

EFFECT OF COOPERATIVE LEARNING ON MUSIC COMPOSITION,  
INTERACTIONS, AND ACCEPTANCE IN ELEMENTARY  
SCHOOL MUSIC CLASSROOMS

by

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Title: EFFECT OF COOPERATIVE LEARNING ON MUSIC COMPOSITION,  
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CLASSROOMS

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This investigation compared the effectiveness of cooperative learning to individualistic instruction in two fourth-grade elementary school general music classes. Effects of the two strategies on the music composition, social interactions, and acceptance of peers were examined.

Cooperative learning is a process whereby students work together toward shared goals. Student/teacher interaction is structured and encouraged in this model. Groups of four to six students combine their efforts to solve problems, make decisions, and work interdependently in an effort to enhance critical thinking and social skills necessary for students to better function in society.

Individualistic instruction allows students to work independently of others. Interaction with other students is absent, given that students work alone, allowing them to

work at their own pace on problems that may or may not be the same as those of their classmates.

A pre/posttest two group experimental design was used. The two experimental groups were cooperative learning (n=26) and individualistic instruction (n=27). Intact, fourth-grade heterogeneous classes were randomly assigned to one of two treatment groups. Each group participated in seven interventions over five-weeks.

The independent variables were the two learning strategies, cooperative learning and individualistic instruction. The dependent variables were music composition, interactions, and acceptance of peers. Measurement instruments included a music composition test, created by the researcher, and an acceptance scale based on that of Yager, Johnson, Johnson, & Snider (1985). Students were videotaped at the start and end of the study to assess on- and off-task interactions.

There was a significant increase in composition pre- and posttest scores for both experimental groups. On- and off-task interactions were significantly different between groups. There was no significant difference in the acceptance of peers; however, a strong correlation was found between the positive nominations made on the pre- and posttests.

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## CHAPTER I

### INTRODUCTION

The elementary music classroom has long been a place where students are encouraged to explore and create. Traditionally, one role of the music teacher has been to direct and structure this exploration and creativity in an attempt to achieve music literacy and appreciation. The most frequently used method of instruction in the general music classroom is whole group with the music teacher being the primary focus of the students' attention. This hierarchical work process places one person in charge of decision-making, requiring all others to comply (Claire, 1993/94). However there are other means of instruction that are successful in meeting the needs of students in the diverse music classroom. Cooperative learning is among these strategies.

Cooperative learning is a teaching technique that requires students to take on a more active role in acquiring knowledge. The teacher's responsibilities in a cooperative learning environment are to structure, inform, and guide student learning; to specify instructional objectives, provide appropriate materials and observe student interaction (Adams & Hamm, 1990; Kaplan & Stauffer, 1994, p. 46; Zbikowski & Long, 1994). A cooperative learning structure is one where students work together toward shared goals by exchanging ideas, information, and resources (Johnson, Johnson, & Holubec, 1994). It is a mutually supportive process where students work collaboratively sharing responsibilities of making decisions (Claire, 1993/94). Cooperative learning shifts the

educational focus from the “glorification of the individual (competition) to the success of the group (cooperation)” (Kaplan & Stauffer, p. 4).

The social aspect of cooperative learning is of paramount importance (Di Natale & Russell, 1995). Within this structure, students work with peers who act as behavior models for other students; they imitate each other’s behavior and identify with friends possessing admired competencies. “Peers have the ability to shape a wide variety of social behaviors, attitudes, and perspectives” (Johnson & Johnson, 1987, p. 25).

### *Methodological Framework*

Simply placing students in small groups does not meet the criteria of a cooperative learning environment. Rather, the activities in which the students participate and the way each group member functions must be carefully structured to provide for specific learning goals and objectives.

The common school movement of the 18th century was similar, in its constructs, to cooperative learning. Like cooperative learning, it aimed to teach students from different social backgrounds a common body of information (Spring, 1997). Proponents of the common school felt that political disagreements would decrease and students would become better collaborators by including students from various social positions. They hoped that better social circumstances would result (Cangro, 2004, p. 8). Cooperative learning groups represent microcosms of the class in which they participate. They are illustrative of the academic abilities, gender, ethnicities, and races therein (Cangro, 2004, p. 17).

Cooperative learning is a structure whereby “two or more individuals are allowed, encouraged, or required to work together on some task, coordinating their effort to complete the task” (Slavin, 1983, p. 431). All cooperative learning is considered a task structure. Lectures, individual seatwork, and group seatwork are examples of other task structures.

There are reservations regarding utilizing cooperative learning strategies. Some of them are:

1. Passive uninvolvement – the behavior applied to those students who do not participate, help, or pay attention during group activities (Johnson & Johnson, 1987, p. 131). These students are *free riders* due to passivity and the expectation that other group members will do all of the work (Therrien, 1997, p. 15-16).

2. Active uninvolvement – off-task behavior. Students leave their groups without permission and refuse to do the work that is required (Johnson & Johnson, 1987, p. 132). This *sucker effect* is the resultant factor of inaction (Therrien, 1997, p. 16).

3. Independence – students complete tasks alone, without paying attention to the activities and input of the group.

4. Taking charge – the behavior of those students who want to be the manager of all choices that are made. Students who take charge do so by controlling the majority of the work and actions of group members (Johnson & Johnson, 1987, p. 132). Two behavioral subsets of taking charge are *status differential* and *ganging up*. Students with more dominant personalities tend to take charge of the task, resulting in a lack of support for the ideas that stem from students who are less dominant (Therrien, 1997, p. 16).

### *Elements of Cooperation*

Proper structuring of cooperative learning groups can prevent many of the negative issues listed above. When organized well, cooperative learning ensures active participation by all students (Therrien, 1997). Johnson and Johnson (1999) identify five elements that must exist for the adequate structure of a cooperative environment:

1. Positive interdependence – when students are linked to other students in such a way that one member cannot succeed unless other group members also succeed.

2. Individual accountability – each group member is assessed and his or her reward is dependent both on his or her individual performance and that of the whole group. This assessment requires that all group members be responsible for knowing the material and help to complete the task.

3. Face-to-face – interactions where “students promote each other’s learning by encouraging, praising, supporting, helping, and assisting” (p. 71).

4. Interpersonal and small group skills – “students are taught and encouraged to employ the social skills needed for cooperation” (Hosterman, 1992, p. 13). Improved self-esteem is an associated benefit of this element.

5. Processing – self-assessment; the individuals assess their own work and the group as a whole assesses how they functioned for the purpose of defining strengths and weaknesses.

### *Background*

The public school classroom met significant change with P.L. 94-142, the Education for All Handicapped Children Act (EAHCA). It was the first step in mandating

that students with special needs take part in general education classrooms in some way. In 1990, this act was renamed Individuals with Disabilities Education Act (IDEA). It assured that “no child could be denied a free and appropriate public education, and that education must take place in the most integrated, least segregated setting as possible” (Adamek & Darrow, 2005, p. 23).

According to Condition of Education, 1998, the number of students who participate in federal programs for children with disabilities is on the increase. From 1977 to 1996 this number grew by 51 percent (Hammel, 2001, p. 9).

#### *Statement of the Problem*

In efforts to meet the needs of all students music teachers may need to alter curricula. Traditionally, music instruction has been teacher-led. Teachers who completed training programs more than ten years ago most likely did not have to take a class that addressed the needs of students with disabilities, as part of their course of study.

Clearly, modifications to curricula are necessary if inclusion practices are to be successful. Cooperative learning is a technique that modifies instructional strategies rather than content. The literature discussed in the review will highlight the comparisons between cooperative learning and other techniques and the effect cooperative learning can have on students regardless of the varying levels of ability.

#### *Purpose of the Study*

The purpose of this study is to investigate the effectiveness of cooperative learning strategies as they relate to music composition, behavioral interactions, and acceptance of elementary school music students. It is hypothesized that students who



work in cooperative learning groups will be positively affected by the implementation of this structure. The following research questions delineate this purpose:

1. Do structured cooperative learning strategies improve fourth-grade general music students' ability to compose music more than individualistic instruction?
2. Are students who participate in cooperative learning groups more on-task than students who work individually?
3. Do cooperative learning groups promote more on-task behavioral interactions among students than individualistic instruction?
4. Are elementary school students more accepting when they work cooperatively or individually?

#### *Importance of the Study*

Vygotsky (1987) theorized, “what the child is able to do in collaboration today he will be able to do independently tomorrow” (p. 211). The collaborative structure of cooperative learning can be inherent in the music-making process. Members of music ensembles work together as sections to achieve a unified sound, and some general music students participate in musical games and interactive activities. However, despite these connections, there is little literature that examines the use of cooperative learning in general music classrooms. Furthermore, it seems that few music educators have chosen to use cooperative learning in their classrooms (Kassner, 2002).

The general education research on cooperative learning began in the 1970s. Most of this work has been conducted in math, reading, language arts, and social studies (Slavin, 1983, p. 3). Since then, the use of cooperative learning has been extended to

working with college students (Hosterman, 1992; Richardson, 1997) and physical education (Grenier, Dyson, & Yeaton, 2005). Even though the body of literature supporting cooperative learning is large in these areas, this strategy remains relatively unexplored in music education.

As students in schools become more diverse, the need for different teaching methodologies becomes greater. Therefore, research that includes the implementation of cooperative strategies in music education may help contribute to our understanding of this little used strategy.

#### *Scope and Limitations*

In this study, fourth-grade students received one of two methods of instruction in their general music class: individualistic instruction or cooperative learning. Both methods were defined as experimental conditions. The dependent variables utilized were music composition, behavioral interactions and acceptance.

It was assumed that the study would be limited by some circumstances that I could not manipulate. Students who participated in this study were part of intact, heterogeneous music classes. Complete random assignment was not possible. Musical skill levels of the students varied. It was assumed that the level of musical skill would be greater for students who take private lessons, and/or participate in community and school music ensembles, than for other students who may have little to no music involvement outside of their general music class. However, it was hoped that this diverse nature of the students would be comparably distributed between the experimental groups and across the classes. The pretest scores provided documentation of these differences.

## CHAPTER II

### REVIEW OF LITERATURE

Cooperative learning is a mutually supportive work process whereby small groups of students are organized in such a way as to work together toward shared goals by exchanging ideas, information, and resources (Claire, 1993/94; Johnson, Johnson, & Holubec, 1994). Various types of grouping such as peer tutoring, cross-age tutoring, and cooperative learning have been used extensively in the fields of general and special education. Each involves a wide variety of organizational plans, group selection criteria, instructional methodologies, and educational philosophies (Esposito, 1973). Based on peer mediation, grouping shifts the focus from the teacher to the student.

