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A descriptive study of the ratio of approval to disapproval demonstrated by music teachers and classroom teachers in first, second, and third grades

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

A DESCRIPTIVE STUDY OF THE RATIO OF APPROVAL TO DISAPPROVAL
DEMONSTRATED BY MUSIC TEACHERS AND CLASSROOM TEACHERS IN
FIRST, SECOND, AND THIRD GRADES

A thesis submitted in partial fulfillment of the

requirements for the degree of

MASTER OF SCIENCE

in

MUSIC EDUCATION

by

Manuel Emilio Brenes

2004

To: Dean R. Bruce Dunlap
College of Arts and Sciences

This thesis, written by Manuel Emilio Brenes, and entitled A descriptive study of the ratio of approval to disapproval demonstrated by Music teachers and classroom teachers in first, second, and third grades, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

John Augenblick

Orlando Jacinto Garcia

Michael Wagner, Major Professor

Date of Defense: April 16, 2004

The thesis of Manuel Emilio Brenes is approved.

Dean R. Bruce Dunlap
College of Arts and Sciences

Dean Douglas Wartzok
University Graduate School

Florida International University, 2004

DEDICATION

I dedicate this thesis to my family. Without their supporting love, the completion of this work would not have been possible.

ACKNOWLEDGMENTS

I wish to thank the members of my committee for their support and patience. Their guidance throughout this process has been most appreciated. I thank Dr. Garcia for the insight he provided me during my work. Dr. John Augenblick was very supportive and motivated me to finish my work every step of the way. Finally, Dr. Michael Wagner, my major professor and mentor, was particularly helpful in guiding me throughout the entire study. His willingness to answer any question at any time, even while abroad, was immeasurably generous and shows true commitment to education.

ABSTRACT OF THE THESIS

A DESCRIPTIVE STUDY OF THE RATIO OF APPROVAL TO DISAPPROVAL DEMONSTRATED BY MUSIC TEACHERS AND CLASSROOM TEACHERS IN FIRST, SECOND, AND THIRD GRADES

by

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Florida International University, 2004

Miami, Florida

Professor Michael Wagner, Major Professor

The purpose of this study was to determine the approval to disapproval ratios of feedback given by music and classroom teachers to first, second and third grades. Eight teachers from a South Florida Elementary School were selected for this study.

Twelve 20-minute videos were taken for further examination. Analyses of data using percentage formulas were used to determine the ratio of each of the teacher reinforcement. Classroom teachers gave 2.3% social approval feedback, 59% academic approval feedback, 22% social disapproval feedback, 16.5% academic disapproval feedback, and 0% errors. Music teachers gave .7% social approval feedback, 67% academic approval feedback, 22% social disapproval feedback, 10% academic disapproval feedback, and 0% errors. Today's teachers are 8% more academically approving than thirty years ago. Results also show that today's music teachers are still more approving than classroom teachers.

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CHAPTER 1

INTRODUCTION

This is a descriptive study of approval to disapproval ratios of feedback demonstrated by music teachers and regular teachers to first, second, and third grades. The issue examined concerned the positive and negative feedback of elementary school music teachers and classroom teachers towards students' answers to questions in the classroom. Thirty years ago, teachers displayed more negative than positive feedback to their students, thus leading students to more off-task behavior. Nevertheless, music teachers demonstrated more approval than disapproval because of the nature of the subject: students are more on task during music because music is rewarding by itself (Kuhn, 1972). The purpose of this study was to measure the teacher approval to disapproval ratios of feedback demonstrated to first, second, and third grade elementary students during contemporary music and regular classrooms today. To accomplish this task, a study was prepared to replicate many of those done in the early '70's. The findings of this study were then compared to the findings of thirty years ago to see if today's teachers are more positive or negative than teachers have been in the past.

Studies of approval and disapproval feedback began in the 1950's, stating that student attentiveness, class attitude, and motivation to learn improved when teachers in music and regular classrooms established a 4:1 approval/disapproval ratio, in which 80% contingent approval and 20% contingent disapproval were given by teachers. The research problem of this study was to determine if today's educators perform the same ratios of feedback as they did thirty years ago when most of this research was done. At that time, most teachers did not perform close to this "ideal" feedback ratio. Another part

of the problem was to determine if today's music teachers are still more positive than classroom teachers. The data gathered in this study will hopefully lead to further studies that will provide educators with a larger knowledge base of positive reinforcement strategies and techniques that they may apply in their classrooms in order to achieve higher ratios of approval.

This study answered two important questions:

1. Are teachers still more disapproving than approving as they were thirty years ago?
2. Are music teachers still more approving than classroom teachers?

