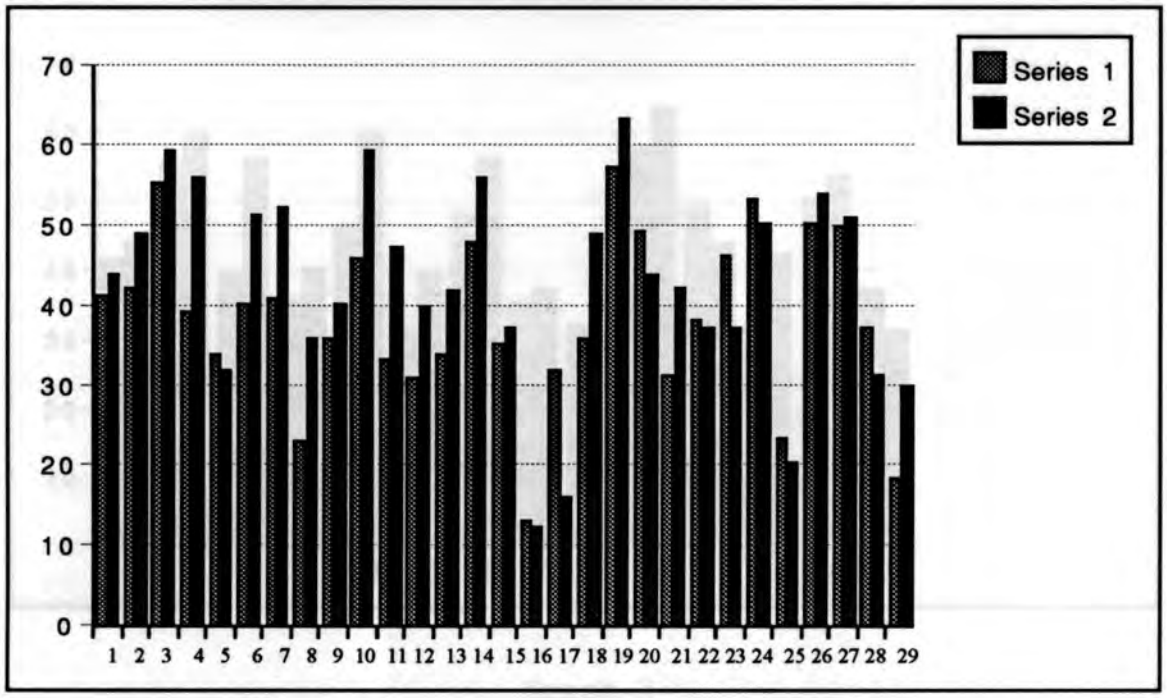
I compared the scores of the two judges to determine inter-reliability. The correlation coefficient was $r = .95$ on the pretest. The judges were not as similar with their scores on the posttests. The correlation coefficient for the posttest scores is $r = .85$.

Though the majority of the scores were very similar between both judges on the posttest, ranging from a difference of 0 to 4 points between judges, the scores from three students differed by 14 or more points.

Of these three students, students 15 and 20 were in the experimental group, and student 23 was from the control group. Scores from Judge #1 show that student 15 had a decrease in his score of 5 points between his pretest and posttest, but scores from Judge #2 show that the student had an increase of 9 points from the pretest to the posttest. This was a difference of 14 points between judges. Concerning student 20, Judge #1 scored the student 21 points lower than did Judge #2. Both judges scored student 23 lower on the posttest than the pretest, but Judge #2 scored the student 14 points lower.

Test Results

As there was a set of student scores, pretests and posttest, for each of the two judges evaluating the tests, I averaged the scores of the two judges to leave only two sets of scores for comparison. The pretest scores for all students produced a mean of 38.2 with a standard deviation of 10.8. The posttest scores for all students produced a mean of 42.9 with a standard deviation of 12.7 (see Graph 1). In all cases, Series 1 on the graph is the student's pretest score and series 2 is the student's posttest score.

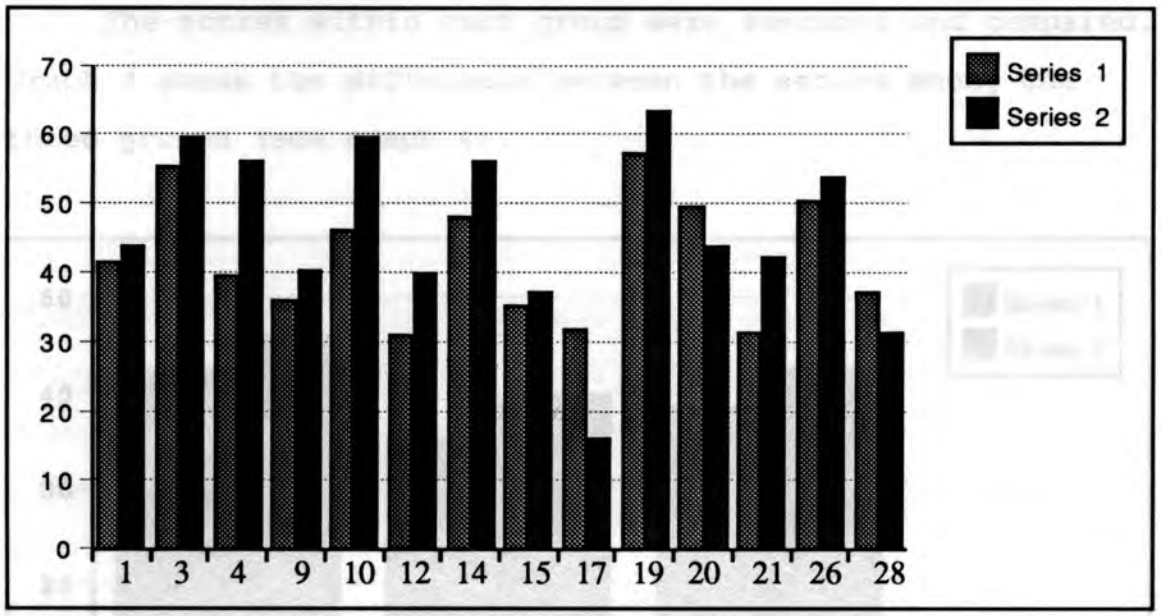


Graph 1

Scores of All Students

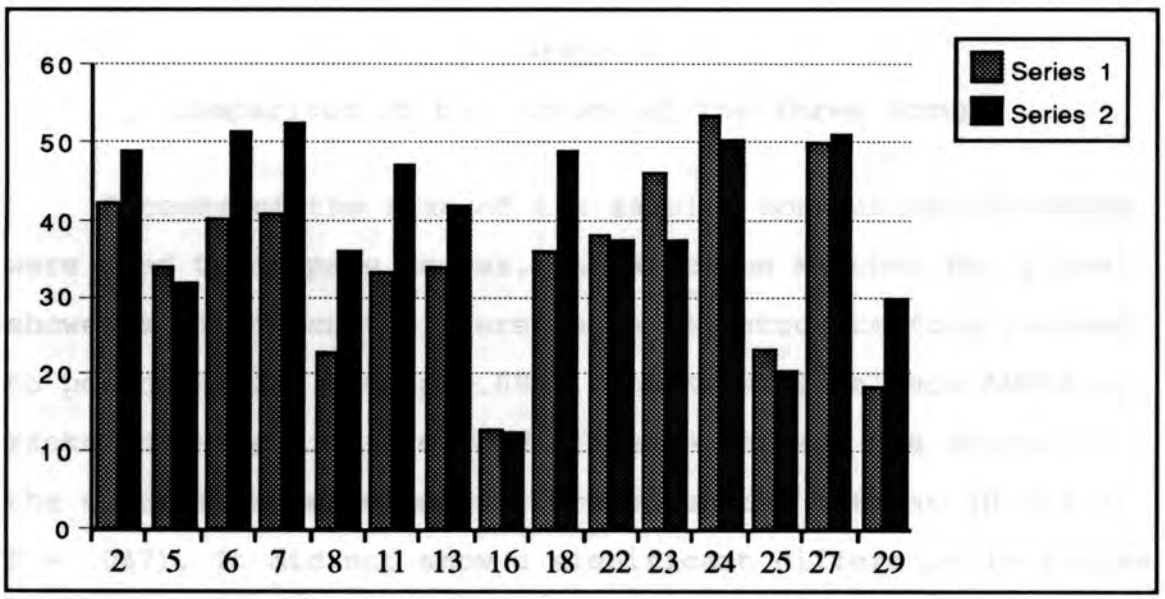
The pretest scores for the experimental group produced a mean of 42.2 with a standard deviation 8.9. The posttest scores for the same group produced a mean of 45.7 with a standard deviation of 13.6 (see Graph 2).