Groups and dyads focus on the actions of the individual in cooperative learning (Moody & Vaughn 1997). Leading researchers in the field of cooperative learning agree that, in order for a group to be cooperative, it must be heterogeneous (Johnson & Johnson, 1987; Slavin, 1990). Heterogeneity is achieved by assigning children to a group or class such that a wide range of individual differences is present (Esposito, 1973).

Other researchers advocate the use of peer-mediated learning strategies in heterogeneous groups (Andrews, 1996; Dugan, Kamps, Leonard, Watkins, Rheinberger, & Stackhaus, 1995; Gillies 2000; Jellison, Brooks, & Huck, 1984; Rutowski, 1996; Slavin, Madden, & Leavey, 1984; Webb, 1982). Peer mediation is the process whereby students work together to achieve academic and/or social goals. Some of the expectations of peer mediation are: (a) analyzing one another's work; (b) problem solving; and (c)

peer modeling (Darrow, Gibbs, & Wedel, 2005). Peer-tutoring, cross-age tutoring, and cooperative learning are three peer mediation methods represented in the most literature. The heterogeneous groups used in the research outlined in this review were mainly comprised of four- to five-members, and included high, average, and low achieving students; boys and girls; and ethnic groups represented in the class population. Additionally, much of the literature cited here was written prior to IDEA and did not require the use of person-first language, (i.e., students with special needs or students with disabilities). For the purpose of this review, the terminology used will adhere to IDEA and person-first language, unless a direct quote is used.

### *Peer-Tutoring*

Darrow, Gibbs, and Wedel (2005) define peer tutoring as an arrangement of peer mediation where “two students work together with one student providing assistance, instruction, and feedback to the other.” This form of peer mediation has been used successfully in urban schools to teach reading (Kourea, Cartledge, & Musti-Rao, 2007). When compared to the traditional teacher-led instruction, peer-tutoring yielded significantly higher reading responses (Ezell & Kohler, 1994).

The appropriateness and adequacy of peer tutoring strategies have found a place in the inclusive classroom as well. Students with learning disabilities have shown increases in achievement in spelling, mathematics, and music (Alexander & Dorow, 1983; Burks, 2004; Calhoon & Fuchs, 2003). Pairing a reward structure with peer-tutoring also increased achievement in mathematics for students who functioned

normally (Harris & Sherman, 2003). Additionally, student and teacher attitudes are generally positive towards peer-tutoring (Calhoon & Fuchs, 2003; Darrow, Gibbs, & Wedel, 2005).

### *Cross-Age Tutoring*

Cross-age tutoring is a form of peer mediation by which an older student, considered the expert, presents academic material to younger students, one-on-one (Maher, 1982). Students with behavior and/or emotional problems often benefit from this type of tutoring (Madsen, Smith & Feeman, 1988; Maher, 1982; Scruggs & Osguthorpe, 1986).

When compared with peer tutoring, cross-age tutoring has very similar academic results. In addition, research has found that when students with learning and behavioral needs were used as cross-age tutors, they showed attitudinal gains as well (Scruggs & Osguthorpe, 1986).

The specific behavioral benefits of cross-age tutoring include academic improvement, lower absentee rates, and fewer disciplinary referrals (Maher, 1982; Maher, 1984). When students with extreme behavioral problems served as tutors for younger students, they were identified as gifted, on-task, and socially appropriate by observers (Madsen, Smith, & Freeman, 1988).

### *Cooperative Learning Techniques*

Cooperative learning is a mutually supportive work process whereby students work collaboratively toward shared goals by sharing responsibilities of making decision

and exchanging ideas, information, and resources (Claire, 1993/94; Johnson, Johnson, & Holubec, 1994). There are several cooperative group structures provided in the literature. While all cooperative structures focus on the student, the ways in which the learning is organized differs. Team-Assisted Individualization, Jigsaw, and Student Teams Achievement Division are three structures used widely in general education.

Team-Assisted Individualization is a combination of individual and group work. After students work alone on a given task, they join with other members of their class to discuss answers and seek assistance. The scores the students receive individually are combined with those of their group members resulting in a final score (Slavin, 1983b).

Slavin, Madden, and Leavey (1984a) and Slavin, Leavey, and Madden (1984b) evaluated the effect of this cooperative learning technique when compared to Individualistic Instruction and group paced instruction. The 504 students in the first study were placed into one of three groups; Team-Assisted Individualization, Individualistic Instruction with no student teams, or control. The control in this study was defined as traditional instruction methods for teaching mathematics; the teacher led the instruction and activities included in the class. Students in the Team-Assisted Individualization group worked on math problems using the structure described above. The same content was studied in the Individualistic Instruction group, but those students did not check answers or receive feedback from other students as did their Team-Assisted Individualization peers. A traditional lecture method was employed in the control group, using the same content as the other groups. The eight-week treatments showed the Team-

Assisted Individualization group making significant gains in achievement over the control group. However, there was no significant difference in gains between the Team-Assisted Individualization and Individualistic Instruction groups (Slavin et al., 1984b).

In the first study higher interactions across abilities were also found. All students in the inclusive classroom completed a sociometric measure that acted as a pre- and posttest. The measure asked all participants to consider if they viewed the other students as being either a best friend or o.k. Scores from the 117 students with academic disabilities were examined in an effort to delineate the effects the Team-Assisted Individualization and Individualistic Instruction had upon them. The pretest results showed that students with disabilities scored significantly below the mean for being listed as best friends and significantly above the mean on non-choices. On the posttest, the students with disabilities in the Team-Assisted Individualization and Individualistic Instruction groups gained significantly more than those in the control group. However, there were no significant differences in the gains between the Team-Assisted Individualization and Individualistic Instruction groups (Slavin, Madden, and Leavey 1984a).

There were two Team-Assisted Individualization groups and two control groups consisting of 375 fourth-, fifth-, and sixth-grade students in the second study. These groups utilized the same methods as the previous study over a 10-week treatment period. Results of this study were similar to those in the previous study; the Team-Assisted

Individualization students scored significantly higher than the control group on the posttest (Slavin et al., 1984b).

Jigsaw is like Team-Assisted Individualization in that both techniques require a certain level of responsibility on the part of students individually. However, when using the Jigsaw method, there is no direct individualization. Rather, each student is assigned to one content area in which they are to become an expert. After separating from their initial groups, students form new groups with those peers who have been assigned to the same content area. Once the material is expertly learned, students return to their original groups and teach their content to the other group members. Students are tested on all material and scored individually (Slavin, 1990).

The Jigsaw method was compared to direct instruction in a high school physics class. Two groups, totaling 137 students, were assigned to the groups randomly and were given an academic performance test and questionnaire assessing individual personality characteristics such as self-concept and goal orientation. Test scores were highest on the portion of the test that covered the individual's area of expertise. However, for the content that was taught by peers, students in the Jigsaw group performed worse than those students who received direct instruction. Improvements in self-concept and feelings of competence were evidenced for those students assigned to the experimental group (Hanze & Berger, 2007).

The least structured type of cooperative learning techniques is Student Teams Achievement Division. Individual quizzes and the use of worksheets are two main



components of Student Teams Achievement Division. After the teacher introduces the content, groups study worksheets in whatever way best suits them; they quiz one another, help one another and discuss problem areas. Students are allowed to work in whatever way they feel will help them learn the material. They are quizzed individually and are scored based on improvements made (Slavin, 1983b).

Vaughan (2002) utilized the Student Teams Achievement Division technique of cooperative learning in a fifth-grade classroom in Bermuda to test its effectiveness as indicated by attitude and achievement of students of color. Pre- and posttests, in the forms of standard achievement measure and a scale based on attitudes toward mathematics, were implemented. During the 12-week intervention, groups were reorganized six times; individual quizzes were given every Friday. In all cases but one a significant difference was found between the pre- and posttest scores. Data also suggested positive effects on the attitudes of the students toward mathematics.

#### *Cooperative Learning versus Individualistic Instruction*

Individualistic instruction focuses on the needs and abilities of each child; the learning progresses at the pace of the individual (Slavin et. al, 1984b). Individualization of instruction began in the 1960s with *cognitivism*. Cognitivists like Jerome Bruner and Jean Piaget, lessened the importance of curricula. They believed that learning should “not be forced into generalized expectations or predetermined curricular goals” (Rideout, 2002, p. 35). Rather, to achieve at the highest level, education had to be catered to each individual child; the child’s mind was deemed curious, natural, and unique.

For instruction to be individualistic, assignments must be simple and clear, with tasks oriented to the skill level of each child. The role of the student in this instructional technique is contrary to that in cooperative learning. The students each must work in isolation with their own sets of materials and tasks. Self-responsibility and self-evaluation are necessary components of individualistic instruction (Johnson and Johnson, 1987).

What sets cooperative and individualistic learning techniques apart is interdependence. In cooperative structures, interdependence is fostered through the social nature of small groups. For students to succeed in this structure, they must rely on, and interact with, their peers. Conversely, individualistic structures do not provide for the element of interdependence in any way (Johnson & Johnson, 1987).

Contrasts between cooperative learning and individualistic instruction were explored in an effort to discover any effect the techniques had on the relationships between students with special needs and their normal functioning peers (Yager, Johnson, Johnson, & Snider, 1985). Moreover, the attitudes of these students were measured to determine whether cross-ability relationships developed in a linear or nonlinear way. Fifteen fourth-grade students with special needs and 54 of their peers who functioned normally participated in one of three learning conditions: (a) cooperative learning; (b) cooperative learning followed by individualistic learning; and (c) individualistic learning. At the start of the study a sociometric measure was administered to ascertain any negative attitudes the normal functioning students had towards their peers with special needs. Students in the cooperative only condition saw the most progress in their attitudes toward

their peers with special needs. The two cooperative groups also had higher self-esteem, greater cooperation, and greater peer support than the students in the individualistic group (Yager et al., 1985). Johnson (2006) also found that elementary school students prefer group learning as compared to competitive and individualistic learning.

The positive integration of students with special needs into an inclusive classroom can be evidenced by the social interactions and cross-ability relationships found therein. Cooperative learning was used as a tool for integrating students with special needs into a regular fourth-grade classroom (Johnson & Johnson, 1981b). The 12 students with special needs and their 39 peers were randomly assigned to two experimental conditions: individualistic instruction and cooperative. The findings showed that more verbal interactions across abilities occurred in the cooperative learning condition, and students who participated in the cooperative groups displayed more cross-ability interactions during the free-time sessions. Students who were part of the individualistic condition demonstrated more off-task behavior than those in the cooperative condition.