CHAPTER 2

REVIEW OF LITERATURE

4:1 Optimal Feedback Ratio

Studies of approval and disapproval feedback began in the 1950's, stating that student attentiveness, class attitude, and motivation to learn improved when teachers in music and regular classrooms established a 4:1 approval/disapproval ratio (80% contingent approval and 20% contingent disapproval), which is considered the optimum ratio of positive to negative feedback (Wachhaus & White, 1973).

In the last thirty years, literature shows that the ideal teacher feedback condition is a 4:1 approval/disapproval ratio (80% approval and 20% disapproval) (Kuhn, 1972; Yarbrough, 1975; Dorow, 1977; Wagner & Strul, 1979). In those studies, various ratios were used: 1:1 (50% positive and 50% negative) (Yarbrough, 1975); 4:1 (80% negative and 20% positive) (Dorow, 1977), 5:0 (100% positive and 0% negative) (Murray, 1972); and, 0:5 (0% positive and 100% negative) (Murray, 1972). All of those studies used contingent teacher feedback. A number of extremely important things were noted:

1. Students liked the teacher best under a 4:1 positive to negative teacher feedback ratio.
2. Students liked the subject (class) more under a 4:1 positive to negative teacher feedback ratio.
3. The subjects followed classroom rules better under a 4:1 positive to negative teacher feedback ratio.
4. There was substantially less student off task behavior under a 4:1 positive to negative teacher feedback ratio.

In 1972, Kuhn suggested that other ratios should be manipulated because there wasn't enough supporting data about the effectiveness of these ratios in the literature from the previous thirty years (Kuhn, 1972).

In "Perception of Approval/Disapproval in Music Education," (Madsen & Duke, 1985) it is stated that investigators have studied numerous techniques and have demonstrated that appropriate classroom discipline and student attentiveness can be maintained by reinforcing relevant academic skills, by reinforcing low rates of inappropriate behavior, and by maintaining a high rate of contingent teacher approval. It is also noted that reduced classroom behavior problems resulted in additional instructional time for academics, and that improved student attentiveness proves reinforcing to the teacher (Madsen & Duke, 1985 p. 119).

Teacher/Student Interaction

Research done in the use of reinforcement by music teachers is important in relation to teacher-student communication, as well as the subject matter activities. Specific teacher characteristics and class activities may affect attentiveness and achievement. For example, Wagner & Strul (1979 p. 302) site a study done by Kuhn (1975), in which on-task behavior was determined to be greater under highly approving teachers than under highly disapproving ones.

Elementary students' attentive behavior is a function of classroom activities (Forsythe, 1977 p. 315). Forsythe emphasizes that appropriate social behavior is necessary for successful academic learning. Attentive behavior, or on-task behavior which is parallel to affective behavior, is an example of social behavior regarded as a prerequisite to academic learning. Even though Murray's (1972) findings were about

high school, he also acknowledges that most research has dealt with elementary music classrooms, and that one ratio of approval/disapproval has been manipulated during many studies: 80% approval to 20% disapproval, or a 4:1 ratio, and it has been concluded that this balanced approval/disapproval ratio resulted in favorable student attitudes and efficient teaching/learning experiences and at all levels. Dorow's (1977 p. 535) research study, "The Effect of Teacher Approval/Disapproval Ratios," shows that music taught with high approval from the teacher will become more reinforcing and time spent listening to music will increase. "The Effect of Teacher Approval and Disapproval on Attentiveness, Musical Achievement, and Attitude of Fifth-Grade Students," a study done by Kuhn (1972 p. 40) indicates that teachers who contingently approve social and academic behaviors of their students for 80% of their interactions, using a 4:1 ratio, have fewer students off task. White's (1973 p. 111) findings in "Adult Approval and Students' Music Selection Behavior" also emphasize that high approval causes greater adherence to classroom rules than does low approval. Furthermore, White (1973) finds music-instructor approval behavior as a potentially valid measure of music teacher competency.

In a study conducted by Dorow (1977 p. 34) two groups received five days of instruction: one under high teacher approval, and the other under high teacher disapproval. Approval/disapproval ratios were controlled for both groups. The group who was under high teacher approval (4:1 [80/20]), showed that music taught with high approval from the teacher would become more reinforcing. In a study done by Wachhaus & White (1973) subjects were randomly assigned to five groups. Four of the groups received different instructional treatments, and one group acted as a control. Two main effects were studied—(a) high approval (4:1 [80% approval to 20% disapproval])

versus low approval (1:4 [20% approval to 80% disapproval]) and (b) clinician –artist presentation versus repeating listening. The high approval groups spent more time listening to more music categories, while the low approval group decreased their time listening to music classics and electronic music more than high approval groups (Wachhaus & White, 1973 p. 112).

