M J R M E

MISSOURI JOURNAL OF RESEARCH IN MUSIC EDUCATION

Number 45
2008

Published by the

Missouri Music Educators Association

BUSINESS OFFICE

Missouri Music Educators Association
3140-K East Raynell
Springfield, MO 65804

EDITORIAL OFFICE

Conservatory of Music and Dance
University of Missouri-Kansas City
4949 Cherry
Kansas City, MO 64110-1516

Missouri Journal of
Research in Music Education

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2008

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Missouri Journal of Research in Music Education, No. 45, 2008, 3-11

The Effects of Picture Book and Instrument Pictures During Music Listening on the Attentiveness, Attitude, Instrument Identification Ability, and Memory for Classical Themes of Prekindergarten Children

Dianne Mack
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This study was designed to examine the effects of using picture books and instrument pictures during music listening lessons on prekindergarten children's attentiveness, attitude, instruments identification ability, and memory for classical themes. Three-through five-year-old subjects (N = 60) from Head Start centers in Midwestern USA participated in the study. Subjects were divided into six groups, of which two groups were randomly assigned to each of three treatment conditions. The treatment conditions were: (a) instrument pictures only (PO), (b) instrument pictures and picture book (PPB), and no visuals (NV). Treatments consisted of two listening lessons based on Prokofiev's Peter and the Wolf. The first listening lesson with each group was videotaped. Using the videotaped lessons and a time-sampling procedure, data on the duration of attending time were obtained. Data on attitude, identification of instruments, and memory for classical themes were obtained during individualized posttest sessions. No significant effect of picture books or instrument pictures was found. Replication of the study using a larger sample size and a longer experimental time frame was suggested.

Even casual observation of children at play reveals that although attention span is determined primarily by age and experience (Greer, Dorow & Hanser, 1973; Greer, Dorow & Randall, 1974), it is also influenced by the strength of the activity's appeal (Forsythe, 1977; Moore, 1987). Young children's attentiveness is task-specific (Forsythe, 1977; Madsen & Geringer, 1983; Sims, 1986). They may be diverted easily from one activity to another, or may persist for longer than expected periods of time based upon the type of music activity (Forsythe, 1977) and the context of the activity (Bloom, 1981; Sims, 1986; Turnipseed, Thompson, & Kennedy, 1974).

Music has inherent interest for young children. The challenge of the music educator is to tap into the natural attraction of young children for musical sounds, to present music for listening in imaginative and varied ways, and to direct the focus of attention so that the initial attention will be sustained for increasingly longer periods of music listening time.

Young children's attention is visually oriented. They "tend to think in visual images rather than words, and pictures capture their attention readily" (Thomas & Thomas, 1985, p. 3305). In the music lesson, pictures may be used:

(a) as an enhancement to intensify interest (Smardo, 1990), (b) as a focus for visual attention to provide support for sustained involvement (Schickendanz, York, Stewart & White, 1983), or (c) as a learning aid to reinforce music memory by providing extramusical images that can later assist in the retrieval of music information (Cutietta & Booth, 1988).

Many studies have investigated the effects of pairing music with visual icons (Pflederer & Sechrest, 1968; Rudolph, 1979; Thompson, 1972; Webster & Zimmerman, 1983; Zikmund & Nierman, 1992), notated examples (Oberdin, 1967; Peterson, 1965; Pflederer & Sechrest, 1968; Rudolph, 1979; Sears, 1976; Smith, 1953), physical outlining of melodic or rhythmic contours (Forsythe & Kelly, 1989), and videos (Geringer, Cassidy & Byo,1996); but only a few have examined the effects of using actual pictures (Abel-Struth, 1981; Bastarache, 1972; Fullard, 1967; Greer, Dorow & Hanser, 1973; Schevill, 1969; Wooderson & Small, 1981).

In experiment two of a study by Greer, Dorow and Hanser (1973), nursery school children were taught to match pictures of instruments with selected excerpts of symphonic music. Although the primary purpose of the study was to determine the effect of music discrimination training and levels of teacher approval or disapproval on children's music selection behavior (attitude), other observations from the experiment were of interest to the present study. The study provided evidence that young children can be taught to recognize melodies and identify instrument timbres using nonverbal response modes. An unexpected outcome of the study was the increase in subjects' attending time.

The Frankfurt (Germany) Studies, reported by Abel-Struth (1981), were a series of ten experiments with five-to-seven-year old preschoolers. Test two asked subjects to listen and match picture cards to selected thematic incidents whenever they appeared in the musical examples. Results of this study revealed that the treatment groups' rate of improvement in audio-analytic ability (recognition) significantly surpassed that of the control group.