The pretest scores for the control group produces a mean of 35.2 with a standard deviation of 11.4. The control group's posttest scores produce a mean of 39.9 with a standard deviation of 12.2 (see graph 3).



Graph 2

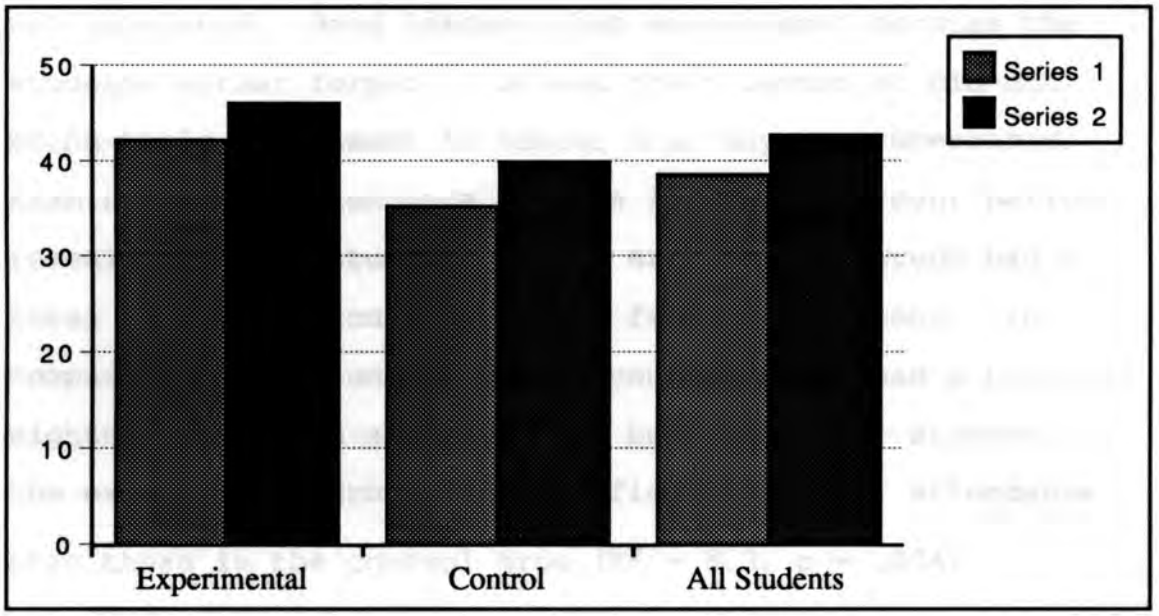
Scores of Experimental Group



Graph 3

Scores of Control Group

The scores within each group were averaged and compared. Graph 4 shows the difference between the scores among the three groups (see graph 4).



Graph 4

Comparison of the Scores of the Three Groups

Because of the size of the sample, non-parametric tests were used to compare scores. The Wilcoxon Matched Pairs Test showed a significant difference in all students from pretest to posttest (Z = 3.5, p =.001). The Kruskal-Wallace ANOVA by ranks showed a significant difference between the scores of the control and experimental groups on the pretest (H = 3.9, P = .047). It did not show a significant difference in scores between the two groups on the posttest (H = 3.6, p = .054).

Lesson Attendance

A secondary purpose of the study was to see if the use of the computer during band lessons would improve lesson attendance. Excused absences for illness or field trips were not tabulated. Band lessons that were missed because the students either forgot to attend their lesson or did not bring their instrument to school that day were unexcused. Examination of attendance records for the treatment period reveals that the students of the experimental group had a total of four unexcused absences from band lessons. In comparison, the students of the control group had a total of eighteen unexcused absences from band lessons. Students in the experimental group had significantly better attendance than those in the control grou ($X^2 = 8.3$, $p = .004$)

Discussion

Concerning the first two questions posed in this study, analysis of the students' scores shows that using the computer software as a tool for self-evaluation did not make a significant difference in the students' rhythm reading scores. However, anecdotal evidence taken from my observation journal suggested that the self-evaluation and the computer software appeared to make a practical difference in the students' overall performance and understanding of musical performance. This will be discussed next.

Student Progress

On the whole, the students in the experimental group

progressed further in their lesson books and in their overall musicianship than the control group. This is not to say that the students in the control group did not progress during the treatment period, rather they progressed at the rate that I would normally expect of sixth grade students. By the end of the treatment period in December, the control group students had reached the level of musical and technical development that sixth grade band students in my program usually reach by December of their second year of study. The experimental group had progressed further than expected though, four pages further in the book on the average.

In the nine years that I have used the *Essential Elements* (Rhodes, Bierschenk, & Lautzenheiser, 1991) band method books, I have had only two students complete Book 2 and begin Book 3. None of my students have completed Book 2 since the introduction of the Middle Level Arts Graduation Standard into 6th Grade Band three years ago. This year six students completed Book 2 as well as completing the Graduation Standard. Four of these students were in the experimental group. Though the other two students were in the control group, they shared a band lesson with students in the experimental group.

The aspect of this study that I have been most pleased with has been the fact that for the students in the experimental group their progress continuied, seemingly without me. This is not to say that I stopped teaching these students, but I became more of an educational guide than a band director in their lessons. The students have became

actively involved in their musical education rather than passively absorbing it. The students make corrections and connections themselves, rather than waiting for me to do it for them.

The students in the experimental group also began to foresee problems that they might encounter in the music and to look for ways to solve the problems beforehand. For example, when the students returned from Christmas vacation, following the treatment period, I handed out a new piece of music that incorporated the Irish folk tune "Wearing of the Green." Students 14 and 21, two clarinetists from the experimental group, noticed that this had been a selection that they had recorded in a lesson earlier in the school year and remembered the rhythmic problems they encountered playing this melody. The students clapped and counted the rhythm together, and noted the pitch change that they would have to make on the "and of two." Not surprisingly, when the students sight read the music - played it for the first time - I noticed that these two clarinetists not only played the rhythm correctly, they also made the pitch change in the correct place.

Although I was initially concerned that emphasis placed on recording and evaluation involved in this study might not be appropriate for the level of development of all of my students, I was very pleased with the ultimate effect on the students. Not only was it definitely appropriate, but I observed this group of sixth grade students becoming more

musically and technically proficient than any group of sixth grade students that I have taught in the past.

As the students moved through the treatment period, I began to see a maturity developing in the approach to playing in the experimental group's students that I did not see in the control group's. In band rehearsal the students in the control group seemed to just follow along with the students in the experimental group, while the experimental group students have really become leaders in band rehearsal.

Though all the students seemed to tire of the weekly recording process by the end of the treatment period, the students in the experimental group still seemed to really enjoy the evaluation and discussion portion of the study right up to the conclusion of the treatment period. The students in lesson groups with at least one student in the experimental group continued to discuss mistakes that they or their partner had made while playing, whether it was a selection that they had recorded or not.

I noticed that the students from lesson groups that included at least one student from the experimental group, took more responsibility for the musicality in their overall performance, not just the aspect of rhythm that was the focus of the study. Playing correct pitches, dynamic contrast and correctly interpreting articulation markings joined rhythm as the focus of the discussions that the students and I had in band lessons following the conclusion of the treatment period.