Evidence regarding student music selection behavior and attentiveness as influenced by ratios of teacher approval to disapproval has determined that music taught with high approval from the teacher becomes more reinforcing, and music taught under high disapproval from the teacher becomes less reinforcing (Dorow, 1977 p. 38). White's (1973 p. 109) study supports earlier findings regarding students who prefer subject matter, teachers, and activities under which they receive high approval. He stipulates that discrimination among musical selections is better according to the degree of positive reinforcement. Music teacher behaviors are associated with students' acquisition of music discrimination (White, 1973 p.111). His findings show that students make future choices without avoidance to future contact with similar music. White (1973 p. 119) also determines that music-instructor approval is a potential measure of music teacher competency because it shows that such a teacher has better knowledge of the subject matter, better social behavior, and higher on-task student behavior.

Social Behavior

The ability to give and receive appropriate feedback from other individuals appears to be a requisite skill for effective human interaction (Madsen & Madsen, 1972); also, this ability is of great importance to a teacher to further a student's grasp of the subject matter as well as in shaping socially acceptable behavior. Investigators have

demonstrated that appropriate classroom discipline and student attentiveness are maintained by reinforcing relevant academic skills and that approval may be the most important attribute of interaction. Unfortunately, “most teachers are not successful at giving contingent approval because they naturally know how to give contingent disapproval, not contingent approval” (Madsen & Madsen, 1972, p. 119).

Children behave differently during music as compared to regular classes, regardless of errors (teacher mistakes), with mean off-task percentages being less in music classes because the subject matter appears to be “naturally” reinforcing (Forsythe, 1975). In other words, the effect of teacher approval, disapproval, and errors seems to function differently in music as compared to other classes. Forsythe’s study also reinforces previous conclusions from Becker, Madsen, Arnold, and Thomas (1967) that disruptive behavior of selected students could be reduced significantly through contingent teacher attention (Forsythe, 1975, p. 49).

Teachers who contingently approve social and academic behaviors of their students for 80% of their interactions have fewer students off task (Kuhn, 1972, p 40). In other words, a 4:1 ratio of contingent approval to disapproval is again shown to be the most effective. “For the past 40 years,” Kuhn continues, “experimenters have been examining the effect of reinforcement on behavior.” For this reason, psychologists have investigated the use of operant conditioning techniques in shaping desirable behaviors in students, demonstrating the efficacy of reinforcement techniques in teaching appropriate classroom behaviors (Kuhn, 1972, p. 40). The results of Kuhn’s (1972) study are very convincing because the data indicate that students receiving teacher approval followed

class rules and were more attentive than students receiving teacher disapproval or no teacher interaction.

Kuhn's (1972) findings concerning social behavior were consistent with previous findings that high approval (4:1 approval to disapproval ratio) causes greater adherence to classroom rules and attentiveness than low approval. In his study, "The Effect of teacher Approval and Disapproval on Attentiveness, Musical Achievement, and Attitude of Fifth-Grade Students," (Kuhn, 1972, p. 42) the teacher-approval ratio was manipulated in order to determine its effect on student attentiveness, musical achievement, and verbal report of attitude toward the instructional lesson. Two approval ratios were employed: high approval and high disapproval. In-Group 1, the teacher was 80% approving and 20% disapproving, using a 4:1 approval to disapproval ratio. And, in-Group 2, the teacher was 20% approving and 80% disapproving, using a 1:4 approval to disapproval ratio. Results indicated that students receiving teacher approval followed class rules better than students receiving teacher disapproval. Attentiveness results also indicate that teachers were more successful in maintaining desired classroom social behavior if they maintained a 4:1 approval to disapproval ratio, in which 80% of their interactions with students were approving and contingent upon appropriate social behaviors and 20% of their interaction with students were disapproving and contingent upon inappropriate social behaviors. Other approval/disapproval ratios should be experimentally isolated in order to determine their effect on student social behavior. Such ratios as 3:1, 2:1, and 1:1, are in need of data indicating their effect on behavior (Kuhn, 1972, p. 46).

In their study, Madsen and Duke (1985) allude to French Existentialist philosopher, Jean Paul Sartre's suggestion that the only way we know ourselves is through the feedback we receive from others. The authors touch on a very important point by questioning themselves as to what the goals would be for giving feedback to students. They continue saying that we have to give positive reinforcement to students; but, if a music teacher wants to teach someone to listen to music, he or she must be very careful because music is a pleasant sensation and, that listening to music is already rewarding. Another question is: "What constitutes music teachers' perceptions concerning potential effectiveness of approval/disapproval given to students within a musical environment? Clearly, continuing participation is the best possible feedback" (Madsen & Duke, 1985, p. 206).