Young children's thinking and learning processes are dominated by action and sense perceptions. Teaching strategies and conditions for learning that capitalize upon children's learning modalities and provide opportunities for multisensory involvement can therefore be the most effective. Visuals can create an enhanced learning condition in music listening experiences with young children. The purpose of this study was to examine the effect of using music picture books and instrument pictures in the music listening lesson on the attentiveness, attitude, instrument identification, and memory for classical themes of prekindergarten children.

Method

Children ($N = 60$) from three Head Start classes in rural, midwestern United States participated in this study. Head Start is a federally-funded prekindergarten program for children from low-income families. It is

administered by the United States Department of Health and Human Services: Administration for Children and Families. The central tenet of this program is the development of the child within the context of the family and community, and its primary goal is school readiness. Enrollment for each Head Start class is capped at twenty students, with one teacher and an aide per class. Head Start has a policy of full inclusion; ten percent of its enrollment opportunities must be made available for children with special needs and these children must have the opportunity to be involved in all aspects of classroom activity (Zigler & Muenchow, 1992).

The subjects represented a culturally and linguistically diverse population. Of the total, 32 subjects were girls and 28 were boys. The average age was 4 years 6 months. Using alphabetized class lists and a simple numbering system, each of the three classes was divided into two, equally sized groups, resulting in a total of six groups. Two groups received instrument pictures only (PO), two received instrument pictures and picture book (PPB), and two received no visuals (NV). In the final analysis, girls outnumbered boys in both of the no visuals groups (NV) groups and in one of the instrument picture only (PO) groups. Boys outnumbered girls in one of the instrument picture only (PO) groups and in both of the combination picture and picture book groups (PPB).

Prokofiev's *Peter and the Wolf,* with music and narration, was selected for the study. None of the subjects had prior listening experience with this composition. Subjects listened to the selection according to the following conditions: (a) For the first treatment condition, instrument pictures only (PO) were shown to the subjects while they listened to the opening narration; (b) The second treatment condition had subjects viewing instrument pictures as they listened to the opening narration, after which picture book pages (Palecek, 1987) were shown while they continued listening to the music-story. (c) The third treatment condition included no visuals (NV). Treatments consisted of one, 30-minute session, held each week for two consecutive weeks, at the Head Start facility. The first treatment session for each group was videotaped for subsequent analysis of the attending behavior. The lesson sequence was replicated the following week. Within three days of the second session, 10-minute, individualized interviews with the subjects were conducted to collect data on thematic memory, instrument identification ability, and attitude. These interviews were audiotaped and behavioral responses were transcribed onto prepared forms.

Attentiveness was evaluated using a time-sampling procedure suggested by Madsen & Yarbrough (1980). Observers viewed videotapes of the group instructional sessions and rated the subjects' attentiveness based on two observable behaviors, body posture and visual attention. On-task behavior was operationally defined as facing forward in a seated position. An intervallic observation form adapted from Sims (1986) enabled the observers to record the frequency of students' on- and off- task behaviors. When both observers

deemed two-thirds of the subjects to be off-task for five consecutive intervals (about one minute), the observation period was terminated. Duration of group listening time was considered to be one minute prior to cessation of the observation period.

All subjects completed three individual posttests. In the test of memory for classical themes, subjects listened to 15-second excerpts of the seven character themes and then pointed to the picture that matched the character. Responses were recorded by the examiner and the number of correct responses per subject was tabulated.

For the instrument identification test, subjects listened for the sound of each of the seven instruments pictured on a displayed poster and pointed to the corresponding picture. The number of correct responses was recorded. The 15-second excerpts used in this test were recorded on the stimulus tape in a random order, different from that used in the test for memory of classical themes.

The test for music affect was in two parts, open-ended, constructed response (verbal) and forced-choice, fixed response (pictograph). In the verbal portion, subjects' responses to the question, "How did you feel about the story of *Peter and the Wolf*?" were audiotape recorded. The pictographic portion of this test consisted of a series of three faces with smiling, frowning, and neutral expressions. Subjects were instructed to circle the pictured face that best represented their feelings about the listening experience. This evaluative model has been used successfully in other studies with young children to circumvent the problem of limited verbal skills (Kuhn, 1981; Peery & Peery, 1986; Sims, 1987).