In another study by Johnson and Johnson (1981a), the frequency and quality of cross-ability interactions were examined. Forty students, eight of whom were identified as having severe learning and/or behavior problems, were assigned to either cooperative learning or individualistic instruction. Trained observers assessed each of the groups for interactions within the instructional situation, interpersonal attraction, and frequency of interaction during free time. The students who functioned normally and the students with special needs in the cooperative condition interacted 48 times per session whereas

students in the individualistic group interacted only 16 times per session. The frequency of verbal comments between the students was also counted. The normally functioning students in the cooperative condition interacted more with their peers who had disabilities in the following ways: (a) directions and suggestions, (b) help and assistance, (c) encouragement and praise, (d) negative comments, and (e) general conversation. There was no significant difference between the two groups in the amount of off-task behavior.

Individualistic learning has also been compared to competitive learning. This technique is similar to individualistic learning in that students work alone and are graded on an individual basis. However, students who work competitively against their peers in an effort to achieve a goal that can be attained by only one or a few students (Johnson & Johnson, 1987). Johnson and Johnson (1982) observed the free time interactions of students working within competitive and cooperative learning structures. The researchers also assessed attitudes regarding cooperation, working individually, and cohesion between students. The results showed that students in the cooperative group had more cross-ability interactions and helping than students in the competitive group. Students in the cooperative group displayed helping behaviors toward their peers 17 times whereas the students in the competitive group only showed signs of helping 11 times.

Other means of structuring groups cooperatively were examined by Johnson, Brooker, Stutzman, Hultman, and Johnson (1985). Cooperative controversy and cooperative concurrence seeking were compared to individualistic learning by determining the effects each type of learning had on student achievement and attitude.

Students who worked in the cooperative controversy group were encouraged to disagree with one another as a means of learning the content and providing arguments for their conclusions about the content. Conversely, the cooperative concurrence-seeking group aspired to avoid disagreement and emphasize agreement as it pertained to the content. Those students in the individualistic group worked independently. Three tests were administered as a means of measuring the two dependent variables, achievement and attitude. Results indicated that students in the cooperative controversy group achieved the highest, followed by the students in the concurrence-seeking condition, with the students in the individualistic condition achieving the lowest. Additionally, students in the two cooperative conditions, overall, exhibited a greater change in their attitudes and believed that there was more cooperation among students.

In an inclusive classroom where cooperative learning is employed, students achieve higher and have more positive attitudes towards the learning process than their peers who learn in individualistic or traditional teacher-led situations (Hanze & Berger, 2007; Holloway, 2001; Inzenga, 1999; Slavin, Madden, & Leavey, M., 1984a; Slavin, Leavey, & Madden, 1984b; Vaughan, 2002). Values such as self-esteem and altruism are also heightened with the use of cooperative learning (Gillies, 2000; Johnson, Johnson, Johnson, & Anderson, 1976; McManus & Gettinger, 1996). Lastly, this literature shows that students prefer group to individualistic learning (Johnson, 2006).

*Behavior and Cooperative Learning*

Cooperative learning has been used frequently as a means of encouraging cross-ability relationships in the inclusive classroom. Cross-ability is a term adapted from a similar term used by Johnson and Johnson (1981), cross-handicap. This term refers to relationships between students with and students without disabilities. Students' attitudes change and they achieve higher academically when they work cooperatively in cross-ability groups (Jellison, Brooks, & Huck, 1984; Johnson & Johnson, 1981, 1982; Johnson, Johnson, & Snider, 1985; Slavin et al., 1984a). This process is further beneficial when students with disabilities are introduced to their peers in a positive way (Colwell, 1998; Johnson & Darrow, 1997). Both practices foster more optimistic attitudes among students towards their peers with disabilities.

Student interactions were higher for two students with autism during a cooperative learning intervention than when they participated in a traditional teacher-led learning environment (Dugan, Kamps, Leonard, Watkins, Rheinberger & Stackhaus, 1995). The purpose of the study was to explore cooperative learning as a means of including the two students with autism into a regular social studies class. The students with autism and their 16 peers took part in the intervention four times a week for three weeks. Groups were organized heterogeneously; the students with autism were considered the low achieving students in two of the groups. In addition to enhanced student interactions, an increase in the number of correct items on social studies' quizzes and the percentage of academic engagement during the intervention resulted.

The behavior of students is affected by cooperative learning. They exhibit more altruistic behavior towards their peers and have higher self-esteem (Johnson, Johnson, Johnson, & Anderson, 1976). Students who participate in cooperative learning groups also like working within the method and seem to learn better on a day-to-day basis than their peers who work individually (Johnson, Johnson, & Snider, 1985).

### *Cooperative Learning and Music*

An extensive search of the literature revealed that the use of cooperative learning within the context of a music classroom is limited. Of the research that is available, findings suggest that cooperative learning can be an effective instructional means of teaching music (Holloway, 2001; Hosterman, 1992; Inzenga, 1999), although there is not unanimity (Cangro, 2004).

Using a one-group pre/posttest design, Cangro (2004) investigated the effect of cooperative learning strategies on the music achievement of fifth and sixth grade instrumental music students. After 20 weeks of group lessons in a cooperative learning setting, the results found no significant difference in the playing ability of those students who received the cooperative learning intervention.

The attitudes of college students toward cooperative learning were measured along with achievement in music history and listening skills in a music appreciation class (Hosterman, 1992). There was no significant difference between the scores of the control and experimental groups on music history elements. However, the experimental group did score significantly higher on the listening portion of a final examination. While

journals and peer observations indicated the positive outcomes of cooperative learning, the attitudes measured significantly favored the control group in this study.

Holloway (2001) also found that the use of cooperative learning significantly increased overall music listening skills of college music appreciation students. When compared to a traditional lecture model, cooperative learning helped increase listening skills for melody, meter, and timbre. However, there was no significant difference between the experimental and control groups for listening skills for form or modality.

The sight-reading skills of teen-age females were observed and evaluated in the context of the choral classroom (Inzenga, 1999). Students warmed-up in a large ensemble setting, divided into small groups to work on team assignments for 10 to 15 minutes and then concluded the class with the larger group. Findings showed that the students grew significantly in their ability to read tonal and rhythmic phrases while participating in small groups as compared to their performance during teacher-led instruction.

The interdependent nature of cooperative learning yields higher interactions between students of varying abilities. Jellison, Brooks, & Huck (1984) compared the frequency of social interactions and acceptance of students with special needs in large group instruction and small group work, without and with music reinforcements. The group that demonstrated the most cooperation was allowed to listen to rock music at the end of the activity. The percentage of positive social interactions between students with special needs and their peers was highest under the condition that incorporated music reinforcements and lowest under the large group condition.



### *Composition*

“Composing and arranging music within specified guidelines” is the fourth National Standard for Music Education (<http://www.menc.org/publication/books/standards.htm>). While some music educators choose to incorporate other music activities at the expense of music composition, many feel that by implementing composition into their curriculum 71.9% of music teachers in Indiana cite that “children learn more through composing” (Strand, 2006).

Riley incorporated composition into seventh- and eighth-grade band classes (2006). Two modes of music instruction were used in this study: (a) music performance and listening, and (b) music composition, music performance, and listening. The effect of these instructional approaches on music achievement, performance, and attitude was studied. No significant difference between groups on music achievement was evidenced.

In a longitudinal study elementary and middle school students were given free reign to compose in their music classes on a weekly basis for five years. No composition instruction was given. While younger students had a more difficult time expressing the intentions they had for their compositions, an understanding of note durations and relationships between notes was seen. The older students, on the other hand, demonstrated more functional understandings. Overall, all students became better capable of expressing their musical thoughts over the period of the study (Stauffer, 1999).

Similar findings resulted when second grade students were presented with a variety of instruments for which they were to compose (Levi, 1991). This researcher

found that, the longer students worked and when they were given regular opportunities to compose, their compositions improved, their notations became more understandable, and learning to compose provided other avenues for teaching music literacy.

To ensure that long-term value is gained from the composition process, it is important to understand the processes by which students compose. Research has shown that children do use specific compositional processes. These processes follow a pattern of moving from initial planning to the development of motivic ideas (Wiggins, 1994), they show the ability to create clear beginnings and endings (Baldi & Tafuri, 2000/01), and the processes include exploration, development, and repetition just as those processes of professional composers (Kratz, 1989).

Some of these processes involve traditional notation, but nontraditional notation systems are also used. While some researchers see the creation of a nontraditional notation system as composition in and of itself (Swanwick & Tillman, 1986), the overall effectiveness of similar graphic notation systems has been argued.

Junior high school students in Korea who used traditional staff notation when composing showed significantly greater creativity than their peers who used nontraditional graphic notation (Auh & Walker, 1999). Additionally, a greater variety of compositional strategies were used by students in the traditional group.

When students worked collaboratively with friends to create a musical composition, 11 and 12 year old students received significantly higher scores on final compositions than did their peers who were paired with non-friends (Miell &

MacDonald, 2000). Similarly, dyads including friends exhibited high use of collaboration; students completed one another's musical thoughts. It was supposed that friends communicated in ways better suited to the completion of these collaborative musical tasks.

### *Conclusions Drawn from the Literature*

There is overwhelming evidence that supports the use of cooperative learning in the general education classroom. Incorporating the technique into the inclusive classroom has resulted in greater interdependence, more social interactions, and more cross-ability relationships than other modes of learning. As the need for classrooms to be more conducive to a wide variety of learning abilities rises, greater is the need for different ways of teaching.

Given the interdependent nature of creating music, namely composition, it would seem that cooperative learning is well suited for use in the music classroom. Further, it may be that it can enhance positive behavioral interactions and attitudes among students of varying abilities in this setting. Therefore, I chose to compare the implementation of cooperative learning and individual strategies in a fourth grade setting to examine their impact on student achievement, behavioral interactions and acceptance.

## CHAPTER III

### METHODS

#### *Research Design*

A pre/posttest two group experimental design was used in this study. The two experimental groups were cooperative learning and individualistic instruction. Intact, fourth-grade heterogeneous classes were randomly assigned to one of two treatment groups. The study lasted for a total of five weeks. Both groups completed individual pretests in their regular classrooms at approximately the same time, one week before implementing the intervention. The interventions occurred seven times during the four-week study. Each class meeting lasted approximately 30 minutes. The week following the intervention, the groups completed individual posttests during the second class meeting in the fifth week. Like the pretests, the posttests were administered to the students in their regular classroom. I served as the instructor in this study.

#### *Independent Variables*

The two independent variables studied were cooperative learning and individualistic instruction. While the content taught in both conditions was identical, the instructional techniques differed. For a portion of the music class, students in the cooperative learning condition worked on assignments in groups, and students in the individualistic instruction condition worked on those assignments alone.