To further explain this phenomenon, some authors have suggested that music's inherent qualities serve as students' reinforcements (Forsythe 1977; Madsen and Alley, 1979; Madsen and Duke, 1985b). However, it may be the nature of music instruction, and not necessarily the music itself, that is observed among successful teachers. One important factor found in the literature is that students are more on task during the time that music activities occur in music class, in spite of low ratios of approval because students want to do well in future trials, rehearsals, or performances (Yarbrough & Price, 1981 p. 340). Music instruction is highly interactive. Although music teachers provide high levels of positive feedback, they also give much negative feedback. However, students do not take this teacher behavior as something negative because the negative feedback is constructive. Students tend to study for future rehearsals to show their

teachers their improvement. A student does not need to receive as much verbal positive reinforcement to do better because the nature of performance is already reinforcing. The same does not apply to regular elementary classes. The nature of these classes is passive because students aren't always actively involved in activities. This is why, according to many studies, such as Forsythe (1977) and Kuhn (1972), students have more opportunities to be off-task and regular teachers are more negative than music teacher.

Student Attitude and Preference

The literature states that excellent teachers' verbalizations include rates of positive feedback that is equal to or greater than the rates of negative feedback (Duke & Henninger, 1998 p. 489). Although the optimal feedback ratio is 4:1, the best ratio shown in studies of the past was only 1:1 (Duke & Henninger, 1998). In a study performed by Cornelia Yarbrough (1975), it is noted that high approval does influence attitude and preference. High school students appeared to like both the music and the rehearsal of conductors who used high approval. Additionally, younger students receiving music listening lessons under conditions of adult high approval selected more of that music than subjects under low approval conditions (Yarbrough, 1975 p. 328). In this study by Yarbrough (1975 p. 338), the ratio of reinforcement was maintained 1:1, or 50% approvals and 50% disapprovals. Although this ratio is shown to be effective, it is, nevertheless, not considered the optimal ratio of approval to disapproval teacher feedback.

Similarly, Murray (1972 p. 166) concluded that a balanced approval/disapproval ratio resulted in favorable student attitudes and efficient rehearsals. Murray references Kirkland (1968), in which the effects of three different ratios of approval/disapproval

responses on rehearsal “rapport” and musical achievement were discovered. Results indicated that a 1:1 ratio of approval/disapproval responses was more effective than giving 100% approval responses (5:0 ratio) or 100% disapproval responses (0:5 ratio). However, data from six groups under this study received their highest rating on the performance rehearsed under the high approval condition (4:1). Only one group, Group 3, received a higher rating for the performance rehearsed under the low approval condition (1:4) than it received for the performance rehearsed under the high approval condition (4:1). Results in students’ attitudes shows that students rated the music and rehearsal under the 4:1 approval condition highest and the music and rehearsal under the 1:4 approval condition lowest.

Quantifying Information

Teacher behaviors during music or regular classes can be quantified using observational techniques developed by researchers studying classroom behaviors (Murray, 1972 p. 165). Murray states that a growing volume of empirical data has shown that behavioral techniques can increase social and academic behaviors conducive to learning. For example, raw data about elementary school students shows that these students do better when high approval conditions are present (Dorow, 1977; Kuhn, 1972; White, 1973; Murray, 1972). In order to have these conditions, teachers have to contingently approve the social and academic behaviors of their students. It is important to note here that under these circumstances, students are consistently more on-task than off-task. Studies have also compared beginning music teachers to experienced music teachers. Experienced teachers use reinforcement as a way to manipulate classroom environment to affect learning (Wagner and Strul, 1979; Moore, 1978). Similar to Kuhn

(1972), Forsythe (1977), and Murray (1972), Wagner and Strul (1979) articulate that a high ratio of approval constitutes a significant increase in attending behavior.

A study done by Wagner and Strul (1979 p. 312) titled, “Comparison of Beginning Versus Experienced Elementary Music Educators in the Use of Teaching Time,” the authors cite other research concerning the effects of approval reinforcement (greater than 75% contingent approval [3:1]) have been shown to significantly increase attending behavior (Forsythe, 1975), increase the following of classroom rules (Kuhn, 1975), and increase positive attitude toward choral rehearsal (Murray, 1975). In this investigation, teachers’ reinforcement rate showed approximately a 1:1 approval to disapproval ratio. Although pre-intern and intern teachers in this study had observed and quantified teachers’ approval/disapproval ratios as a portion of their teacher training and had studied previous research in this area, they did not increase their own approval/disapproval ratio beyond those of their supervising teachers. Wagner and Strul (1979) stated that it is important that pre-interns, interns, and experienced teachers increase the number of approvals (particularly social approvals) given contingently in their classes in order to match the optimal teacher approval to disapproval feedback ratio, 4:1 (Wagner & Strul, 1979).