Results

Data revealed that the duration of group listening time ranged from 4 minutes 15 seconds to 16 minutes. The listening times for the two poster only groups were 5 minutes 30 seconds, and 4 minutes 15 seconds. Listening times for the combination poster and picture book treatment groups were 4 minutes 30 seconds, and 16 minutes. Listening times for the no visuals/control groups were 4 minutes, and 6 minutes 15 seconds. In order to better understand the children's responses across time, beginning times of declining attention were pinpointed at the moment when approximately one-half of the subjects were observed to be off-task. Most groups showed signs of declining attention after 2-1/2 or 3 minutes of listening. The average time of declining attention by condition was 3 minutes 30 seconds for the poster only groups, 3 minutes 15 seconds for the combination poster and picture book groups, and 2 minutes 30 seconds for the no visuals/control groups.

The length of attending time of one PPB group was very different from that of the other groups. Data for the PPB2 group indicated that the subjects did not show a significant decline in on-task behavior during the entire listening experience (16 minutes). The on-task behaviors for this group appeared to be continuous, never declining below 50%. But in reviewing the videotape of this

group, it was discovered that the attending behavior was more similar to that of the other groups than the quantitative data suggested. While group attention may have been continuous in the PPB2 group, individual attention was intermittent and irregularly staggered throughout the listening period. Manifestations of subjects' waning attention began to appear in this group slightly after the time that it had appeared in the other groups (approximately 4 minutes) (see Figure 1). The difference with this group was that the attention of the individual subjects, though not continuous, was continuously retrieved throughout the listening period. Visual attention was consistently regained at the narrator's introduction of a new character and at the page turn of the picture book.

Based on the results of a one-way analysis of variance comparing memory test scores by treatment conditions, it was concluded that the treatment had no significant effect on subjects' ability to recognize the thematic content, $F(2,47) = 2.32$, $p = 0.11$.

A one-way analysis of variance was used to compare instrument identification scores by treatment group. Results indicated no significant differences attributable to treatment, $F(2,46) = 2.75$, $p = 0.08$.

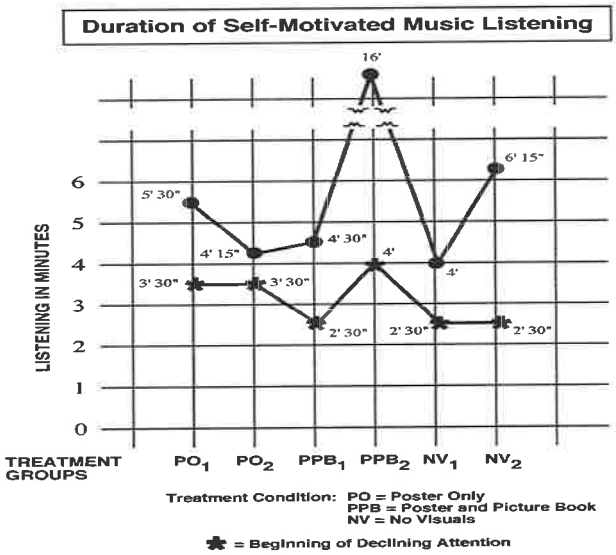

Figure 1.

To the open-ended question, "How did you feel about the story of *Peter and the Wolf*?", subjects' verbal responses tended to be evasive. While a few subjects verbalized their feelings; most remained silent or said that they didn't know. On the other hand, during the pictograph portion of the test all subjects responded readily, drawing a circle around the pictured face that best represented their feelings. No reliable data were collected from the verbal

portion of this test. Data from the pictographic portion indicated that the majority of subjects, regardless of teaching condition, responded favorably to the music listening experience. A chi-square analysis revealed no significant differences in attitude attributable to treatment.

Discussion

In this study, a pattern of declining attention was evidenced in all groups after a period of 2-1/2 to 4 minutes; and in all but one group, attentive music listening discontinued at about 6 minutes. In the one exceptional group (PPB2), attentive listening was maintained for a full sixteen minutes at which time the session was terminated. In this instance, sustained attention appeared to have been related to the changing picture book pages. It was observed that the interest stimulated at each page turn consistently drew the children back to full visual attention and music listening. This behavior was a stunning example of the orienting reflex or "What is it?" response described by Pavlov (1927). Unfortunately, because of the high rate of variability between similarly-treated groups, no generalizations about this effect were possible.

Attentive (focused) music listening is an unfamiliar activity for many prekindergarten children. Even where music is a significant part of the daily activities, it is most often used as an accompaniment for games, to create classroom ambience, as a cue for non-musical events, or in participatory music activities. In addition to these kinds of experiences, young children need opportunities when they learn to listen with focus in order to learn *about* music.

Young children often lack the mental discipline or prerequisite experience for sustained periods of attentive music listening. The incorporation of pictures and picture books into music listening activities may provide them with instructional support for this type of activity until internalized systems have developed. The potential of visuals (pictures) to sustain music listening time-on-task as evidenced by one treatment group merits further exploration. In future studies, a larger sample might yield definitive data from which generalizations can be made. Disaggregation of data by age may provide additional insights.