At the beginning of each class, students in both groups were instructed to sit in a large circle for instruction. I took 10 minutes to present the day's material in a traditional

teacher-led format. My interactions were limited to the musical tasks and occasional reinforcements for appropriate academic and social behaviors.

Following the initial 10-minutes of instruction, cooperative condition students were assigned and moved to heterogeneous groups of four to five children where they worked cooperatively on a given task. I defined what it meant to work cooperatively for the students each day of the intervention. A poster with the rules of cooperation was also displayed in the classroom in such a way that all students could view easily. The display read, (a) work with everyone, (b) help everyone, (c) encourage everyone, and (d) talk about the music activity with everyone (Jellison, Brooks, & Huck, 1984). Students in the cooperative condition read the rules before beginning their small group work each day. To ensure that all students participated in the task, group members were assigned specific roles as suggested in the literature (Kaplan & Stauffer, 1994, p. 21). The roles to which students were assigned were: reader, writer, and supply manager. Reinforcements were given to students who displayed the characteristics of cooperation when it was warranted.

Group members decided each day who would serve in the roles that I specified for them. The readers were in charge of reading the printed directions to the other group members, the writers recorded the ideas and anything having to do with the assignment on the worksheets, and the supply managers were responsible for collecting, distributing, and returning any needed supplies (Kaplan & Stauffer).

Students in the individualistic condition completed the identical tasks as those in the cooperative group, except they worked alone. They were directed to keep their work to themselves and raise their hand if they had a question. When it was warranted, I

reinforced the students for working alone and keeping quiet. The cooperation poster was not displayed for these students. However, the students were reminded that the rules of the music classroom still applied even though a different person was teaching. A stopwatch was used to monitor time spent on each aspect of instruction to assist with fidelity of treatment in instruction between the groups.

Composing was the task taught in both conditions. Activities were centered around creating compositions that included ta, ti-ti, and ta rest; sol, mi, la, re, and do. These note names and note values were reviewed in the first two weeks of intervention. Once these concepts were learned the students were taught how to use them to compose music in various time signatures.

#### *Dependent Variables*

Three dependent variables were studied: (a) music achievement, (b) behavioral interactions, and (c) acceptance. Achievement and acceptance were measured in the pre- and posttests. The frequency and nature of interactions between the students was observed using video recordings of the classes in both conditions twice during the study – pretest and posttest. The behavioral interactions were observed, identified and labeled similar to practices used by Gillies (2000) and Jellison et al. (1984). It was first determined whether the behaviors were heterogeneous or homogeneous.

Heterogeneous behaviors were cooperative in nature. The behavioral interactions that occurred between students in the cooperative condition were labeled on-task or off-task. On-task cooperative interactions included students giving assistance to one another

while working on a task. Off-task interactions between students included lack of attention to a given task.

Homogeneous behaviors were those that were individual in nature. If students who worked alone displayed positive academic behaviors (i.e., work on the assignments), they were termed “individual on-task,” whereas individualized negative academic behaviors (i.e., staring about the room and not completing tasks) were called “individual off-task”.

For each of the four interaction types, specific behaviors were named. These behaviors and the codes for each behavioral interaction are listed in Table 1.

Table 1

*Behavioral Interactions Codes*

Interaction	
Heterogeneous – Cooperative	
On-Task (C)	Helping Peers, Engaging with Peers, Encouraging Peers
Off-Task (N)	Not Helping Peers, Not Engaging with Peers, Encouraging Peers
Homogeneous – Individualistic	
On-Task (O)	Working on Tasks Alone
Off-Task (F)	Talking with Peers, Nonparticipation

*Gillies, 2000.*

### *Data Collection*

Two measurements were used for pre- and posttest assessments. Students in both conditions completed the tasks individually. The first was a rubric used to assess individual student's ability to compose following specific criteria such as tonality (start and end the composition on "do"), correct number of beats per measure and varied rhythms, and creativity (Appendix A). The composition test was comprised of four questions (Appendix B). We utilized the composition rubric to score student compositions. Existing rubrics that were originally intended to assess music compositions were modified for use with the population in this study and the content taught (Hickey, 1999).

Behavioral interactions were observed and analyzed using Scribe 4. This data analysis software allows the user "to label events in live observations or in QuickTime movies, summarize event timings, and play back labeled events in customized configurations" (<http://cml.music.utexas.edu/scribe/htm>). For the purposes of this study the video recordings were imported into iMovie HD and subsequently were exported to QuickTime to create movies compatible with Scribe 4.

The music classes met twice each week. The classroom teacher placed the children in line, alternating boys and girls. Upon entering the classroom the students were met at the door and instructed to sit in a circle, facing the white board used for instructional purposes. They sat this way for the first 10 minutes while content instruction took place. On the first day of the study, I put the students in the cooperative condition into their groups and placed them throughout the classroom for the group activity.



Students in the individualistic condition were placed by themselves throughout the room. The floor in the music room was made of vinyl tiles primarily white in color. Alternating tiles of red and green were dispersed equally in the floor. The students in the individualized condition were instructed to sit on a certain color square throughout the room to provide for an equal amount of distance between all students. Following the 10-minute instruction period, students in the cooperative condition moved to their groups and students in the individualized condition moved to the appropriate colored squares.

The students in both conditions were videotaped during the first and last class meeting. Four video cameras were placed in the room such that all students could be seen. Each student received passive parent/guardian consent, thereby giving permission to be videotaped, prior to the start of the study. For each of the recordings a QuickTime movie was created for analysis purposes. I labeled all on- and off-task interactions based on the categories determined a priori. A reliability observer watched one-third of the video and labeled on- and off-task interactions as well. The percentage of time students were observed as being on task were calculated and the durations reported by each observer were compared and ranked in descending order. The resultant rank orders of levels of on-task were comparable (Table 2). The disparity between observers on posttest observations numbered six and seven were likely the result of an ecological awareness on the part of the researcher. What seemed to be off-task behavioral interactions was interpreted by the researcher as the students looking at the teacher and listening to a brief instruction during the activity period.

Table 2

*Reliability Observer Percentages of On-Task Behavioral Interactions*

Observation	Pretest		
	Observer 1	Observer 2	
1	86.89	87.48	
2	85.67	86.80	
3	80.70	83.32	
4	79.70	75.82	
5	77.51	79.28	
6	61.43	59.21	
7	53.57	53.45	
Observation	Posttest		
	1	96.45	90.77
	2	94.98	97.40
	3	92.11	88.39
	4	89.75	88.23
	5	86.67	85.58
	6	85.94	75.88
	7	85.12	67.02
8	68.77	63.01	

Over the course of the four-week intervention each group was observed twice, and events were labeled during the group or individual work from the time the students received the assignment until the time at which they turned in their completed work.

Student acceptance was measured using a sociometric measure developed by Yager, Johnson, Johnson, and Snider (1985). The purpose of this scale was to measure the “sociometric nominations of interpersonal attraction” between students (Yager et al.). Johnson (2006) used an adapted version of this measure in a related study. The measure consisted of sixteen questions. For each question students were instructed to name the three friends from science class who answered the question; the students nominated peers for each of the questions asked. For the purposes of the current study the academic subject specified in the test was changed from science to music (Appendix C).

I read each question aloud and the students were told to list the students they chose for each question. Upon completion of the measure, the sheets were collected and the number of nominations for each student were counted and recorded for each condition.

### *Selection of Subjects*

This study involved fourth-grade students (N=52) in a Spanish immersion elementary school in a Northwest city. In this school, native English speaking students receive instruction in English and Spanish with the intention of students becoming biliterate and developing an appreciation for the cultures of the Spanish-speaking people (<http://www.4j.edu.schools/buonavista>).

This was a convenience sample. Students were part of intact, heterogeneous classes. Assignment of the two classes to the two treatment groups was random. Class A was assigned to the cooperative learning condition; Class B was assigned to the individualistic instruction condition.

### *Procedures*

Students completed two pretests prior to the treatment. One that assessed their composition skills and another that measured their attitudes toward peers with disabilities. Following the pretests, students in Class A were assigned to cooperative learning groups such that each group represented a microcosm of the class as a whole; there were even numbers of high, average, and low-achieving students, boys and girls. The music teacher assigned all students to one of the three achievement categories based on their performance in music class as indicated by their regular music teacher. Students in each category were dispersed evenly across cooperative learning groups (Table 3).

Table 3

*Student Achievement Levels and Sexes in Cooperative Groups*

Group Number	Achievement Level			Sex	
	High	Average	Low	Boys	Girls
1	2	2	0	2	2
2	2	1	2	3	2
3	2	2	0	2	2
4	3	1	0	2	2
5	2	2	1	2	3
6	2	1	1	3	1

Prior to the start of the study, students had not worked cooperatively in music class.

Class time for both conditions was broken down into three distinct sections. In the cooperative condition I took the first 10 minutes of class to introduce the content. For the next 10 minutes, students worked on worksheets in their groups as their regular music teacher and I circulated throughout the room. I acted only as a resource for the groups, directed their questions about the content back to their group members as needed. For instance, if a student asked me for help on a particular question, I told them to ask that question of their group members first. If the problem continued I would then contribute. After the worksheets were completed, I led the students in a short wrap up activity. The structure of the lessons for the individualized instruction treatment was the same as that

in the cooperative treatment, except students in the individualistic condition worked alone on the worksheets for 10 minutes. Students completed the posttests in the fifth and final week of the study.

### *Statistical Analysis*

A Repeated Measures ANOVA was conducted; cooperative learning versus individualized instruction and the repeated factor of the pre- and posttests acted as the variables. The ANOVA determined the effectiveness of the independent variables on those that were dependent. The dependent variables included: (a) achievement in music composition, (b) cooperative versus noncooperative interactions, and (c) acceptance of peers. Dependent *t*-tests were conducted for achievement to determine within group changes from pre- to posttests.

## CHAPTER IV

### RESULTS

#### *Overview*

Cooperative learning and individualistic instruction were incorporated into two fourth-grade elementary school music classes for four weeks. The two classes were randomly assigned to one of the two experimental conditions. Both groups received instruction in basic music literacy and composition twice a week for the duration of the study. The classes consisted of approximately 10 minutes of instruction and 10 minutes of either cooperative learning or individualistic instruction activities. Participant behavior was videotaped at the beginning and end of the study; the videotapes were coded as per the behaviors outlined in the methods section (Table 1). Additionally, participants in both groups completed two pre- and posttests; a music composition test and an acceptance scale. Instruction was recorded for all sessions to verify that it was delivered to the two groups similarly.