Students 11 and 12

Students 11 and 12, two trumpet players, were one of the shared lesson groups - student 11 was part of the control group and student 12 was part of the experimental group. Though most of the students in shared lesson groups seemed to completely ignore the discussions that I had with their partners, student 11 paid close attention.

Originally, I had hoped that student 11 would be part of the experimental group because I knew that this would be a wonderful opportunity for her to excel. Student 11 never turned in a parental permission slip. I struggled with the possibility of separating these two students into separate lesson groups, but scheduling problems did not allow this.

Student 11 would record and listen first every week, and only received my evaluation, while student 12 would record, listen, receive my evaluation, self-evaluate and discuss the recording with me. At first student 11, like the other control group students in mixed band lesson groups, completely ignored student 12 and me as we discussed the performance. This soon changed. By week four student 11 had begun self-evaluating before I could replay the recording and give my evaluation. Student 11 also tried to draw me into a discussion about the performance, as I did with student 12. When I would not discuss the performance with student 11, student 12 would offer criticism or encouragement to student 11. Though I would intervene, these two students would try to continue. By the end of the treatment period, both students in this lesson group were commenting on their own

and each other's performance throughout their entire lesson time, not only on their recorded performances. Although I discouraged this behavior, explaining that I did not want them to effect each other's performance during my study, it was hard to contain a smile each time the students did this.

During one post-treatment period band lesson with students 11 and 12, the students actually got into an argument over how short the staccato articulations in that particular selection should be played. To settle the argument student 12 suggested that they each record the selection to determine whose interpretation sounded better. The students came to the conclusion that staccatos sounded more musical when they were simply separated (student 12's interpretation) rather than making a short "dut" sound. The exciting thing about this whole scenario was the fact that the students used their self-evaluation skills to reach their own decision on the appropriateness of the articulation without ever asking my opinion. I just ran the computer while trying, unsuccessfully, to suppress a grin.

Although it was pleasing as an educator to observe this interaction between students, as a researcher I know that it affected student 11's final score. Even though the other four students in shared lesson groups did not show such a dramatic effect, the process may have affected these students in some way.

Students 19 and 26

Two alto saxophone players, both in the experimental group, thrived on the power that the self-evaluation skills learned in this study gave them. After the second week of the treatment period, these boys would barely have their mouthpieces out of their mouths and *they* were initiating the evaluation and discussion. The two students would discuss their performances between themselves and check with me to see if *I* agreed with *them*. These conversations would continue, as the students would point out to each other the mistakes that they or their partner had made, and how they could have improved their performances. These two students, in particular, progressed much faster than I would have ever predicted and completed the second book five weeks before the end of the school year.

Student 28

Many more students also became more aware of whether they had played a selection correctly or incorrectly, whereas they were previously ignorant, or uncaring, of any mistakes that had occurred. One example is student 28, a flute player with limited ability and, before this study, effort. Though this student continued to make many mistakes and struggled to keep up with the better flute players in the section, she began recognizing when she was making a mistake. Before this study, she was seemingly oblivious to any errors in her performance; during full band rehearsal she would continue playing with no apparent knowledge of where the rest

of the band was in the music. While this student continued to make numerous errors, she was aware of them and stopped playing during lessons to attempt to correct the errors. This was a giant step towards understanding instrumental music performance for this student. Also, even though this student continued to fall behind while playing in full band rehearsals, I noticed that she would stop playing, try to figure out where the band was in the music, and attempt to rejoin the group.

This student had even begun to correct student 05, the flutist who shared a band lesson with student 28. Student 05 was in the control group and did not seem to pay any attention to what student 28 was doing during the self-evaluation process. Student 28 began pointing out errors in student 05's performance, particularly rhythm and pitch errors, and suggesting ways for her to fix them.

Student 17

Though I found this change in my teaching methods to be very advantageous to the majority of the students, I determined that this type of instruction was not a good approach for some students, particularly student 17. As a fifth grade student, student 17 was a very promising clarinet player. During her first year of study I had switched her to bass clarinet, partly because of her ability and partly because her family could no longer afford to rent a soprano clarinet. The school owns the bass clarinet and there is no rental fee.

Two weeks into the treatment period student 17's parents filed for divorce and all areas of her schoolwork began to suffer. Student 17's confidence level dropped dramatically as well. When asked to play a selection to record onto the computer, she would sometimes break down into tears. We would talk and I would encourage her to play, and the recording would eventually get done, though both she and I would evaluate most of the items on the checklist as "-" for not meeting expectations. This was to become the routine for most of the treatment period. During one discussion, the student asked to stop making recordings because "we both know that it's going to be awful anyway." Not surprisingly, the student did far worse on the posttest than on the pretest. Both judges evaluated student 17's posttest score sixteen points lower than her pretest score.

Following the treatment period, when we had stopped making recordings onto the computer at every band lesson, student 17 showed more interest in and effort for the lessons assigned. Even the few recordings made on the computer in the weeks following the treatment period seemed less frustrating for her. In retrospect, I was probably putting pressure on the student, whose personal life was already in turmoil, by making her record onto the computer at every band lesson when she was obviously not in a mental state to be able to deal with the pressure.

Student 16

Student 16 is a student who is in special education

classes for every subject except band and physical education. She made limited, but steady, progress. Her desire to be part of the group and her dedication to band was strong, but her ability to perform was not at the same level as her peers. This shows in her extremely low pretest and posttest scores.

Student Attendance

Concerning the third question posed in this study, the improved responsibility that I noted in the students extended beyond their musical performance into their attendance. The students in the experimental group had much better attendance at band lessons than did the students in the control group. Other than absences from school, only one student in the experimental group forgot to attend her band lesson more than once during the treatment period. That student's band lesson was scheduled at a difficult time for her to remember - in the middle of math class. In fact, only three students in the experimental group had unexcused absences from their band lessons during the treatment period. In comparison, eight members of the control group had one or more unexcused absences from their band lessons during the same time period.

The experimental group students were also much more responsible about remembering to bring their instruments to school on band days. Having band every other day and alternate Fridays has always been confusing for the students during their first year of band instruction, and, in the past, that confusion has continued well into their second

year of instruction in sixth grade. Analysis of attendance records for band rehearsals during the treatment period show that only two students in the experimental group forgot their instruments more than once, while eight members of the control group forgot their instruments more than once.

The Grady Profile

I noted an interesting response from the students following the treatment period. Many of the experimental group students were excited about recording on to the computer during their lessons and were disappointed when they were unable to. The size of the students' computer files containing their recordings had become so large that following the treatment period I was forced to store them in my staff folder on the school district's central computer server rather than in my desktop computer. Because of a technical problem, there were a number of days in which I could not access my folder on the district server to record the students' performances. Some of the students in the experimental group were upset when they could not record; their disappointment showed in their slumped shoulders and diminished excitement. None of the control group students ever showed disappointment in not recording; in fact, some were relieved that they did not have to do it.

Another interesting response was the students' desire to print the checklists. Grady Profile allows the user to print a report that includes the checklist, both the instructor's and the student's evaluations, as well as any notes or

comments entered onto the evaluation card (see Appendix E). Both during and after the treatment period, some of the students from both groups would ask me to print the checklist so that they could bring it home to show their parents. It was very exciting for these students to be able to bring home to their parents something tangible about their band performance.

Student Motivation

Though most of the experimental group students seemed to thrive on the challenge, by the third week of the treatment period I could already see some of the control group students losing interest. Whereas the students in the experimental group had become active participants in their education, the students in the control group were passive recipients of my evaluations. There was a noticeable difference in the level of interest during band lessons between the students of the two groups, and that difference in interest seemed to translate directly into their rate of achievement in their lesson material. The experimental group students progressed much quicker in their performance and in their understanding of their performance than did the students of the control group.