In the tests for memory for classical themes and aural identification of instruments, data revealed that the use of pictures resulted in no significant, between group differences. Overall low scores on these tests might be due to few repetitions of the selection over a short period of time; the entire process of memory may require a more frequent and lengthier exposure.

The test for music affect was in two parts: constructed-response (verbal) and selected-response (pictographic). Most of the usable data were obtained from the pictographic portion of the test. Responses to this portion were enthusiastic and unhesitant; unlike the responses to the verbal portion which were minimal and tentative, at best. In future studies, the continued use of assessment methods such as drawing (used in this study), pantomime, and

play is encouraged as these methods are: (a) independent of verbal language ability, (b) possess general interest appeal, and (c) appear to be emotionally satisfying activities for young children. Data obtained revealed that regardless of the teaching condition and subsequent learning outcomes, all of the subjects enjoyed the music listening experience.

References

Abel-Struth, S. (1981). Frankfurt studies on music audiation of five to seven year old children. *Bulletin of the Council for Research in Music Education, 66-67,* 1-7.

Bastarache, D. J. (1972). The effect of theme association and visual stimulus upon aural retention and preference in a music listening experience. *Dissertation Abstracts International, 33*(1), 344A-345A. (UMI No. 72 - 19, 485)

Bloom, B. S. (1981). *All Our Children Learning: A Primer for Parents, Teachers, and Other Educators.* New York: McGraw-Hill.

Cutietta, R. A., & Booth, G. D. (1988). *Toward a comprehensive model of musical long-term memory.* Poster presented at the meeting of the Music Educators National Conference, Indianapolis, IN.

Forsythe, J. L. (1977). Elementary student attending behavior as a function of classroom activities. *Journal of Research in Music Education, 25*(3), 228-239.

Forsythe, J., & Kelly, M. (1989). Effects of visual-spatial added cues on fourth-graders' melodic discrimination. *Journal of Research in Music Education, 37*(4), 272-277.

Fullard, W. G. (1967). Operant training of aural musical discriminations with preschool children. *Journal of Research in Music Education, 15*(3), 201-209.

Geringer, J. M., Cassidy, J. W., & Byo, J. L. (1996). Effects of music with video on responses of nonmusic majors: An exploratory study. *Journal of Research in Music Education, 44*(3), 240-251.

Greer, R. D., Dorow, L., & Hanser, S. (1973). Music discrimination training and music selection behavior of nursery and primary level children. *Bulletin of the Council for Research in Music Education, 35,* 30-43.

Greer, R. D., Dorow, L. G., & Randall, A. (1974). Music listening preferences of elementary school children. *Journal of Research in Music Education, 22,* 284-291.

Kuhn, T. L. (1980). Instrumentation for the measurement of music attitudes. *Contributions to Music Education, 8,* 2-38.

Madsen, C. K., & Geringer, J. M. (1983). Attending behavior as a function of in-class activity in university music classes. *Journal of Music Therapy, 20*(1), 30-38.

Madsen, C. K., & Yarbrough, C. (1980). Competency-Based Music Education. Englewood Cliffs, NJ: Prentice-Hall.

Moore, R. S. (1987). Effects of age, sex and activity on children's attentiveness in elementary school classes. In C. K. Madsen & C. A. Prickett (Eds.), *Applications in Research in Music Behavior* (pp. 26-31). Tuscaloosa, AL: University of Alabama.

Oberdin H. E. (1967). The use of notated examples in fifth-grade music appreciation classes. *Journal of Research in Music Education, 15*(4), 300-304.

Palecek, J. (1987). *Peter and the Wolf.* Natick, MA: Picture Book Studio.

Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex.* (G. V. Anrep, Trans.) London: Oxford University Press.

Peery, J. C., & Peery, I. W. (1986). Effects of exposure to classical music on the musical preferences of preschool children. *Journal of Research in Music Education, 34*(1), 24-33.

Peterson, A. V. (1965). A study of developmental listening factors in children's ability to understand melody. *Dissertation Abstract, 27,* 06A-1855. (UMI No. 66-236)

Pflederer, M., & Sechrest, L. (1968, Spring). Conservation-type responses of children to musical stimuli. *Bulletin of the Council for Research in Music Education, 13,* 19-36.