In an attempt to determine the degree of positivism of a teacher, the following operational definitions were used by observers during Murray’s (1972 p. 173) study to record responses from teachers: *Approval*--any desirable (aural or visual) endorsement of an appropriate behavior: verbal approvals, smiles, signals indication approval; *Disapproval*—any observable (aural or visual) reprimand of an inappropriate behavior: verbal disapprovals, frowns, sarcasms, signals indicating disapproval; *Approval Error*—

any approval of an inappropriate behavior; *Disapproval Errors*—any disapproval of an appropriate behavior. Most observations were accomplished by observing students for 15 seconds and then recording what was observed for 5 seconds. Therefore, the time allocated to each total observational interval was 20 seconds (Murray, 1972).

When Murray (1972) was gathering data for his 1972 study, observations were done using video-recording equipment, so that the recorded tapes would provide a source for analysis of the observations. Murray's (1972 p.177) findings show that the lowest ratings occurred when rehearsing an easy selection under low approval conditions (1:4); and, the highest ratings occurred when rehearsing a difficult selection under high approval conditions (4:1). These ratios were performed by teachers under the supervision of trained observes who cued the teachers to give the amount of feedback that was under control (80% approval and 20% disapproval [4:1]).

Other studies also used time intervals for such observations. In Forsythe's (1977 p. 315) study, observers were instructed to scan the class from left to right during 15-second intervals and count the number of students who were off-task. Five-second record intervals allowed the observers to record the frequency data onto an observation form. A prerecorded cassette tape was used to regulate accurate "observe" and "record" intervals by cueing the observers as they listened to the tape through an earplug (Forsythe, 1977 p. 315). Trained observers gathered separate observations in order to examine off-task levels in relation to the class activity occurring during each interval. Throughout this process other useful information was attained as a result. Although it was not the original purpose of the data collection procedure used by Forsythe (1977) to determine what proportion of class time teachers were dedicating to the different activities, this

information proved to be a useful byproduct of the resulting data by allowing researchers to maintain experimental control and allow for an analysis of the relationship between off-task behavior levels and percent of class time (Forsythe, 1977 p. 316).

Bowers (1997 p. 432) also used video-analysis forms. Subjects were specifically instructed in identical procedures for developing music lesson plans. They received scripted feedback, and subjects had to provide a verbatim transcript identifying teacher feedback as being specific or nonspecific for each verbal approval or disapproval given. Subjects were given other types of coaching, as well. Individual remarks by the course instructor provided feedback as to strengths and weaknesses in subjects' teaching efforts (Bowers, 1997). Bowers' (1997) research, which emphasizes the importance of sequential patterns in teaching, concurs with Yarbrough's research that also uses video analysis. Subjects in the Yarbrough study were also given verbatim typescripts of each teaching situation. The typescripts were used to scrutinize, count, and time units of teaching and student performance (Yarbrough, 1989).

Literature from thirty years ago demonstrates that investigators studied teacher/student behaviors with the purpose of enhancing music education strategies. Duke & Blackman (1989 p. 290) declared that observation plays an important role in helping novice teachers and is a major factor in grading teachers. Clearly, the existing literature indicates that positive feedback leads to learning, on-task behaviors, and appropriate social behavior. Their research shows that elementary music teachers kept students on task better than regular elementary teachers because off-task behavior seemed to be a function of the nature of the kind of reinforcement they received. The nature of music tends to maintain on task behavior because of the inherent rewards of performance.

CHAPTER 3

METHOD

Subjects

Eight teachers (three Caucasians, three African Americans, and two Hispanics) were selected from grades first through third from a low-income, inner-city, South Florida Elementary School: two music teachers, two first-grades teachers, two second-grades teachers, and two third-grades teachers. Classroom and music teachers taught 142 students in the following way:

C1 (classroom teacher 1) 28 students;

C2 27 taught students;

C3 taught 28 students;

C4 taught 22 students;

C5 taught 21 students; and

C6 taught 16 students.

M1 (music teacher 1) taught 138 students; and

M2 (music teacher) taught 142 students but in multiple classrooms.

Video

An eight-millimeter (8mm) video camera was used to gather data for future examination. The researcher videotaped seven teachers (one music teacher and six classroom teachers, and the media specialist videotaped the researcher (as a second music teacher, “M2”) while the researcher was teaching his classes. The researcher recorded two videos in the morning and one in the afternoon, a total of three videos every day during a six-week period. The camera was located in the back of the room, using a

tripod, high enough to videotape only the teachers, but not the students to protect the students' identities. The camera was panned only when the teacher moved. Regular classrooms served as settings for all experimental classes.