I was also concerned about the effect that participation in this study was having on a number of other students in the band. Some of the students did not have the technical skills on their instruments needed to understand how to use self-evaluation to improve upon their performance. Their time

would have been better spent working on fingerings, counting and tone production. I had not foreseen what I was doing with the students in this study as possibly being detrimental to their musical and technical growth as performers, but for much of the treatment period that was how I felt. At times during the beginning of the treatment period, I found myself warring between being a teacher and being a researcher. Though the researcher won in this little internal skirmish, the teacher felt incredibly guilty.

I also became very concerned that approximately one third of the students in the sixth grade band, most of whom were in the control group and losing interest, would not be as proficient on their instruments as needed for junior high band. Even though students receive weekly band lessons in the elementary, they only receive two band lessons per quarter in junior high. Usually the students who have not achieved a sufficient level of proficiency on their instruments in the elementary quit band in junior high. I saw myself failing in my efforts to help these students achieve the needed proficiency.

By week seven though, my doubts had begun to subside. By this time, all but the lowest students were progressing at the rate that I would have expected if they had not been involved in the study.

Subjectivity of Judges

The subjectivity of the judges was a concern for me, as for earlier researchers (Radocy, 1995, Schmalstieg, 1972).

Both of the judges have been involved in music education for the past twelve years in both a school setting and in a private studio setting in a metropolitan area, and both had been classmates of mine in undergraduate school. I knew both of these women well and trusted their judgment. Judge #1 teaches in three inner-city public schools. Judge #2 currently teaches in a private studio setting, but was previously a full-time band instructor in a private elementary school in a suburb. When I was instructing the judges on protocol for assessing the tests, I asked them to evaluate the students as though they were evaluating their own students.

Judge #1 seemed to have a more difficult time evaluating the recordings than did Judge #2, especially those recordings made by percussionists. In particular, Judge #1 had a difficult time following student 20, a percussionist, throughout the ten recordings; in fact she listened to each of the ten recording at least three times. When I tabulated the scores, I found that Judge #2 had given student 20 a posttest score that was five points higher than her pretest score, but Judge #1 had given student 20 a posttest score that was sixteen points lower than her pretest score.

Though the judges were very similar in the scores that they gave the students, ranging from a difference of zero to four points between judges, there were two more students, other than student 20, students 15 and 23, whose scores were widely different, a difference of fourteen points or more. Analysis of the scores from Judge #1 show that student 15 had

a decrease in his score of five points between his pretest and posttest, but scores from Judge #2 show that the student had an increase of nine points from the pretest to the posttest. This was a difference of fifteen points between judges. As previously discussed, there was a difference of twenty-one points between the two judges in student 20's scores. Both judges scored student 23 lower on the posttest than the pretest, but Judge #2 scored the student fourteen points lower than Judge #1. Together, these three students probably were responsible for most of the drop in interjudge reliability from .95 on the pretest to .85 on the posttest.

Reflection

The combination of the computer and the Grady Profile software seems to be the useful tool that I was searching for to teach the students self-evaluation skills. By using their self-evaluation skills the students have learned to listen to themselves while they are performing, to understand the accuracy and musicality of their performance, and to make corrections or improvements to their performance without direction from their instructor.

It would have afforded more flexibility in scheduling band lesson times if I had conducted this study during the third and fourth quarters of the school year, rather than the first and second quarters. However, the second half of the school year is when the students complete their Middle Level Arts Graduation Standard, which calls for all of the students to self-evaluate. Thus, the study had to be conducted in the

first half. Because this resulted in a limited time frame in which to work, the treatment period had to begin the second week of the school year so that it would end before Christmas vacation, as I did not want to have a two-week interruption of the treatment period. The early starting date made it difficult for some of the students to return their parental permission slips on time. Five students from the control group brought in their permission slips after the study had begun.

The end of the study also happened to coincide with the elementary Winter Music Concert. Our concert was on Monday night, and many of the students took their posttest the following day. I suspect that physical and mental exhaustion, as well as the typical post-concert letdown, affected the students' state of mind when they took their posttests. Also, as the band performs in the Winter Music Concert on alternate years, this would have been easier on the students if the study had been conducted in a year when the concert would not have been a factor.

Upon reflection, this study has caused me to change the way that I teach band lessons. Band lessons are no longer a teacher-led experience for the students in which the students perform an assigned selection, receive comments, and then move on to the next selection. The structure of the band lesson has become more student-led in that the students perform an assigned selection, we discuss the performance, the student or I may play the selection again, discuss it some more, and then we may or may not move on to another

selection. The students' level of understanding dictates whether we move on or not. Many lessons have been spent on only one selection from the assignment. Much more of the band lesson time is now spent in discussion than was previously spent, so much so that some lessons are composed of more discussion than performance. These students have become more empowered in their musical education than any students that I have taught previously. Many times I have felt more like a bystander in these band lessons than an instructor. The self-evaluation process no longer takes precedence, student understanding does.

Chapter 5

SUMMARY

I began this study searching for a tool to help my students improve their rhythm reading skills so that they had adequate skills to complete the Middle Level Arts Standard in the Minnesota Graduation Rule. I chose self-evaluation for that tool, and the multimedia computer software Grady Profile to teach the students self-evaluation skills. I wanted to investigate the effect of student self-evaluation on rhythm reading scores. I also wanted to see what effect multimedia computer software had as a tool for self-evaluation on rhythm reading scores. A secondary purpose was to see if using the computer during band lessons improved attendance.

During a fourteen week treatment period the students all recorded a pretest, a posttest, and ten selections onto the computer during their weekly band lessons. The students in the experimental group listened to their recordings, completed an evaluation checklist, received my evaluation, and participated in a discussion on how to better their performance. The students in the control group also listened to their recordings, but only received my verbal evaluation.

Analysis of the scores from the pretests and posttests determined that the use of the self-evaluation and the multimedia computer software did not have a statistically significant effect on the students' rhythm reading scores. While a statistical difference was not shown, an effect of practical significance was shown in the students overall performance and understanding of musical performance. The use of the computer and multimedia software during band lessons did seem to have a positive effect on the attendance of the students in the experimental group.

Recommendations for Further Study

If this study were to be replicated, I would highly recommend that a larger, more flexible population be used so that students from the experimental group would not be forced to share their band lessons with students of the control group. Perhaps future researchers on this topic should separate the experimental and control groups completely by using two or more different bands in the same or different buildings. Optimally, students in one band would comprise the control group, while students from a separate band would comprise the experimental group. In this study, four of the five control group students that were paired with an experimental group student for their lesson did not appear to have been affected by the discussions that I undertook with their partners. However, one of the five control group student's performance was very much affected by the discussions.

Another aspect for further study would be the timing of the treatment period within the school year. I would recommend that future researchers schedule the treatment period at a time when it would not conflict with concert performances or curricular demands.

An aspect for further consideration would be to separate the effect of the self-evaluation and the effect of improving upon their performance by discussing the performance and further refining the performance by playing the selection again. Control group students in the shared lesson groups sometimes followed the example of their partners and replayed the selection with their partner. This never happened in the lesson groups with only members of the control group. The idea of replaying the recorded selection only developed in groups that had at least one member of the experimental group in it.

Another item for consideration for further study concerns the judges. It would be advisable for the judges to evaluate one set of tests, such as all test A's, on one occasion, and the other set of tests on another. Though my judges made a concerted effort to remain focused during the entire period, ten hours of evaluating takes a toll on any teacher. Keeping the judges' minds fresh and alert is a must in order for the test scores to be reliable. Perhaps a third judge may have served to reduce the effect of the judges' subjectivity on the students' final scores.

Conclusion

I began this study searching for a way to help my students meet a standard in reading music notation. I identified self-evaluation as a tool that students could use to transfer their understanding of rhythm and sub-division of the beat into performance on their band instruments. In this study, self-evaluation, using Grady Profile, did not prove to have a significant effect on the improvement of the students' rhythm reading scores. However, Grady Profile became a useful tool for me to teach self-evaluation skills to the students, and the practically significant effect on the students overall performance and responsibility was a satisfying result for me as their teacher.