Rudolph, J. M. (1979). The effect of visual guides when used in conjunction with listening lessons in Junior High school general music classes on perception of melodic sequence in piano compositions. *Dissertation Abstracts International, 40*, 07A-3864. (UMI No. 79-28, 349)

Schickendanz, J. A., York, M. E., Stewart, I. S., & White, D. A. (1983). *Strategies for Teaching Young Children* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Schevill, H. S. (1969). Hierarchial processes in pitch delineation at the 2nd grade level. *Dissertation Abstracts International, 31,* 01A-308. (UMI No. 70-13160)

Sears, M. F. (1976). Musical listening skills, musical insight and visual-auditory perception: A statistical investigation of their relationship. *Dissertation Abstracts International, 37*, 09A-5672. (UMI No. 77-6257)

Sims, W. L. (1986). The effect of high versus low teacher affect and passive versus active student activity during music listening on preschool children's attention, piece preference, time spent listening, and piece recognition. *Journal of Research in Music Education, 34*(3), 173-191.

Sims, W. L. (1987). Effect of tempo on music preference of preschool through fourth-grade children. In C. K. Madsen & C. A. Prickett (Eds.), *Applications in Research in Music Behavior* (pp. 15-25). Tuscaloosa, AL: University of Alabama.

Smardo, F. A. (1990, Summer). Encore! Integrating children's literature as a prelude or finale to music experiences with young children. *School Library Media Quarterly, 18*, 258-260.

Smith, E. H. (1953). The value of notated examples in learning to recognize musical themes aurally. *Journal of Research in Music Education, 1* (2), 97-104.

Thomas, S. M., & Thomas, R. M. (1985). Memory. In T. Husen & T. N. Postlewaite (Eds.), *The International Encyclopedia of Education: Research and Studies* (1st ed.) (Vol. 6, pp. 3301-3306). New York: Pergamon Press.

Thompson, K. P. (1972). Relative effectiveness on aural perception of televised verbal descriptions and visual representation of selected musical events. *Contributions to Music Education, 1,* 68-83.

Turnipseed, J. P., Thompson, A., & Kennedy, N. (1974). *Utilization of a structured classical music listening program in the development of auditory discrimination skills of preschool children.* (ERIC Document Reproduction Service No. ED 102 089)

Webster, P. R., & Zimmerman, M. P. (1983). Conservation of rhythmic and tonal patterns of second through sixth grade children. *Bulletin of the Council for Research in Music Education, 73*, 28-49.

Wooderson, D. C., & Small, A. R. (1981). Instrument association skills: Children in first and second grades. *Journal of Research in Music Education, 29*(1), 39-46.

Zigler, E., & Muenchow, S. (1992). *Head Start*. New York: Basic Books.

Zikmund, A. B., & Nierman, G. E. (1992). The effect of perceptual mode preferences and other selected variables on upper elementary school students' responses to conservation-type rhythmic and melodic tasks. *Psychology of Music, 20* (1), 57-69.

Missouri Journal of Research in Music Education, No. 45, 2008, 12-24

Relationships among Teacher Verbalization, Difficulty Level of Music, and Rehearsal Enjoyment of Collegiate Chorus Participants

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The purpose of this study was to conduct a long-term descriptive analysis of teacher verbalization across an entire semester by eleven choral conductors of the same chorus. Teacher verbalizations were computed as percentages of total rehearsal time, and averages were obtained for each conductor across the semester. Chorus participants were given surveys to indicate their level of enjoyment of the rehearsal process on each piece. A panel of choral experts assigned a rating to each piece based on difficulty level. There was no significant relationship between difficulty level of the music and student enjoyment of the rehearsal process of the piece. Interestingly, the least enjoyed piece was the least difficult piece. No significant relationship existed between mean teacher verbalization on a piece and student enjoyment of that piece nor between mean teacher verbalization on a piece and difficulty level of that piece. Results suggest that duration of teacher verbalization did not relate to how much students enjoyed the music. Additionally, the difficulty of the selection did not affect how much time teachers spend talking. Trends throughout the semester revealed that teachers tend to talk most at the beginning of the semester and less as the performance draws nearer and pressures are heightened.

Researchers have noted that teachers spend approximately 40% of their class time engaged in some form of teacher verbalization. In a frequency and time description of selected rehearsal behaviors, Thurman (1977) classified rehearsal behaviors of five choral conductors and discovered that conductors devoted an average of 40% of rehearsal time to verbal communication; the average number of verbal initiations, or interruptions in performance, was 199.2, or about one every 25 seconds. Watkins (1993) investigated specific breakdowns of verbal behaviors in middle and junior high school choral directors and found that they spent 33.86% of time in expository verbal mode, .84% in eliciting higher order thinking, and 5.7% of time in nonspecific verbal mode, for a total of 40.40%.