Observation Form

The researcher used "Form B: Teacher observation (Madsen & Yarbrough, 1985) as a model in creating the observation form for this study. This instrument was used, by the authors' permission, as a tool to record teacher's approval/disapproval occurrences (Appendix III). The time allocated on each form, to record each subject, was 15 minutes. The following categories were used to determine teacher's feedback:

1. As (Social Approval)-approval for social behavior. The teacher gives any approving response paired specifically with appropriate social behavior.
2. Aa (Academic Approval)-Approval for academic behavior. The teacher indicates that the academic work is correct by using praise.
3. Ds (Social Disapproval)-Disapproval for social behavior given by the teacher following any disruption of the learning environment that interferes with learning.
4. Da (Academic Disapproval)-Disapproval for academic behavior. Any disapproval indicating that a student's response to academic work was incorrect.
5. (Social Approval Mistake)-An approval mistake of reinforcement follows social behavior that involves giving approval to inappropriate behavior.

6. **Aa** (Academic Approval Mistake)-This is an approval mistake of reinforcement following academic behavior. Teacher indicates the academic response is correct when, in fact, the answer is incorrect.
7. **Qa** (Disapproval Social Mistake)- A disapproval mistake of reinforcement following social behavior. Teacher gives disapproval when the social behavior was indeed appropriate to the classroom situation.
8. **Qa** (Disapproval Academic Mistake)- A disapproval mistake of reinforcement following academic behavior. Teacher indicates the academic response is incorrect when, in fact, the answer is correct. A tic (/) was made in the proper observation interval each time feedback was given (Wagner & Strul, 1979).

Observer Reliability

Before observing the videos, an experienced researcher and reliable observer, Dr. Wagner, the researcher's major professor, coached and reviewed the researcher, when the researcher was analyzing the videos, concerning the criteria needed to determine whether or not a teacher behavior was positive or negative feedback (See Appendix). Dummy observations were screened and data recorded by the researcher and Dr Wagner (the reliable observer) until both of them achieved 100% concordance in at least 80% of the intervals. That is, independent observations were made by each of them, using the same observation intervals, and this process continued until both observers independently saw and recorded the same data for at least 80% of the feedback in each observation. At that point, the researcher was deemed a "reliable observer," and all experimental observations

accomplished in this study were subsequently done by the researcher. These criteria, used extensively in teacher observation recording and reported in the literature, were used to observe the videos for consistency. The researcher was also coached on the correct procedure to be used to analyze the videos. After the tapes were recorded, the researcher examined the videos to record the amount of teacher feedback. The researcher examined every one of the videos in the same way: The researcher observed for 15 seconds and recorded for 5 seconds, a total of three intervals per minute, doing the same for the fifteen-minute duration of the videotape.

The formulas used to determine the percentage of As, Aa, Ds, Da, and errors are in the Appendix.

CHAPTER 4

RESULTS

Table 1 *Combined Classroom Teacher Data*

<i>Teachers</i>	<i>As</i>	<i>Aa</i>	<i>Ds</i>	<i>Da</i>	$\textcircled{As}$	$\textcircled{Aa}$	$\textcircled{Ds}$	$\textcircled{Da}$
<i>C1</i>	3	422	32	52			1	
<i>C2</i>	18	142	43	52				
<i>C3</i>	4	100	84	31				
<i>C4</i>	1	147	67	44				
<i>C5</i>	12	116	77	54		1		
<i>C6</i>	2	80	82	52				
<i>Totals</i>	40	1007	385	285	0	1	1	0

Raw data pertaining to the observations of the six classroom teachers' feedback behaviors are revealed in the *Teacher Classroom Data* table (Table 1). Analyses of data were calculated using the formulas shown in Appendix III to determine the ratio of each of the teacher reinforcement categories. *Classroom Teacher Data* shows that classroom teachers gave 2.3% social approval feedback, 59% academic approval feedback, 22% social disapproval feedback, and 16.5% academic disapproval feedback. Only one academic approval error and one academic disapproval error were found. Analysis of these percentages shows a new ratio of 3:2 contingent approval to disapproval teacher feedback in today's teachers.

Table 2 *Combined Music Teacher Data*

<i>Teachers</i>	<i>As</i>	<i>Aa</i>	<i>Ds</i>	<i>Da</i>	$\textcircled{As}$	$\textcircled{Aa}$	$\textcircled{Ds}$	$\textcircled{Da}$
<i>M7</i>	2	225	75	32	0	0	0	0
<i>M8</i>	2	111	36	19	0	0	0	1
<i>Totals</i>	4	336	111	51	0	0	0	1

The same formulas were used to determine the ratio of each of the teacher reinforcement categories shown by the two music teachers. The music teacher data table shows that the music teachers gave .7% social approval feedback, 67% academic approval feedback, 22% social disapproval feedback, and 10% academic disapproval feedback. Only one academic disapproval error was found. Analysis of these percentages shows a ratio of 5:2 contingent approval to disapproval teacher feedback in today's music teachers.