The students used their self-evaluation skills to improve all aspects of their performance, not just rhythm. The checklist also asked the students to think about their pitches, tempo, articulations, tone and dynamics. By using their self-evaluation skills, the students learned to be aware of the different aspects of their performance that may or may not be correct, and to facilitate corrections on any mistakes. This unexpected side effect of the study has helped this group of students to become more musically and technically proficient than any group of students that I have taught in the past. This increase in student understanding is precisely what both the National Standards of Music Education and the Minnesota Graduation Rule strives to achieve.

In conclusion, I have been very pleased with the effect that this study has had on both my students and myself. My students have acquired a tool, the ability to self-evaluate, which has not only improved their overall musical performance, but has also resulted in a better understanding of their performance. I have changed my approach to teaching band lessons in that student understanding and student performance now have equal importance, whereas student performance previously took precedence. While the data did not to show a significant improvement in the students' rhythm reading skills, I was able to help them become more self-sufficient in perfecting their performance. I look forward to using and refining this technique with students to come.

End Notes

1. HyperCard is a "stack" of cards with information imprinted on each "card", like a recipe box or a roledex. The user can navigate between cards by clicking on arrows which will take the user to the next card in the stack or back to the previous one.

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APPENDICES

APPENDIX A

Parental Permission Letter and Form

Dear 6th Grade Band Parents,

Your child is invited to participate in a study of self-evaluation in instrumental music. I am working on the thesis for my Master of Music Education Degree at St. Cloud State University in which I would like to involve the students in the 6th Grade Band.

Many of you stopped to see me during conferences last year and listened to your child's performance on the computer. In the past, each student normally recorded onto the computer every 2-3 weeks. Beginning this fall, all of students will record an excerpt from their lesson assignment every week. The children who will be taking part in the study will be asked to complete a self-evaluation checklist as well. I have enclosed a copy of the check list. In addition, all students in the 6th Grade Band will be given 2 tests to compare their music reading skills. Because the process uses self-evaluation procedures used last spring, only students who were in 5th Grade Band last school year will be invited to participate.

If you decide to allow your child to participate in the study, any information obtained that can be identified with you or your child will remain confidential. The children will be identified by numbers so that the teachers evaluating the tests will have no knowledge of a student's name. After Christmas vacation, the students will receive their scores on both tests. I will also be discussing their results with the students, and whether they think self-evaluation has

improved their performance in band. I should have the results of the study available to share with you at conferences in February. If I am not able to see you at conferences, I am willing to meet with you to discuss the study, or to send you the results.

Your decision whether or not to participate will not effect your child's grade in band. Your decision will simply determine whether your child self-evaluations and test results can be included in the study data. This does not necessarily mean that you child will even be chosen to participate, because I will choose the participating students at random from those who are willing to be involved. Approximately 17 students will be chosen. The work that we are doing is now part of the band curriculum; all students will complete the work either this semester or next. If you agree to allow your child to participate, your child is free to discontinue participation at any time.

If you have any questions, please feel free to call me at school (453-6455) or at home (597-2927). You may also call my thesis adviser, Dr. Marcelyn Smale, at St. Cloud State University, (320) 255-2285.

Thank you,

Kimberly Salo, Elementary Band Instructor

Consent Form for 6th Grade Band Students to Participate in a Study of Self-Evaluation

Your signature indicates that you have read the information Mrs. Salo has provided and have decided to allow your child to participate. Your child may withdraw at any time after signing this form should you choose to discontinue participation in this study.

Please return this permission slip to Mrs. Salo no later than September 14, 2000.

_____ _____

Signature of Legal Guardian Date

APPENDIX B

Student Permission Letter

Dear 6th Grade Band,

I know that summer went way too fast, but I am glad to see you all back in school this fall! I am writing this letter to ask for your help with some of ***my*** school work. Most of you know that I have been going to school at St. Cloud State University to get my Masters Degree in Music Education. I am almost finished! I just have one project left - and this is where I need your help.

Remember how I had you record on the computer during your band lessons last year? And at the end of the school year, you learned how to complete that checklist after we listened to your recording. This year, in 6th grade, you will record on the computer every week. Some of you will be in a group that will do the checklist with me every week, and some of you will be in another group that will not. Everyone in band will also take 2 rhythm reading tests that will be recorded on to the computer. One in the next week, and one right after the Winter Concert in December.

If you agree to help me with my project, your name will be put into a hat. I will pull about 17 names out of that hat, and those people will be in the group that will do the checklist every week. So, just because you agree to help me, doesn't mean that you will definitely be involved.

Now, I don't want you to think that if you say "NO" that you won't ever have to do the checklist, because everyone will be doing this. If you are not in the group that does the checklist this fall, you will do it after Christmas

vacation. So you are not getting out of anything. I am really just asking for your permission to use the information that I gather about you in my project. Don't worry, if you do say "NO" it won't effect your grade, it will just put you in the group that does the checklist this winter. You also have the right to quit the project at any time.

I will not be grading the tests until Christmas vacation, after everyone has recorded both tests. In fact, I won't even be grading them. Two band directors that I know (but you don't, they teach in St. Paul), have agreed to help me out and grade the tests for me. After Christmas vacation, I will let you know how you did on both tests and we will talk about if you had any improvement in your scores.

I have also sent a letter to your parents, because, legally, I have to have their permission for you to participate in my project. But you are old enough to make the decision about whether you want to participate or not, so I am asking you as well. If you want to talk to me about this, stop in my office sometime in the next week and we will talk.

Thank you,

Mrs. Salo

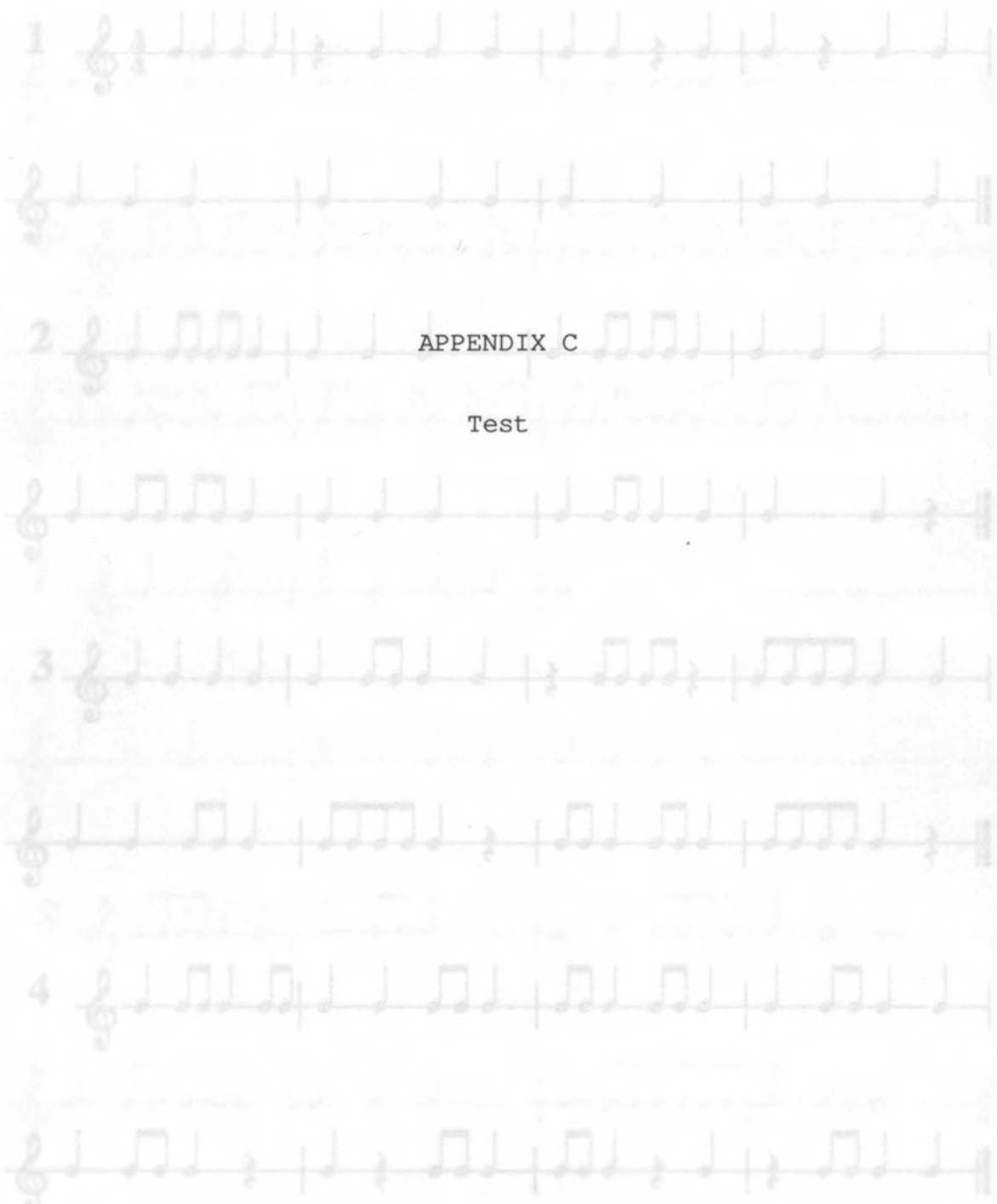
Your signature indicates that you have read the above information and agree to participate in Mrs. Salo's project. You may withdraw at any time after signing this form if you want to quit this project.