Blocher, Greenwood, and Shellahamer (1997) found the total percentage of verbal instruction/direction to be somewhat lower by middle and high school band directors in Florida (middle school teachers, 31.06%, high school teachers 31.84). Pontious (1982) provided a range of time spent on verbal communication (from 33.8% to 45.9%, with a mean of 42.1%) in observations

of high school band directors. Sherill's (1986) ranges were not very different. Junior high and high school band conductors spent between 30% and 56% of the rehearsal segments in verbal instruction, with a mean of 44%.

Several researchers have found a link between use of class time and student attentiveness (Dunn, 1997; Forsythe, 1977; Madsen & Alley, 1979; Moore, 1987; Murray, 1975; Spradling, 1985; Wagner & Strul, 1979; Witt, 1986; and Yarbrough & Price, 1981). Generally, students tend to be more off-task during teacher verbalization periods (any instance of verbalization regardless of its content) than when they are performing. Kostka (1984) found this to be true in 96 private piano lessons by 48 teachers. Lesson time was largely divided between student performance (56.57%) and teacher talk (42.24%). Students were most attentive when performing and least attentive during nonperformance. Madsen and Geringer (1983) also observed this relationship in 120 classes in six different subject areas: music history, theory, music education methods, choral ensemble, instrumental ensemble, and music therapy. The least off-task behavior consistently occurred during performance activities across all of the curricula, while off-task behaviors were observed more frequently during the transition periods. They concluded that on-task behavior of university students is related to the nature of the activities in which students engage and that on-task participation generally corresponds to the degree of involvement or demands that the activity promotes. Additional research further corroborates the positive relationship between student attentiveness and performance activities (Brendell, 1996).

Some research has attempted to understand whether there is a relationship between teacher talk and teacher effectiveness. Grechesky (1985) studied 11 band directors in Central Indiana and classified teachers as "musical" and "less musical" directors. Verbal and nonverbal behaviors were observed, categorized, and analyzed to determine how they were related to band ensemble performance. In examining the behaviors of the more musical directors, he concluded that excessive time spent on nonmusical matters resulted in a negative impact on the rehearsal atmosphere. He also noted a strong relationship between a high quantity of talking and "less effective" directors. In the piano studio setting, Siebenaler (1997) analyzed 78 total lessons by 13 piano teachers and concluded that a higher percentage of student performance, regardless of quality, was not associated with effective teaching. Performance time was not an indicator of student success or achievement. In the lessons judged to be most effective, the student played less and the teacher participated more.

It appears that teacher talk can affect student attentiveness, in a negative way. Students are less attentive during periods of teacher talk than they are when they are performing. However, there is no clear link between teacher talk and teacher effectiveness. Thus, teachers may assume that students will talk more when they (teachers) talk more, but in and of itself, teacher talk does not necessarily equate to ineffective teaching. Perhaps another measure of the

effectiveness of teacher talk is student attitude or possibly how students respond to teacher talk.

Student attitude has been measured, but rarely as it relates specifically to duration of teacher talk. Duke and Henninger (2002) studied types of teacher verbalization (directive statements and negative feedback statements) and concluded that the verbalizations used to make corrections in student performance did not affect student attitude or achievement. Spradling (1985) isolated the frequency and duration of teacher talk and found that less teacher verbalizations were present during rehearsals of literature for which students had expressed preferences. In this case, student attitude was negatively impacted by more teacher talk. Students preferred selections in which they were allowed to perform more. However, this was one study, with a university band, and studies found thus far have yet to find a link between teacher talk and student enjoyment.

While several music education researchers have found a high percentage of teacher talk in rehearsals linked with high levels of student inattentiveness, research on how teacher talk may impact student attitude is less conclusive. Further, while teachers generally spend about 40% of total rehearsal time talking, there is no agreement about how this functions for students: whether they enjoy the rehearsal process regardless or whether higher amounts of talk yields reduced enjoyment. The purpose of this study was to further explore the relationship between teacher talk and student attitude using college choral students. A secondary purpose of the study was to determine whether difficulty of the music relates to teacher talk and/or student enjoyment, since difficulty of music is not a variable that has been researched in relation to teacher talk. Specific questions include: (1) Is there a significant relationship between the amount of teacher talk and student enjoyment of the rehearsal process? (2) Does difficulty of the music relate to the amount of time the teacher spends verbalizing? (3) Is there a significant relationship between difficulty of music and participant enjoyment of the rehearsal process? and (4) Are there trends in amount of teacher verbalization as a percentage of total rehearsal time throughout the semester between and within conductors?