Four research questions were delineated at the beginning of this study: (1) Do structured cooperative learning strategies improve fourth-grade general music students' ability to compose music more than individualistic instruction; (2) Are students who participate in cooperative learning groups more on-task than students who work individually; (3) Do cooperative learning groups promote more on-task behavioral interactions among students than individualistic instruction; and (4) Are elementary

school students more accepting of their peers when they work cooperatively or individually?

### *Analysis of the Data*

*Research Question 1: Do structured cooperative learning strategies improve fourth-grade general music students' ability to compose music more than individualistic instruction?*

An analysis of the composition pre- and posttest data using a Repeated Measure Univariate Analysis of Variance (ANOVA) was conducted. As shown in Table 4, a significant time effect, pre- to posttest, was found ( $d = 6.11$ ). Additionally, the posttest scores for both groups were significantly higher than the pretest scores. However, a significant group effect across time was not found.

Table 4

#### *Repeated Measures Analysis of Variance for Composition Pre- and Posttest Scores*

Source	<i>df</i>	F	$\eta$
Time	1	448.72*	.91
Time*Group	1	0.50	.01
Error	46		

\* $p < .001$

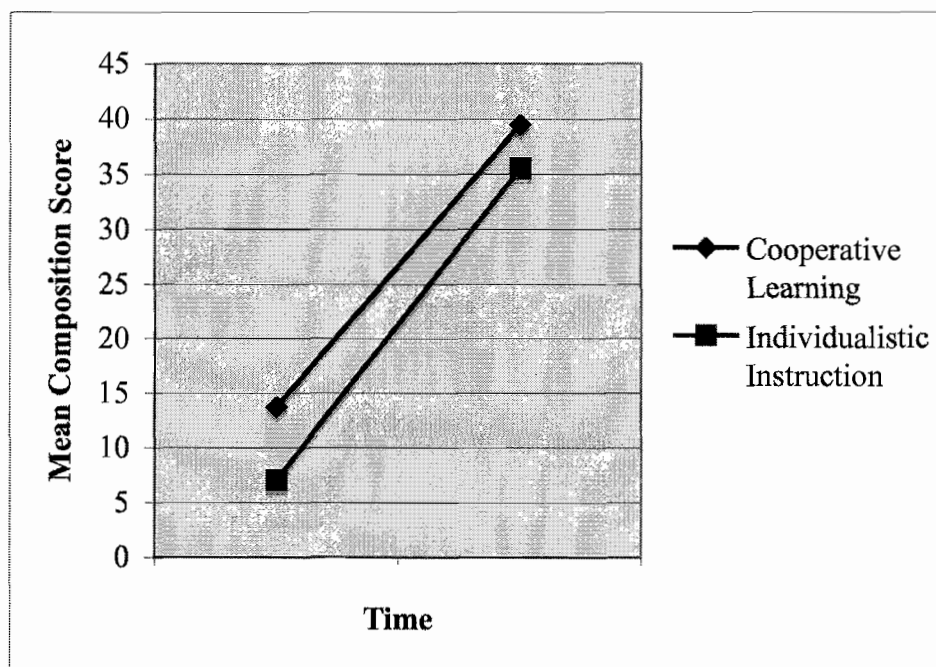
A comparison of the cooperative learning group's composition pretest ( $M = 13.73$ ,  $SD = 5.75$ ) to posttest ( $M = 39.45$ ,  $SD = 4.76$ ) scores was significantly different,  $t(22) = 17.42$ ,  $p < .001$ ,  $d = 4.5$ . The pretest ( $M = 7.04$ ,  $SD = 5.47$ ) and posttest ( $M =$



35.50,  $SD = 8.55$ ) scores of the individualistic instruction group were also statistically significant,  $t(26) = 10.42, p < .001, d = 3.3$ . The cooperative learning group students received higher scores than the individualistic instruction group on both the pre- and posttest. The progression of these scores over time is represented in Figure 1.

Figure 1

*Mean Pretest and Posttest Composition Scores for the Cooperative Learning and Individualistic Instruction Groups*



Instruction was recorded and analyzed to ensure that the content was delivered similarly. There were three parts to the instructional delivery – information, student response, and feedback. Table 5 presents these data and shows that the delivery was similar for both groups. Each group was observed for 18 minutes; nine minutes at the start and nine minutes at the end of the study.

Table 5

*Analysis of Instructional Delivery*

	Frequency	% Time
Cooperative Learning		
Information	117	64.00
Student Response	103	28.66
Feedback	45	7.37
Individualistic Instruction		
Information	134	68.84
Student Response	116	25.50
Feedback	37	5.67

*Research Questions 2 & 3: Do students who participate in cooperative learning groups display more on-task interactions than students who work individually? Do cooperative learning groups promote more on-task interactions among students than individualistic instruction?*

A sample of the students in each group were observed at the start and end of the study to determine if there was a change or group difference in on- and off-task interactions during the learning activities. Thirteen students in the cooperative group and 12 in the individualistic instruction group were observed as a pretest, and 12 students from each group were observed as a posttest. The percentage of time each student spent

on- and off-task was calculated to determine proportionate means of time spent for each type of interaction, by group.

The results of the Repeated Univariate ANOVA are presented in Table 6. The percentage of on-task behavioral interactions over time was found to be significantly different ( $d = 2.38$ ). Furthermore, a significant difference within groups over time was discovered ( $d = 1.88$ ).

Table 6

*Repeated Measures Analysis of Variance for Pre- and Posttest On-Task Behavioral Interactions*

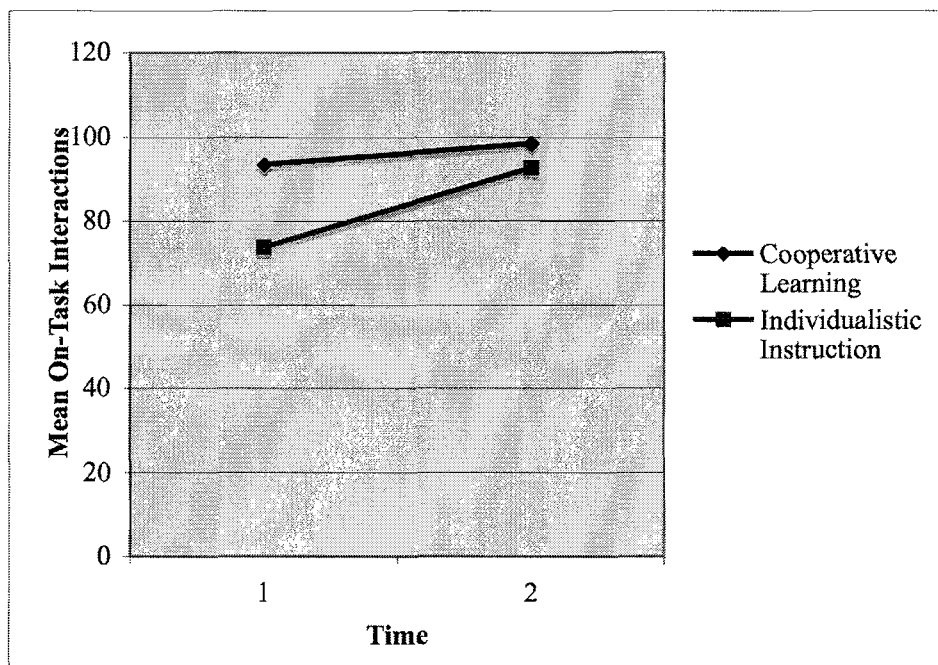
Source	<i>df</i>	F	$\eta$
Time	1	32.42**	0.59
Time*Group	1	10.77*	0.32
Error (Time)	23		

\*\* $p < .001$ . \* $p < .01$

The differences in the cooperative learning groups' pretest ( $M = 93.43$ ,  $SD = 4.41$ ) and posttest ( $M = 98.39$ ,  $SD = 1.50$ ) scores yielded a significant difference  $t(12) = 4.17$ ,  $p < .01$ ,  $d = 1.1$ , and a comparison of the individualistic instruction group's pretest ( $M = 73.73$ ,  $SD = 12.80$ ) and posttest ( $M = 92.59$ ,  $SD = 8.44$ ) scores also resulted in a significant difference,  $t(11) = 9.21$ ,  $p < .001$ ,  $d = 1.5$ . Figure 2 highlights the interaction between the cooperative and individualistic groups' scores over time.

Figure 2

*Mean Pretest and Posttest Percentages of On-Task Interactions*



While the percentage of on-task interactive behaviors of both groups increased from the pre- to the posttest, the individualistic instruction group increased more than the cooperative learning group.

*Research Question 4: Are elementary school students more accepting of their peers when they work cooperatively or individually?*

A Repeated Measures ANOVA with the number of nominations made on the acceptance scale as a dependent variable, pre- posttest scores as the repeated measure, and cooperative learning and individualistic instruction as the independent measure was performed. Results indicated no significant difference in the positive and negative nominations between groups (Table 7).

Table 7

*Repeated Measure Analysis of Variance of Acceptance Scale Treatment Effects*

	<i>df</i>	F	<i>p</i>
Group	1	0.33	0.57
Type	1	0.10	0.76
Group*Type	1	0.00	0.97
Time	1	0.01	0.94
Group*Time	1	0.38	0.54
Type*Time	1	0.65	0.42
Error	53		

There were 16 statements within the acceptance scale for which the subjects had to make nominations of their peers – eight positive and eight negative. The descriptive data mirror the statements of the scale. Means and standard deviations for pre- and posttest acceptance scale nominations are strikingly similar within and between the two groups over time (Table 8).

Table 8

*Means and Standard Deviations for Pre- and Posttest Acceptance Scale Nominations*

	Positive		Negative	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	Pretest			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Cooperative Learning	23.09	1.38	20.55	6.22
Individualistic Instruction	20.23	4.26	18.62	6.53
	Posttest			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Cooperative Learning	21.50	4.85	21.45	5.88
Individualistic Instruction	21.04	4.72	19.04	7.12

A correlation analysis of the number of pre- and posttest positive and negative nominations on the acceptance scale was employed. A strong correlation ( $r=.96$ ) was found between the positive nominations made on the pre- and posttests. Also, the more negative students were on the pretest, the more likely they were to be negative on the posttest ( $r=.78$ ).

### *Summary*

A Repeated Measures ANOVA and several *t*-tests were conducted with the intention of discovering the effect of cooperative learning strategies on the music composition, on- and off-task interactions, and acceptance of peers in elementary school music classrooms as compared to individualistic instruction.