_____ _____

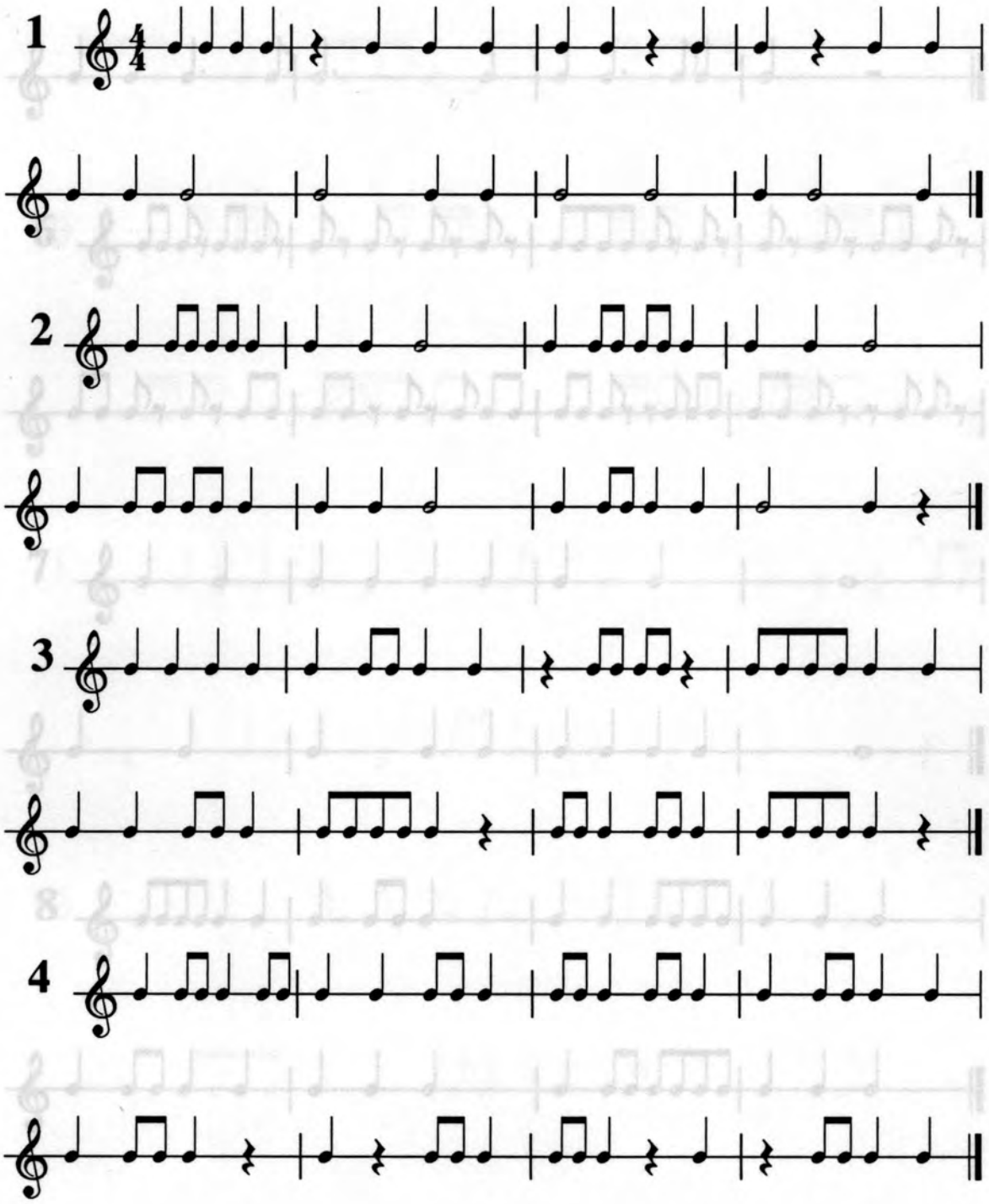
Student Signature Date

APPENDIX C

Test

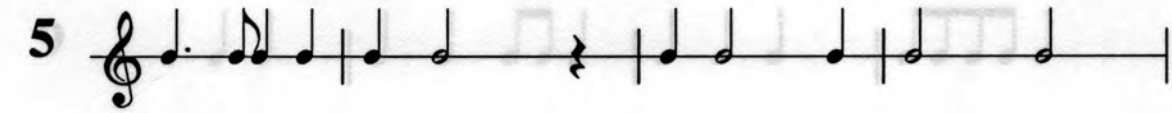


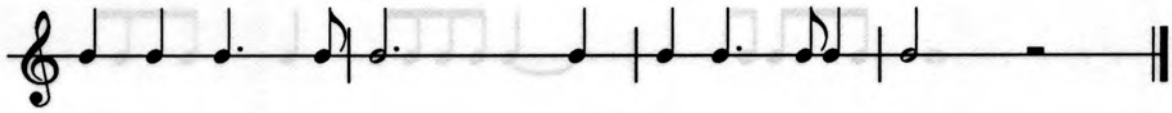
TEST A



Test A

5





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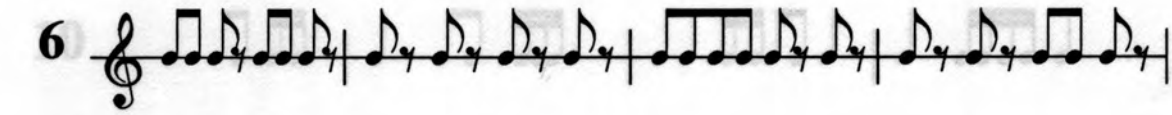

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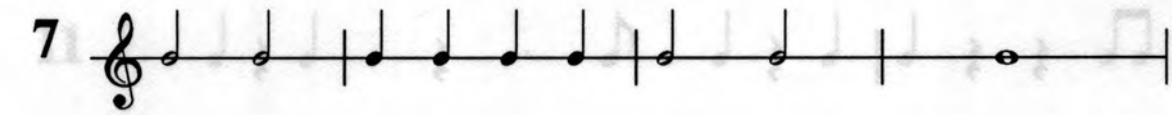