The researcher conducted a long-term descriptive analysis of teacher verbalization across an entire semester with eleven choral conductors of the same chorus. This researcher hypothesized that there would be a negative relationship between teacher talk and student enjoyment, congruent with Spradling's (1985) findings, and that there would be a negative relationship between difficulty of music and student enjoyment. For purposes of this study, total rehearsal time was operationally defined as the entire duration of time from when the conductor came up to the podium and announced his/her piece to the time the conductor left the podium, and teacher verbalization was defined as any time the teacher spent talking, regardless of content; any time that the choir was not performing.

Method

Participants

Participants included 47 students enrolled in a chorus at a large southeastern university. The chorus was comprised of 39 music majors and 8 nonmusic majors. There were 30 undergraduate students and 17 graduate students (20 males and 27 females). This mixed chorus is designed as a laboratory chorus for second-year graduate choral music education/choral conducting majors. It is one of eight choruses in which students schoolwide can participate. There were eleven conductors during this particular semester: seven doctoral students and four masters level students. The eleven conductors rehearsed on a two-day rotation. On Day A, the first five conductors rehearsed for ten minutes each. On Day B, the remaining six conductors rehearsed for eight minutes each. A faculty member in the choral department was assigned as a supervisor to the chorus in that he provided written comments to the conductors and sat in on rehearsals. Table 1 lists all selections and composers.

Table 1. *Musical Selections and Composers*

Title of Piece:	Composer/Arranger:
Cuncti Simus	Ricardo Soto
O Filii et Filiae	Volckmar Leisring
Dixit Maria	Hans Leo Hassler
Praise ye the Lord of Hosts	Jacob Handl
Magnificat	T. Tertius Noble
Nunc Dimitis	T. Tertius Noble
Gloria in excelsis (from *Gloria*)	Antonio Vivaldi
Et in terra pax	
Gratias agimus tibi	
Propter magnam gloriam	
Domine fili unigenite	
Domine Deus, Agnus Dei	
Qui tollis	
Quoniam tu solus santus	
Cum sancto spiritu	
Comin' to Town (from *the Settling Years*)	Libby Larsen
Beneath these Alien Stars	
A Hoopla	
Hope for Resolution	Caldwell/Ivory
We Remember Them	Donald McCullough
Follow the Drinking Gourd	Andre Thomas
Dodi Li	Nina Chen
Sun's a Risen	Ben Allway

Table 2. *Means, Frequencies and Total Time Spent Rehearsing vs. Talking*

Selection	Total Time Spent Talking (# of rehearsals)	Mean Time Spent Talking	Total Time Spent Rehearsing
Cuncti Simus	480.11 sec (7)	68.58 sec	894.77 sec
O Filii et Filiae	1099.78 sec (8)	137.47 sec	2587.70 sec
Dixit Maria	727.53 sec (7)	103.93 sec	2716.30 sec
Praise ye the Lord of Hosts	726.44 sec (7)	103.77 sec	2528.53 sec
Magnificat	2533.30 sec (14)	180.95 sec	6858.22 sec
Nunc Dimitis	1191.23 sec (8)	148.90 sec	3362.32 sec
Gloria in excelsis	859.83 sec (7)	122.83 sec	2018.19 sec
Et in terra pax	1235.24 sec (8)	154.40 sec	3468.08 sec
Gratias agimus tibi	774.50 sec (11)	70.40 sec	1321.49 sec
Propter magnam gloriam	1230.55 sec (15)	82.03 sec	3478.41 sec
Domine fili unigenite	514.02 sec (7)	73.43 sec	1564.09 sec
Domine Deus, Agnus Dei	324.34 sec (4)	81.08 sec	1194.51 sec
Qui tollis	67.52 sec (3)	22.50 sec	424.51 sec
Quoniam tu solus santus	509.43 sec (5)	101.88 sec	701.48 sec
Cum sancto spiritu	1015.13 sec (9)	112.79 sec	2517.70 sec
Comin' to Town	1800.03 sec (13)	138.46 sec	5416.70 sec
Beneath these Alien Stars	3056.50 sec (16)	191.03 sec	8072.93 sec
A Hoopla	2123.25 sec (14)	151.66 sec	5543.75 sec
Hope for Resolution	2256.77 sec (13)	173.59 sec	5145.42 sec
We Remember Them	518.14 sec (6)	86.35 sec	1886.27 sec
Follow the Drinking Gourd	786.44 sec (8)	98.30 sec	2739.54 sec
Dodi Li	1107.67 sec (8)	138.45 sec	3124.10 sec
Sun's a Risen	2084.52 sec (12)	173.71 sec	4467.49 sec

Procedure

Every rehearsal was audio-recorded, beginning with the rehearsal when the music was first introduced, through to the dress rehearsal, for a total of 32 rehearsals. All recordings were analyzed ex post facto using two stopwatches, one to record total rehearsal time and one to record time in teacher verbalization. At the end of the semester, the chorus members were given surveys, in which they indicated their enjoyment of the rehearsal process on each of the pieces on a 10-point Likert-type scale (see Appendix A). In addition, the faculty supervisor for the course was given a survey asking for his expert opinion on the difficulty level of each of the pieces, also rated on a 10-point Likert-type scale

(see Appendix B). Two other university choral professors were consulted and also asked to rate each piece's difficulty level.