The following table shows a complete breakdown of percentages for both classroom teachers and music teachers.

Table 3 *Combined Classroom and Music Teachers Percentages*

<i>Teachers</i>	<i>As</i>	<i>Aa</i>	<i>Ds</i>	<i>Da</i>	<i>As</i>	<i>Ac</i>	<i>Ds</i>	<i>Da</i>
<i>Past studies</i>	2.75	36.88	33.71	12.22	9.25	.23	7.12	1.50
<i>Classroom</i>	2.3%	59	22	16.5	0	0	0	0
<i>Music</i>	.7	67	22	10	0	0	0	0

Results show that today's classroom teachers are 9% more academically approving than thirty years ago because, in the past, teachers gave 50% approval feedback (Duke & Henninger, 1998). Furthermore, today's music teachers are 67% academically approving, leading us to the fact that music teachers are still more approving than classroom teachers.

No study has been found in which classroom teachers and music teachers are compared as to their rates of approval to disapproval feedback. This seems to be the first study that compares the percentages of the eight categories of teachers' behaviors

between classroom and music teachers. And, little investigation has been done to obtain comparative ratios of teacher behavior for classroom teachers of thirty years ago and today's teachers. Wagner and Strul, 1979 is the only study found, which dedicates a portion of their study to mentioning comparative ratios of teacher feedback between 1979 and today.

CHAPTER 5

CONCLUSIONS

In studies conducted approximately 30 years ago, trained professionals demonstrated that when giving feedback to their students, they were 60% approving, while untrained teachers did not come near to 60% (Duke & Henninger, 1998). Duke & Henninger (1998) show that 1:1 was the best approval to disapproval feedback ratio shown by teachers, meaning that the amount of positive feedback was the same as the amount of negative feedback, even though teachers knew, through a series of previous studies, that 80% was the optimum percentage of positive feedback (4:1 ratio) (Kuhn, 1975; Forsythe, 1975; Murray, 1975).

Authors such as Madsen, Forsythe, Murray, Wagner, and others have conducted many studies with the purpose of improving teaching techniques. Unfortunately, these studies are sitting on university shelves waiting for teachers to come and inform themselves about these findings. Through data, these studies showed different teachers' feedback, depicting how students' attentiveness, attitudes, and performance can be improved through appropriate positive teacher feedback. The question is, "Do teachers practice what is good for them?" This study showed that classroom teachers taught under a contingent 3:2 approval to disapproval teacher feedback ratio. However, it is possible that, if teachers would read the entire collection of studies dedicated to approval/disapproval feedback, teachers could perform at the optimum level of approval/disapproval feedback: 4:1.

The subjects (classroom teachers) in this study were more positive than teachers were in the past, showing an approval feedback ratio of 3:2, and meaning that for every 3

approvals, teachers gave 2 disapprovals. This ratio combines both social & academic feedback.

Although the purpose of this study was to compare present teacher feedback ratios to those of thirty years ago, some useful conclusion were drawn from raw data. By comparing the 2.3% social approval to the 59% academic approval, it is easy to assume that teachers emphasize and reinforce academics more than the social aspects of the classroom environment. At least, they give more feedback to academic matters. Music teachers in Forsythe's (1977) study gave students 63% approval feedback, 4% more approval feedback than what this study shows. When comparing music teachers from Forsythe's (1977) study to the music teachers in this study, we see that today's music teachers are giving less approval feedback. Even though the students' attentiveness behavior was not a part of this study, many children with different kinds of emotional problems made the teacher's work more difficult and challenging. It is probable that this challenge forces the music teacher to resemble a classroom teacher, showing a low ratio of social disapproval feedback and a high ratio of academic approval feedback.

Facing the effects of the FCAT (Florida Comprehensive Achievement Test), it is quite possible that today's teachers have needed to become more positive in their interaction with students to achieve greater results. Possibly the research has finally taken hold, and teachers see the need to be more positive, so that learning can happen. Teachers now use various instructional strategies, from Mathematics and Reading workshops, in their classrooms, with their students. There has been so much research done concerning this matter that instructional strategies and teaching techniques seem to have greatly improved. The teaching of researched strategies to educators has become

more uniform allowing more widespread implementation by the majority of teachers today. Hopefully, teacher education programs in universities will use this research in the implementation of courses concerning classroom management, special methods, and instructional strategies. Teachers will be exposed to research findings than teachers were in the past. As always, continuing teacher education is available to new, as well as experienced teachers through workshops and conferences; however, it is observable that now teachers are using these resources.

Some questions still remain:

Are teachers willing to know how a 4:1 ratio can be learned?