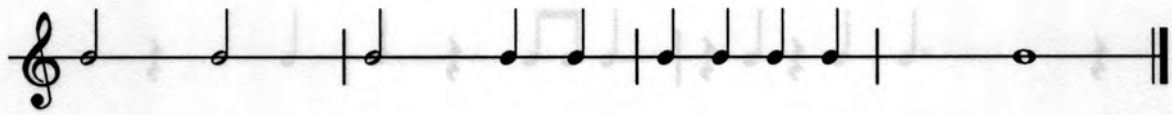

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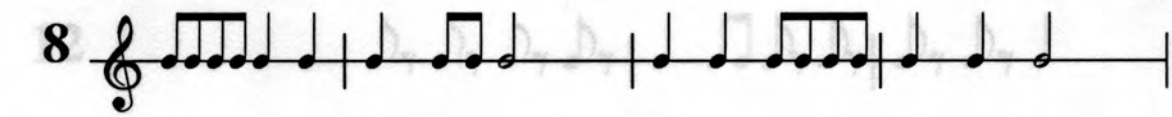

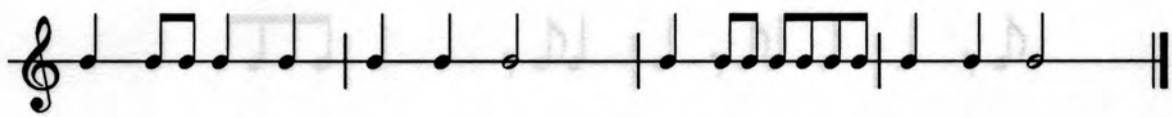

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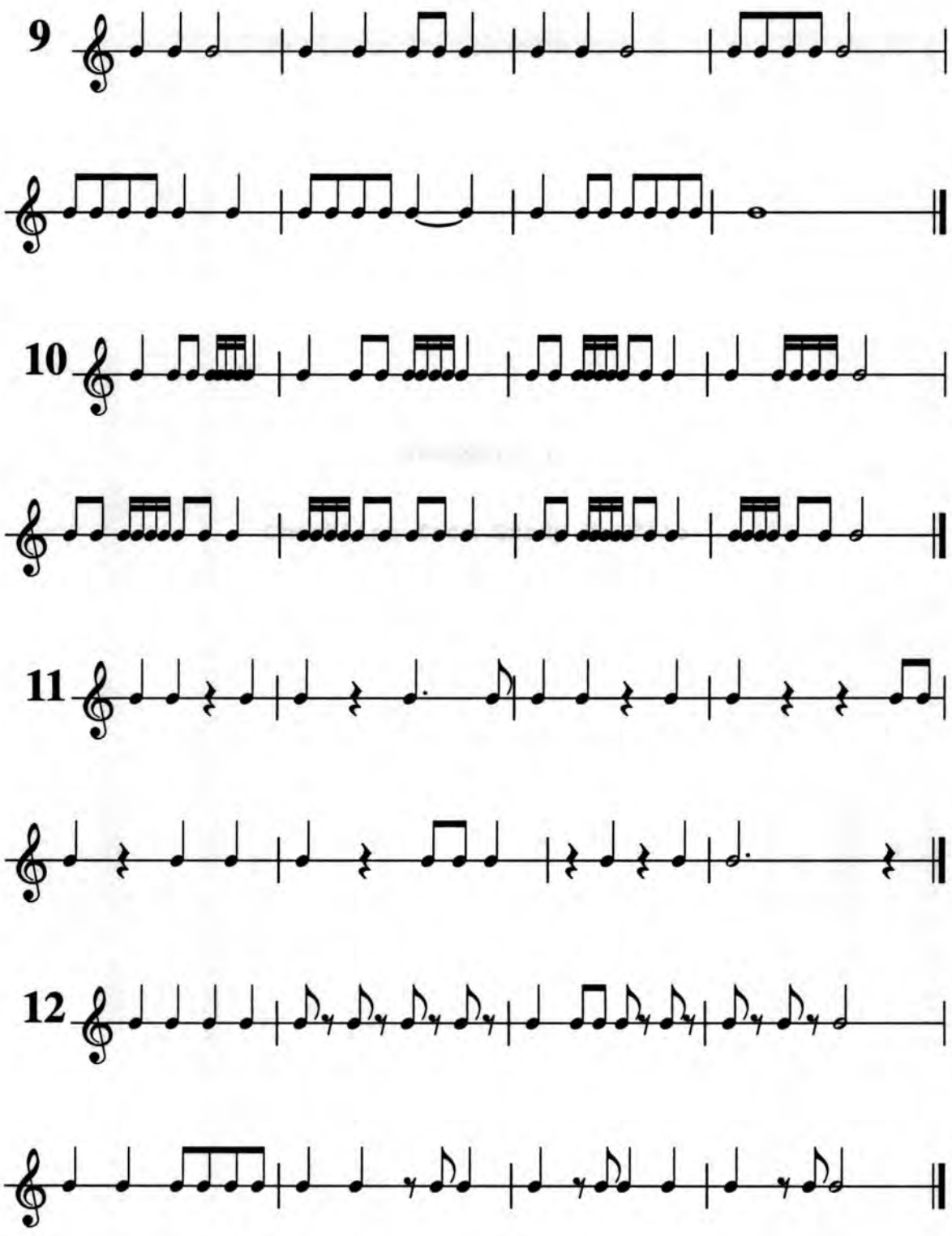
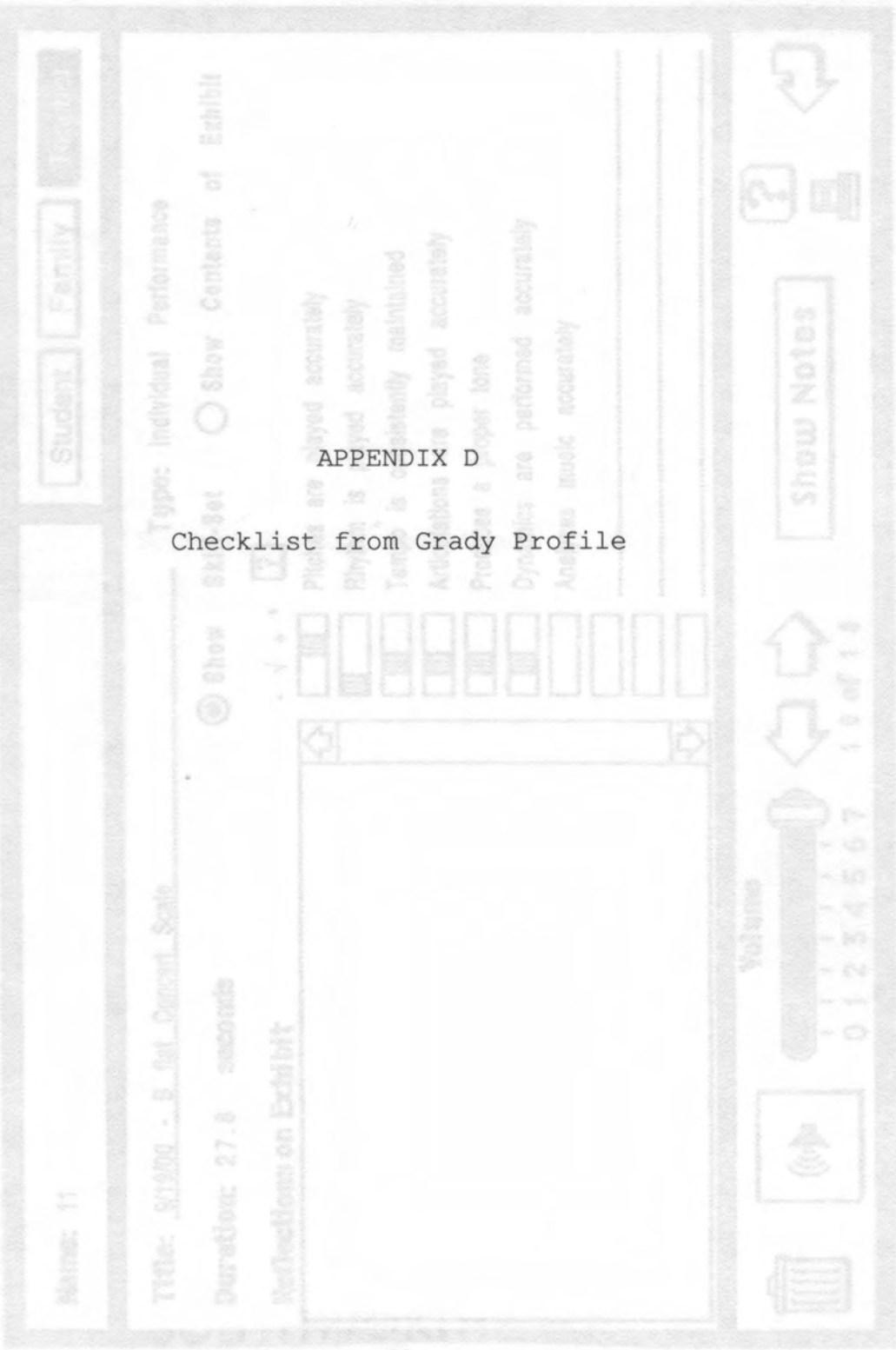
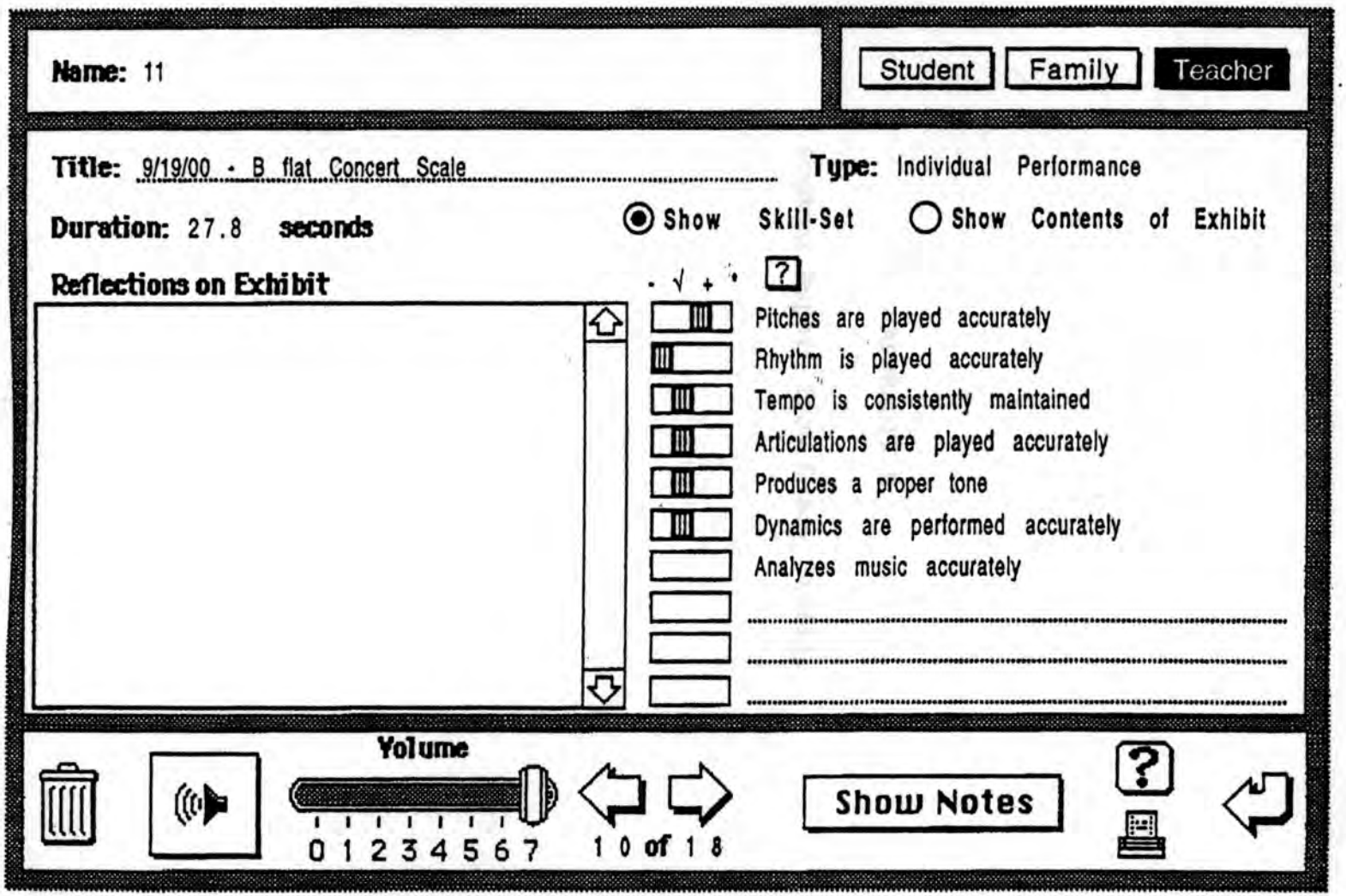