1. Both cooperative learning and individualistic instruction significantly increased the student's abilities to compose music. Both groups showed a significant gain ( $p < .001$ ) in their composition scores from pre- to posttest.
2. There was no significant interaction ( $p > .05$ ) between both the pre- and posttest composition scores of the two experimental groups.
3. The percentage of on-task behavioral interactions over time was found to be significantly different ( $p < .001$ ) for the cooperative learning group.
4. A significant difference ( $p < .001$ ) within groups from pre- to posttest was discovered. Each group increased the amount of time they spent in on-task behavioral interactions.
5. No significant differences ( $p > .05$ ) were found between cooperative learning and individualistic instruction strategies on students' acceptance of their peers.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### *Summary*

The types of students who participate in public school general music are becoming increasingly diverse. They are comprised of a variety of cultures, ethnicities, and ability levels. This diversity warrants the use of a wide range of teaching strategies more suitable to meeting the needs of a variety of students; cooperative learning is one such strategy. It is a mutually supportive work process whereby small groups of students are organized to work together toward shared goals by exchanging ideas, information, and resources (Claire, 1993/94; Johnson, Johnson, & Holubec, 1994). This strategy allows the teacher to introduce content and place students into groups where they work collaboratively while the teacher circulates throughout the classroom.

In the cooperative learning structure students lead their own work processes with little teacher interaction. Activities are student-led rather than teacher-led. This format can alleviate the responsibility the teacher has of relaying a vast amount of information within a short amount of time.

Individualistic instruction is similar to cooperative learning in that the teacher is responsible for presenting the content, after such time the students participate in activities that enhances the content. However, while students who participate in cooperative learning interact in groups, individual work is the focus of individualistic instruction. The



teacher is still free to move around the room, but students are not supposed to communicate with or help others.

Research in the areas of cooperative learning and individualistic instruction suggest that, while both strategies have academic and social benefits, the conclusions are not always consistent. In the field of music, while there is a dearth of research, cooperative learning has proven successful in increasing students' ability to listen to music discriminatingly (Holloway, 2001) and read music at sight (Inzenga, 1999). However, when students who worked cooperatively in music lesson groups were compared to peers working in a traditional teacher-guided lesson format, a significant difference in the instrument playing performance level was not detected (Cangro, 2004). The findings of the current study are similar to those of Cangro. When compared to another means of music instruction (e.g., individualistic instruction), the cooperative learning did not significantly increase the students' ability to compose music. However, while cooperative learning not superior, neither was it less effective as measured by performance.

When cooperative learning has been compared to individualistic instruction in general education student achievement was heightened, but not always significantly so (Johnson, Johnson, Johnson, & Anderson, 1976; Slavin, Leavey, & Madden, 1984b; Slavin, Madden, and Leavey, 1984a). One means of significantly increasing achievement was seen when cooperative learning structures were paired with competition, contingencies and reward structures (Gillies, 2000; Jellison, Brooks, & Huck, 1984; Johnson, Brooker, Stutzman, Hultman, & Johnson, 1985; Johnson, Johnson, Johnson, &

Anderson, 1976; McManus & Gettinger, 1996; Slavin & Tanner, 1979; Vaughan, 2002; Webb, 1982). Neither contingencies nor reward structures were included in the current study. Perhaps if they had been the findings would have mirrored the foregoing literature.

While inquiries in music have not examined it, the behavior of students who participate in cooperative learning groups tends to be positive. Regardless of age or academic level, students who work cooperatively have better self-confidence than students who do not work in this manner (Hanze & Berger, 2007; Vaughan, 2002; Yager, Johnson, Johnson, & Snider, 1985). Additionally, the interactive behaviors they exhibit tend to be altruistic (Johnson, Johnson, Johnson, & Anderson, 1976), they are helpful to their peers (Johnson and Johnson, 1982), they have fewer behavior issues (Slavin, Leavey, & Madden, 1984), and they interact with their peers regardless of whether or not they consider them to be friends (Johnson & Johnson, 1981). Throughout the study I was able to observe the students while they worked cooperatively. Students functioned very well in these groups; I never had to intervene or act as a mediator. Rather, the students were quite self-sufficient. However, these observations did not correspond to the data set obtained from the acceptance scale.

#### *Purpose and Procedures of the Study*

The purpose of this study was to determine if cooperative learning was an effective means of teaching music composition, and whether it had a positive effect on elementary school students' on-task interactions and acceptance of their peers. This experiment involved 53 fourth-grade students in their regular music classes. Two intact,

heterogeneous classes were randomly assigned to either cooperative learning or individualistic instruction.

The participants completed two pre- and posttests – a composition test developed by the researcher and a modification of an acceptance scale by Yager, Johnson, Johnson, and Snider (1985; Appendixes A & B, respectively). On-task interactions were documented through observations of video recordings of students taken at the start and end of the study. The video recordings were analyzed and coded for student behaviors outlined a priori (Table 1). The study lasted five weeks and consisted of seven interventions per group.

### *Results of the Study*

A Repeated Measures ANOVA and *t*-tests were employed to compare the effects of cooperative learning and individualistic instruction on the music composition, behavioral interactions, and acceptance of the fourth-grade students. The findings suggest that students who participate in cooperative and individualistic learning groups both improved significantly but were not significantly different in their abilities to compose. An independent *t*-test revealed a significant difference between the group pre- and posttest composition scores of the two experimental groups ( $p < .05$ ). Furthermore, both cooperative learning and individualistic instruction significantly increased the student's ability to compose music ( $p < .001$ ).

Comparisons of the two group's pre- and posttest behavioral interactions yielded a significant difference in favor of the cooperative learning group, on both the pretest ( $p < .001$ ) and posttest ( $p < .05$ ), suggesting that students who participate in cooperative

learning groups exhibit more on-task interactions than their peers who work individually. It should be noted that on-task was defined differentially for the two groups (see Table 1) according to the nature of the learning activities. However, despite the interdependent nature of this strategy, students who participated in cooperative learning groups were not significantly more accepting of peers.

A Repeated Measures ANOVA indicated no significant difference in the type (positive or negative) or number of nominations made between or by groups, over time ( $p > .05$ ). Yet, a strong correlation ( $r=.96$ ) was found between the overall number of positive nominations made on the pre- and posttests, and the more negative nominations students made on the pretest the more likely they were to be negative on the posttest ( $r=.78$ ).

### *Conclusions*

Based on the results of this study, it can be concluded that the incorporation of cooperative learning activities into the elementary school general music classroom was not a more or less beneficial means of increasing the students' ability to compose music than individualistic instruction. However, improvement in both groups' ability to compose music over time was significant, despite the limited time spent on this unit. This finding suggests that, when cooperative learning strategies are incorporated as per the experts in the field into general music classes, an increase in academic achievement, at least equivalent to individualistic instruction, can be expected. This suggests that adding cooperative learning to ones' instructional strategies is at least as effective as individualistic instruction.

Interestingly, in spite of increased levels of behavioral interactions when students were allowed to work in cooperative learning groups, they were more likely to be less distracted in their interactions with peers than were students in the individualistic instruction group. The results of this study indicate that concerns about classroom management might be reduced through use of cooperative groups. It can be assumed that the interdependent nature of this strategy has much to do with this result; students who work cooperatively depend on one another to complete a task and there might be peer pressure to behave appropriately. When students are given specific roles within their groups, detailed instructions for the task at hand, and a set of rules that outline how to be cooperative, the results are on-task, interdependent interactions; bear in mind that the students in the individualistic group were also given thorough instructions.

Conversely, cooperative learning strategies were not an effective means of increasing students' acceptance of their peers. This was an unanticipated result of this study since previous research has seen cooperative learning as an effective tool for increasing helping and altruistic behaviors (Johnson and Johnson, 1982; Johnson, Johnson, Johnson, & Anderson, 1976). Anecdotally, the researcher and the classroom teacher observed students in the cooperative learning condition as interacting positively with the other students in the group; they helped one another, took turns sharing duties of completing the task, and each day they nominated one another for the different roles without any problems. However, the results of the acceptance scale revealed no significant differences when the pre- and posttests scores of the cooperative learning group were compared. Neither was a significant difference found when the posttest

scores of the two groups were compared. It is conceivable that from the very beginning, given the nature of the structure, students were immediately more accepting and while there was no pre/posttest difference, a change might have been detected had data been collected before students were working in the cooperative learning structure. The preexisting group dynamics may have also played a role in the level of acceptance and lack of change seen among the students. Because the students studied were already interacting on a regular basis in their regular classroom environments, the intervention may not have been powerful enough to overcome the established ecology. It is also possible that the measure used was problematic, either ineffective or lacking in sensitivity.

### *Limitations*

Whenever a study is conducted using human subjects certain limitations are usually present. Four such limitations may have had an effect on the results of the present study.

Since this was a pilot study, I chose to act as the teacher. While I did visit the class on a few occasions before the start of the study, my presence and certainly my position as teacher in these classes was a novelty. My management of the classes, while similar between groups, most likely differed in some ways from the regular teacher conducted his classes.

A second limitation was inconsistent student attendance. Absenteeism was accounted for in conducting the analyses of the pre- and posttest data by eliminating their data, but the same could not be done for the data regarding the behavioral interactions

because students missed class intermittently throughout the course of the four-week intervention.

The physical limitations of the space certainly could have played a role in the outcomes of this study as well. The space of the music room was certainly adequate for the given activities. However, there were no tables or chairs where the children could work. The result was students who laid on the floor, sometimes making it difficult to work effectively.

Lastly, the pre/posttest design can also be seen as a limitation of the study. Because the tests were the same the students may have had preconceived notions about the posttest. A few students remarked about having to take the same tests again when the posttest was given. This, like all of the limitations mentioned above were controlled for as best as possible, but because the participants were young, the reactions they would have were unpredictable.

#### *Recommendations for Future Study*

The focuses of this study were to, as compared to individualistic instruction, determine if cooperative learning strategies are an effective means of teaching music composition, to see if more on-task interactions occurred between students, and to determine if a higher level of acceptance among peers in an elementary school general music classroom was developed. The findings suggest that further study in similar areas is warranted, since these findings are promising but not conclusive.

The area of academic achievement in the general music classroom needs to be explored further than was allowed in this study. A similar study examining other content

areas such as reading notation, playing recorder, and improvising, might provide results more generalizable to the general music classroom and possibly to ensemble settings. Additionally, efforts to train students how to be cooperative in a more intensive and creative manner than reading rules on a daily basis, as was done in this study, could be tested.

Studying reactions classroom music teachers have towards this strategy could also inform teacher-training programs. Because the technique has rarely been examined in the field of music education, it is unclear how many teachers are using forms of cooperative learning in their classrooms. For those teachers who already use the technique, this study can best inform how the strategy can be implemented successfully and, alternatively, describe limitations of cooperative learning when used in the music classroom. A survey of students asking them about their preferences for different learning strategies, including cooperative learning may also be valuable. The answers to these questions could be helpful to preservice teachers and teacher-trainers expanded the vocabulary of how music can be taught.