Are teachers willing to learn how to use this tool?

Are teachers willing to practice it?

Are teachers willing to implement it?

It is hoped that continuing teacher education will become more effective, and teachers will be more willing to consider research findings.

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APPENDIX I

MODIFIED FORM B: TEACHER OBSERVATION

(This form has only twelve rows, but there were fifteen rows used for this study. Used with the author's permission)

Observer: _____ Teacher _____
 Reliability Observer: _____ Grade or Subject: _____
 Number in Class or Group: _____ Date: _____
 General Activity: _____ Time Start: _____ Time End: _____
 Length of Observation Intervals in Seconds: _____
 Record Intervals In Seconds _____ Page _____ of _____
 As _____ Aa _____ Ds _____ Da _____ _____ _____ _____ _____

Time	Activity Code	Intervals for 1-Record	Intervals for 2-Record	Intervals for 3-Record
1		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
2		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
3		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
4		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
5		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
6		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
7		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
8		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
9		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
10		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
11		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da
12		As Aa Ds Da	As Aa Ds Da	As Aa Ds Da

APPENDIX II

TEACHER OBSERVATION CATEGORIES

- Aa Approval for academic behavior is recorded if the teacher indicates the academic work is correct. Academic approval usually involves words, spoken or written. The observer should watch carefully to determine if physical expressions, closeness, activities, or things are specifically paired with correct answers, indicating attention or commendation for the correct answer rather than the "working" itself. Care should be exercised in discriminating between approval directed toward academic work and approval for correct social behavior.
- As Approval for social behavior is recorded if the teacher gives any approving response paired specifically with appropriate social behavior. This category includes words, physical expressions, closeness, activities, and things directed toward any social behavior (following rules, working, cooperating, getting on-task).
- Da Disapproval for academic behavior includes any disapproval indicating that a student's response to the curriculum materials was incorrect. Disapproval in classrooms generally involves words, spoken or written (grades), but one should not overlook physical

expression, closeness, (hitting, grabbing, forcibly holding, putting out of group), or deprivation of activities or things.

Ds

Disapproval for social behavior given by the teacher follows any disruption of the learning environment, which interferes with learning. Disapproval includes words, spoken or written, that reprimand. Disapproval may be of either high or low intensity and includes yelling, scolding, threats and threatening comments concerning later consequences. Disapproval also includes bodily expressions such as frowning, grimacing, or shaking a fist, closeness such as hitting, slapping, paddling, or other means of corporal punishment, and deprivation of activities or things.

As

An approval mistake of reinforcement following academic behavior occurs when the teacher indicates the academic response is correct when, in fact, the answer is incorrect.

As

An approval mistake of reinforcement following social behavior involves giving approval to inappropriate social behavior. For example, a teacher may touch a student "gently" during or following a misbehavior (closeness) or may reinforce the misbehavior through words, bodily expressions, activities, or things. An approval mistake is recorded when the teacher follows a student's breaking of

classroom rules with an approval response (inconsistency). The teacher may verbally recognize a student who is walking around when he is supposed to be in his seat, or the teacher may recognize a student who blurts out an answer (whether correct or incorrect) although the student is supposed to raise his hand for recognition. An approval mistake could also occur if the teacher uses words to dispense group verbal approval (praise) when one or more of the students in the group are off-task.

Da

A disapproval mistake of reinforcement following academic behavior is recorded when the teacher indicates the student's academic answer was incorrect when the answer was, in fact, correct.

As

A disapproval mistake of reinforcement following social behavior is recorded if the teacher uses disapproval when the social behavior was indeed appropriate to the classroom situation. This occurs most frequently when the teacher gives group disapproval and one or more of the students are, in fact, on-task. A disapproval mistake may also occur when the teacher interrupts his work with one student in order to attend another student. Interruptions may lead to a disapproval mistake of reinforcement if the student behavior is disapproved in the process. Disapproval mistakes also occur when the teacher delays too long in using disapproval for inappropriate

behavior. For example, a student engages in inappropriate behavior, stops the inappropriate behavior, is working appropriately, and then the teacher disapproves.

APPENDIX III

FORMULAS

Social Approval Ratio:

$$\frac{As \text{ (frequency)}}{As + Aa + Ds + Da \text{ (Frequency of each)}}$$

Social Disapproval Ratio:

$$\frac{Ds \text{ (frequency)}}{As + Aa + Ds + Da \text{ (Frequency of each)}}$$

Academic Approval Ratio:

$$\frac{Aa \text{ (frequency)}}{As + Aa + Ds + Da \text{ (Frequency of each)}}$$

Academic Disapproval Ratio:

$$\frac{Da \text{ (Frequency)}}{As + Aa + Ds + Da \text{ (Frequency of each)}}$$