APPENDIX D

Checklist from Grady Profile


Name: 11
Student
Family
Teacher
Title: 9/19/00 - B flat Concert Scale
Type: Individual Performance
Duration: 27.8 seconds
Show Skill-Set
Show Contents of Exhibit
Reflections on Exhibit
- √ +
Pitches are played accurately
Rhythm is played accurately
Tempo is consistently maintained
Articulations are played accurately
Produces a proper tone
Dynamics are performed accurately
Analyzes music accurately
Volume
0 1 2 3 4 5 6 7
1 0 of 1 8
Show Notes

APPENDIX E

Student Report from Grady Profile

Graduation Standard Performance

19 **Work Sample – Sound**

Assignment

Legend

- = performance does not meet expectations
√ = performance meets expectations
+ = performance exceeds expectations
* = not applicable

Title: 9/19/00 - B flat Concert Scale
Evaluator: Mrs. Salo
Skill-Set: Individual Performance
Date: 6/7/01
Duration: 20.3 seconds

Student	Parent	Teacher	
√		√	Pitches are played accurately
-		-	Rhythm is played accurately
-		√	Tempo is consistently maintained
√		√	Articulations are played accurately
√		√	Produces a proper tone
√		√	Dynamics are performed accurately
			Analyzes music accurately

Reflections

You did good until the arpeggio, then you kind of made up the rhythm!

Miscellaneous Remarks

This is an entry which may go into the student's Graduation Standard Portfolio.

Notes

APPENDIX F

Student Scores from Judge #1

Student Number	Pretest Score	Posttest Score
1	44	46
2	42	48
3	46	60
4	38	55
5	39	34
6	42	52
7	42	54
8	24	37
9	33	43
10	47	60
11	35	48
12	30	38
13	33	42
14	51	56
15	36	31
16	9	8
17	33	17
18	34	51
19	57	62
20	47	31
21	33	37
22	38	36
23	45	43
24	53	51
25	23	18
26	49	55
27	49	52
28	38	30
29	18	42

APPENDIX G

Student Scores from Judge #2

Student Number	Pretest Score	Posttest Score
1	39	42
2	42	50
3	55	59
4	39	57
5	33	30
6	39	51
7	40	51
8	22	35
9	39	38
10	45	59
11	33	47
12	32	42
13	35	42
14	45	56
15	35	44
16	17	17
17	31	15
18	38	47
19	58	65
20	52	57
21	30	38
22	39	39
23	48	32
24	54	50
25	24	23
26	52	53
27	51	50
28	35	33
29	19	30

APPENDIX H

Mean Student Scores from Both Judges

Student Number	Pretest Score	Posttest Score
1	41.5	44
2	42.5	49
3	55.5	59.5
4	39.5	56
5	34	32
6	40.5	51.5
7	41	52.5
8	23	36
9	36	40.5
10	46	59.5
11	33.5	47.5
12	31	40
13	34	42
14	48	56
15	35.5	37.5
16	13	12.5
17	32	16
18	36	49
19	57.5	63.5
20	49.5	44
21	31.5	42.5
22	38.5	37.5
23	46.5	37.5
24	53.5	50.5
25	23.5	20.5
26	50.5	54
27	50	51
28	37.5	31.5
29	18.5	30