Traditionally, music teacher-training programs have highlighted the use of teacher-led instruction. Music teachers meet with their students sometimes for only 30 minutes a week; they feel it is necessary to teach directly to the students so they can relay as much information as possible. Teachers who utilize cooperative learning in music classrooms might find that, after some initial planning and reorganization of their lesson plans and classrooms, this strategy could be more efficient and allow their students to be creative while interacting with peers.



Cooperative learning is a teaching strategy that I have used and will continue to use in classes I teach and rehearsals I lead. Although not examined in this study, in my experience students are more likely to maintain information working in small groups than in teacher-led learning environments. Additionally, those students who function lower than most of their peers find worth fulfilling the role of cooperative learning group encourager. Work in cooperative learning groups also allows me to circulate the room and assess the students' level of content understanding, which enlightens instruction.

The use of cooperative learning strategies in the general music classroom is virtually unexplored. Yet the need for research in the area of teaching strategies and methodologies in the field of music education is considerable. For the practicing teacher, this literature can serve as a great resource for implementing cooperative learning in the classroom. It could provide information regarding the most effective ways of creating groups, assessing group learning, meeting the needs of students in the inclusive classroom, and it suggests many different valuable methods included under the classification of cooperative learning.

The field of general education research has clearly seen the advantages and effectiveness of cooperative learning in the classroom and in various disciplines. Favorable outcomes from implementing cooperative learning in the field of music education have also been realized in the few studies available.

Cooperative learning is a successful tool for teaching music and future study in this area is warranted. Given the vast body of general education literature, the prior testing of the structure of this teaching strategy, and the interdependent nature inherent in

the music making process, what remains is the need for more investigation by music education researchers and the use of this strategy by music educators as a means of teaching music.

APPENDIX A  
COMPOSITION RUBRIC

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Expectations</b>	The composition was not complete. Under half of the required elements were included.	The composition was very basic. At least half of the required elements were included	The composition was somewhat creative. Most of the required elements were included.	The composition was creative and included all required elements.
<b>Meter</b>	1 of the 4 measures has the correct number of beats	2 of the 4 measures have the correct number of beats	3 of the 4 measures have the correct number of beats	All measures have the correct number of beats
<b>Rhythm</b>	The rhythms used in the composition do not vary and fewer than 2 of the note values provided are used	The composition employs 2 varying rhythms and uses fewer than 3 of the note values provided	The composition employs 2 varying rhythms and uses all of the note values provided	The composition employs 3 varying rhythms using all of the note values provided.
<b>Tonality</b>	Does not begin or end with the correct notes (do, re-do).	Begins or ends with the correct notes but does not do both.	Begins and ends with do but does not include re.	Begins and ends with the correct notes as specified by the assignment.

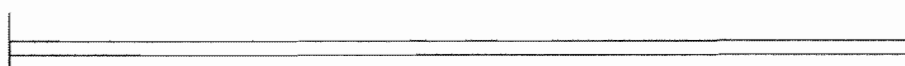
## APPENDIX B

## COMPOSITION PRE- AND POSTTEST

1. Draw an X under each beat.



2. Place the correct notes on the staff.



M       R       D       S       L       M       R       D

3. Compose a melody to the rhythm using s, m, l, r, d.



4. Compose a melody that begins and ends on do.



## APPENDIX C

## ACCEPTANCE SCALE

**MONITOR INSTRUCTIONS:**

(Wait until all children are seated with a pencil and answer sheet in hand. Begin when they are settled.)

*Good Morning boys and girls! Today you are going to answer some questions for me. In front of you is an answer sheet. Please write your first and last names at the top of the answer sheet where it says "Student's Name." (Wait a moment to make sure all of the students have written their names.)*

*Let's get started. I'm going to ask you to answer a few questions about the other students in your music class. For each question I ask I would like you to write down the answer next to the numbers on your answer sheet. For example, you will write your answer to question number 5, next to the 5 on your answer sheet. The only people that will see your answers are Mr. Dobson and myself. There are no right or wrong answers; it all depends on how you feel about what I say. If you're not sure how you feel, just write, "Not sure."*

*Remember, the answer to each question depends on you, and your answers will probably be different from other kids' answers. When you're all done, you may have many different names written down. Any questions? (Wait a moment for questions.)*

*Let's begin. Find the number 1 on your answer sheet and I'll read the first sentence.*

1. Who are your three best friends in music class?
2. If you could work with three friends in music class who would you choose?
3. When working in groups for a grade in music class which three friends would you like to work with?
4. Which three friends do you think you could do your best work with in music class?

*You're doing a great job! The next question will be number 5. Remember, there are no wrong answers.*

5. Who are the three best music students in your class?
6. If you could choose three friends from your music class to sit with at lunch, who would you choose?

7. Which three kids from music class would you like to go to a movie with?
8. If you could go out to dinner with three friends from music class, who would you choose?

*Remember, if you don't feel comfortable answering a question, write 'not sure.' The next question is number 9.*

9. Which three kids in your music class are not your friends?
10. If you could work with three friends in music class who would you not choose?
11. When working in groups for a grade in music class which three friends would you not like to work with?
12. Which three kids do you think you could not do your best work with in music class?

*There are only a few questions left. You are doing a great job! The next question is number 13.*

13. Which three students in your music class are not the best?
14. If you could choose three friends from your music class to sit with at lunch, who would you not choose?
15. Which three kids from music class would you not like to go to a movie with?
16. If you could go out to dinner with three friends from music class, who would you not choose?

*You're done! Thank you very much for your help! Please sit quietly while I collect your answer sheets.*

## BIBLIOGRAPHY

- Adamek, M. S., & Darrow, A. A. (2005). *Music in special education*. Silver Spring, MD: The American Music Therapy Association, Inc.
- Adams, D. M., & Hamm, M. E. (1990). *Cooperative learning: Critical thinking and collaboration across the curriculum*. Springfield, IL: Charles C. Thomas.
- Alexander, L. & Dorow, L. G. (1983). Peer tutoring effects on the music performance of tutors and tutees in beginning band classes. *Journal of Research in Music Education, 31*, 33-47.
- Andrews, B.W. (1996). Student team learning in music instruction: Restructuring the traditional task-incentive system. *McGill Journal of Education, 31*, 159-177.
- Auh, M. S., & Walker, R. (1999). Compositional strategies and musical creativity when composing with staff notations versus graphic notations among Korean students. *Bulletin of the Council for Research in Music Education, 141*, 2-9.
- Baldi, G., & Tafuri, J. (2000/01). Children's musical improvisations: Many ways of Beginning and ending. *Bulletin of the Council for Research in Music Education, 147*, 15-21.
- Buena Vista Elementary School Mission Statement* (n.d.). Retrieved October 28, 2007, from <http://www.4j.edu.schools/buenavista>
- Burks, M. (2004). Effect of classwide peer tutoring on the number of words spelled correctly by students with LD. *Intervention in School and Clinic, 39*, 301-304.
- Calhoon, M. B., & Fuchs, L. S. (2003). The effects of peer-assisted learning strategies and curriculum-based measurement on the mathematics performance of secondary students with disabilities. *Remedial and Special Education, 24*, 235-245.
- Cangro, R. M. (2004). The effects of cooperative learning strategies on the music achievement of beginning instrumentalists (Doctoral dissertation, University of Hartford, 2004). *Dissertation Abstracts International, 65*, 2535.
- Carter, E. W., Cushing, L. S., Clark, N. M., & Kennedy, C. H. (2005). Effects of peer support interventions on students' access to the general curriculum and social interactions. *Research & Practice for Persons with Severe Disabilities, 30*, 15-25.
- Cartwright, G. P, & McIntosh, D. K. (1972). Three approaches to grouping procedures for the education of disadvantaged primary school children. *Journal of Educational Research, 65*, 425-429.

- Chorzempa, B. F., & Graham, S. (2006). Primary-grade teachers' use of within-class ability grouping in reading. *Journal of Educational Psychology, 98*, 529-541.
- Choksy, L. (1974). *The Kodály Method: Comprehensive Music Education from Infant to adult*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Choksy, L. (1999). *The Kodály Method II: Folksong to Masterwork*. Upper Saddle River, NJ: Prentice-Hall, Inc.
- Claire, L. (1993/94). The social psychology of creativity: The importance of peer social processes for students' academic and artistic creative activity in classroom contexts. *Bulletin of the Council for Research in Music Education, 119*, 21-28.
- Colwell, C. M. (1998). Effects of information on elementary band students' attitudes toward individuals with special needs. *Journal of Music Therapy, 35*, 19-33.
- Composition Rubric*. (n.d.). Retrieved November 9, 2007, from [http://www.cesa8.k12.wi.us/bmw/units07/dahl/composition\\_rubric.htm](http://www.cesa8.k12.wi.us/bmw/units07/dahl/composition_rubric.htm)
- Damer, L. K. (2001). Inclusion and the law. *Music Educators Journal, 87*, 19-23.
- Darrow, A. A., Gibbs, P., & Wedel, S. (2005, Fall/Winter). Use of classwide peer tutoring in the general music classroom. *Update: Applications of Research in Music Education, 24*. Retrieved April 1, 2007, from <http://0-web.ebscohost.com.janus.uoregon.edu/ehost/detail?vid=4&h>
- DeKlyen, M., & Odom, S. L. (1989). Activity structure and social interactions with peers in developmentally integrated play groups. *Journal of Early Intervention, 13*, 342-352.
- Di Natale, J. J., & Russell, G. S. (1995). Cooperative learning for better performance. *Music Educators Journal, 82*, 26-28.
- Dugan, E., Kamps, D., Leonard, B., Watkins, N., Rheinberger, A., & Stackhaus, J. (1995). Effects of cooperative learning groups during social studies for students with autism and fourth-grade peers. *Journal of Applied Behavior Analysis, 28*, 175-188.
- Esposito, D. (1973). Homogeneous and heterogeneous ability grouping: Principal findings and implications for evaluating and designing more effective educational environments. *Review of Educational Research, 43*, 161-179.



- Ezell, H. K., & Kohler, F. W. (1994). A program description and evaluation of academic peer tutoring for reading skills of children. *Education and Treatment of Children, 17*, 52-68.
- Gillies, R. M. (2000). The maintenance of cooperative and helping behaviours in cooperative groups. *British Journal of Educational Psychology, 70*, 97-111.
- Grenier, M., Dyson, B., & Yeaton, P. (2005). Cooperative learning that includes students with disabilities. *Journal of Physical Education, Recreation and Dance, 76*, 29-35.
- Gyanani, T. C., & Pahuja, P. (1995). Effects of peer tutoring on abilities and achievement. *Contemporary Educational Psychology, 20*, 469-475.
- Hammel, A. (2004). Inclusion strategies that work. *Music Educators Journal, 90*, 33-38.
- Hammel, A. M. (2001). Special learners in elementary music classrooms: A study of essential teacher competencies. *Update, 20*, 9-13.
- Hanze, M., & Berger, R. (2007). Cooperative learning, motivational effects, and student characteristics: An experimental study comparing cooperative learning and direct instruction in 12<sup>th</sup> grade physics classes. *Learning and Instruction, 17*, 29-41.
- Harris, V. W., & Sherman, J. A. (1973). Effects of peer tutoring and consequences on the math performance of elementary classroom students. *Journal of Applied Behavior Analysis, 6*, 587-597.
- Hickey, M. (1999). Assessment rubrics for music composition. *Music Educators Journal, 85*, 26-35.
- Holloway, M. S. (2001). The use of cooperative action learning to increase music appreciation students' listening skills. (Doctoral dissertation, University of Utah, 2001). *Dissertation Abstracts International, 61*, 4714.
- Hosterman, G. L. (1992). Cooperative learning and traditional lecture/demonstration in an undergraduate music appreciation course (Doctoral thesis, Pennsylvania State University, 1992). *Dissertation Abstracts, 53*, 1440.
- Inzenga, A. (1999). Learning to read music cooperatively in a choral setting: A case study. (Doctoral dissertation, University of New Hampshire, 1999). *Dissertation Abstracts, 60*, 2783.
- Jellison, J. A. (1982). *The Acceptance Within Music Scale*. (Available from J. Jellison, Department of Music, University of Texas at Austin, Austin 78712).

- Jellison, J. A., Brooks, B. H., & Huck, A. M. (1984). Structuring small groups and music reinforcement to facilitate positive interactions and acceptance of severely handicapped students in the regular music classroom. *Journal of Research in Music Education*, 32, 243-264.
- Johnson, C. M. & Darrow, A. A. (1997). The effect of positive models of inclusion on band students' attitudinal statements regarding the integration of students with disabilities. *Journal of Research in Music Education*, 45, 173-184.
- Johnson, D.W., & Johnson, R.T. (1981). The integration of the handicapped into the regular classroom: Effects of cooperative and individualistic instruction. *Contemporary Educational Psychology*, 6, 344-353.
- Johnson, D. W., & Johnson, R. T. (1987). *Learning together & alone: Cooperative, competitive & individualistic learning*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Johnson, D.W., & Johnson, R.T. (1999). Making cooperative learning work. *Theory into Practice*, 38(2), 67-73.
- Johnson, D.W., Johnson, R.T., Johnson, J., & Anderson, D. (1976). Effects of cooperative versus individualistic instruction on student prosocial behavior, attitudes toward learning, and achievement. *Journal of Educational Psychology*, 68(4), 446-452.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). *Cooperative learning in the classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Johnson, L. M. (2006). Elementary school students' learning preferences and the classroom learning environment: Implications for educational practice and policy. *The Journal of Negro Education*, 75, 506-519.
- Johnson, R., Brooker, C., Stutzman, J., Hultman, D., & Johnson, D.W. (1985). The effects of controversy, concurrence seeking, and individualistic learning on achievement and attitude change. *Journal of Research in Science Teaching*, 22(3), 197-205.
- Johnson, R. T., & Johnson, D.W. (1981a). Building friendships between handicapped and nonhandicapped students: Effects of cooperative and individualistic instruction. *American Educational Research Journal*, 18(4), 415- 423.
- Johnson, D.W., & Johnson, R.T. (1981b). The integration of the handicapped into the regular classroom: Effects of cooperative and individualistic instruction. *Contemporary Educational Psychology*, 6, 344-353.

- Johnson, R. T., & Johnson, D.W. (1982). Effects of cooperative and competitive learning experiences on interpersonal attraction between handicapped and nonhandicapped students. *The Journal of Social Psychology, 116*, 211-219.
- Kaplan, P. R., & Stauffer, S. L. (1994). *Cooperative learning in music*. Reston, VA: MENC: The National Association for Music Education.
- Kassner, K. (2002). Cooperative learning revisited: A way to address the standards. *Music Educators Journal, 88*, 17-19.
- Kourea, L., Cartledge, G., & Musti-Rao, S. (2007). Improving reading skills of urban elementary students through total class peer tutoring. *Remedial and Special Education, 28*, 95-107.
- Kratus, J. (1989). A time analysis of the compositional processes used by children ages 7 to 11. *Journal of Research in Music Education, 37*, 5-20.
- Levi, R. (1991). Investigating the creativity process: The role of regular musical composition experiences for the elementary child. *The Journal of Creative Behavior, 25*, 123-136.
- Madsen, C. K., Smith, D. S., & Feeman, C. C. (1988). The use of music in cross-age tutoring within special education settings. *Journal of Music Therapy, 25*, 135-144.
- Maher, C. A. (1982). Behavioral effects of using conduct problem adolescents as cross-age tutors. *Psychology in the schools, 19*, 360-364.
- Maher, C. A. (1984). Handicapped adolescents as cross-age tutors: Program description and evaluation. *Exceptional Children, 51*, 56-63.
- McManus, S. M. & Gettinger, M. (1996). Teacher and student evaluations of cooperative learning and observed interactive behaviors. *Journal of Educational Research, 90*, 13-22.
- Meyer, L. H. (1981). *The acceptance scale: Upper elementary level*. (Available from L. H. Meyer, Division of Special Education and Rehabilitation, Syracuse University, 805 South Crouse Avenue, Syracuse, NY 13244).
- Miell, D., & MacDonald, R. (2000). Children's creative collaborations: The importance of friendship when working together on a musical composition. *Social Development, 9*, 348-369.
- Moody, S. W., & Vaughn, S. (1997). Instructional grouping for reading. *Remedial and Special Education, 18*, 347-357.

- Music - Composition: 20th century rhythm and melodic measure.* (n.d.). Retrieved November 9, 2007, from <http://www.floresville.isd.tenet.edu/LoTi/melodicrubric.htm>
- Music – Composition: Creating a Rhythmic Poem.* (n.d.). Retrieved November 9, 2007, from <http://www.floresville.isd.tenet.edu/LoTi/poemrubric.htm>
- Richardson, C. P. (1997). Using case studies in the methods classroom. *Music Educators Journal, 84*, 17-22.
- Rideout, R. R. (2002). Psychology and music education since 1950. *Music Educators Journal, 89*, 33-39.
- Riley, P. E. (2006). Including composition in middle school band: Effects on achievement, performance, and attitude. *Update: Applications of Research in Music Education, 25*, 28-38.
- Rutkowski, J. (1996). The effectiveness of individual/small-group singing activities on kindergartners' use of singing voice and developmental music aptitude. *Journal of Research in Music Education, 44*, 353-368.
- Schumm, J. S., Moody, S. W., & Vaughn, S. (2000). Grouping for reading instruction: Does one size fit all? *Journal of Learning Disabilities, 33*, 477-488.
- Scruggs, T. E., & Osguthorpe, R. T. (1986). Tutoring interventions within special education settings: A comparison of cross-age and peer tutoring. *Psychology in Schools, 23*, 187-193.
- Slavin, R. E. (1983a). *Cooperative Learning*. New York: Longman, Inc.
- Slavin, R. E. (1983b). When does cooperative learning increase student achievement? *Psychological Bulletin, 94*, 429-445.
- Slavin, R. E. (1990). *Cooperative learning: Theory, research, and practice*. Englewood Cliffs, NJ: Prentice Hall, Inc.
- Slavin, R. E. (1987). Ability grouping and student achievement in elementary schools: A best-evidence synthesis. *Review of Educational Research, 57*, 293-336.
- Slavin, R. E., Madden, N. A., & Leavey, M. (1984a). Effects of cooperative learning and individualistic instruction on mainstreamed students. *Exceptional Children, 50*, 434-443.

- Slavin, R. E., Leavey, M. B., & Madden, N. A. (1984b). Combining cooperative learning and individualistic instruction: Effects on student mathematics achievement, attitudes, and behaviors. *The Elementary School Journal*, 84, 409-422.
- Slavin, R. E., & Tanner, A. M. (1979). Effects of cooperative reward structures and individual accountability on productivity and learning. *Journal of Educational Research*, 72, 294-298.
- Spring, J. (1997). *The American school: 1642-1996* (4<sup>th</sup> ed.). New York: McGraw-Hill.
- Stauffer, S. L. (1999). Learning through composing. *Bulletin of the Council for Research in Music Education*, 142, 92-93.
- Strand, K. (2006). Survey of Indiana music teachers on using composition in the classroom. *Journal of Research in Music Education*, 54. Retrieved from <http://0-web.ebscohost.com.janus.uoregon.edu:80/ehost/>
- Swanwick, K., & Tillman, J. (1986). The sequence of musical development. *British Journal of Music Education*, 3, 305-339.
- Taylor, B. M., Hanson, B. E., Justice-Swanson, K., & Watts, S. M. (1997). Helping struggling readers: Linking small-group intervention with cross-age tutoring. *The Reading Teacher*, 51, 196-209.
- Therrien, M. C. (1997). *Guidelines for the instructional design of technological and cooperative applications in a music program*. Unpublished master's thesis, Concordia University, Montreal, Quebec, Canada.
- Vaughan, W. (2002). Effects of cooperative learning on achievement and attitude among students of color. *Journal of Educational Research*, 95, 359-364.
- Vaughn, S., Hughes, M. T., Moody, S. W., & Elbaum, B. (2001). Instructional grouping for reading for students with LD: Implications for practice. *Intervention in School and Clinic*, 36, 131-137.
- Vygotsky, L. (1987). Thinking and speech. *L.S. Vygotsky, Collected Works Vol. 1* (pp. 39-285). New York: Plenum Press.
- Webb, N. M. (1982). Group composition, group interactions, and achievement in cooperative small groups. *Journal of Educational Psychology*, 74, 475-484.
- Wiggins, J. H. (1994). Children's strategies for solving compositional problems with peers. *Journal of Research in Music Education*, 42, 232-252.

Yager, Johnson, R.T., Johnson, D.W., & Snider, B. (1985). The effect of cooperative and individualistic learning experiences on positive and negative cross-handicap relationships. *Contemporary Educational Psychology, 10*, 127-138.

Zbikowski, L. M. & Long, C. K. (1994). Cooperative learning in the music theory classroom. *Journal of Music Theory Pedagogy, 8*, 135-158.