Descriptive statistics were computed for total amount of rehearsal time on each piece, total amount of teacher verbalization on each piece, teacher verbalization as a percentage of each rehearsal, and average percentage of teacher verbalization across the semester. For each conductor, correlations were computed for average percentage of teacher talk and difficulty of the music, average percentage of teacher talk and student enjoyment of rehearsal process on that piece (as defined by their responses on the survey), and between difficulty of music and student enjoyment of rehearsal process on that piece.

Results

Three university choral professors rated the difficulty of the music. Rater reliability was computed using the Madsen & Madsen (1998) formula: (agreements)/ (total agreements + disagreements). Reliability was acceptable at 85.6%. An agreement was defined *a priori* as within one point deviation on either side of the scale. Thus, if one rated a piece at a difficulty level of 7, another rated it a 7, and another rated it a 6, that was considered an agreement, and the three scores were averaged together for a mean difficulty rating of 6.66.

Table 3 lists all totals for mean percentage of teacher verbalization, difficulty level of each piece, and mean student enjoyment scores of each piece. Figure 1 illustrates the relationships between student enjoyment of each piece and difficulty levels of those pieces. Table 2 illustrates each conductor's total time spent talking, number of rehearsals, and mean time spent talking.

Consistent with related literature, most of the conductors spent about 40% of their total rehearsal time talking. Teacher verbalization ranged from 15.91% to 72.62%. Understandably, the piece that was rehearsed the least amount of time (*Qui tollis*) received the lowest total amount of teacher verbalization. Trends in teacher verbalization also show that as the performance drew nearer, most conductors limited their verbalization.

Results of a Pearson correlation revealed no significant relationships among the three variables. There was no relationship between average percentage of teacher talk and student enjoyment of the rehearsal process on that piece (r = -. 0472, p = .82). Student enjoyment was only slightly different, regardless of how much the conductor talked. Some of the conductors that talked the most received high student enjoyment ratings on their pieces, so the relationship was not consistent, nor should conclusions be generalized between conductors.

The correlation between difficulty of music and student enjoyment of the rehearsal process on that piece was r = -.1868, p = .39. This indicates that difficulty of music did not seem to relate to student attitude. Students rated enjoyment of the rehearsal process relatively high overall (means ranged from

5.61 to 8.43 on a 10-point Likert scale). Interestingly, the piece that was rated as least difficult (*Cuncti Simus*) was also rated as least enjoyed.

Results revealed no relationship between mean percentage of teacher talk and difficulty of the music ($r = .1193$, $p = .58$). Choral conductors did not necessarily spend less time talking if they had a more difficult piece. The piece that was rated most difficult (*Beneath these Alien Stars*) was rehearsed for the most amount of time (8073 seconds or approximately 135 minutes).

Table 3. *Results of Survey and Time Tallies*

Selection	Difficulty Level	Student Enjoyment	Avg. Teacher Talk (%)
Cuncti Simus	2.33	5.61	53.66
O Filii et Filliae	4.66	6.33	42.5
Dixit Maria	6.66	6.81	26.78
Praise ye the Lord of Hosts	5.33	6.09	28.73
Magnificat	8	5.96	36.94
Nunc Dimitis	8	6.89	35.43
Gloria in excelsis	4.33	7.21	42.6
Et in terra pax	8	7.11	35.62
Gratias agimus tibi	4.66	7.68	58.61
Propter magnam gloriam	4.66	8.43	35.38
Domine fili unigenite	4	7.64	32.86
Domine Deus, Agnus Dei	4	7.63	27.15
Qui tollis	4	7.45	15.91
Quoniam tu solus santus	8	7.7	72.62
Cum sancto spiritu	9	7.89	40.32
Comin' to Town	7.66	7.04	33.23
Beneath these Alien Stars	10	6.28	37.86
A Hoopla	8	7.28	38.3
Hope for Resolution	5	7.74	43.86
We Remember Them	4.33	7.55	27.47
Follow the Drinking Gourd	6	7.47	28.71
Dodi Li	6.66	7.68	35.46
Sun's a Risin'	8	6.38	46.66

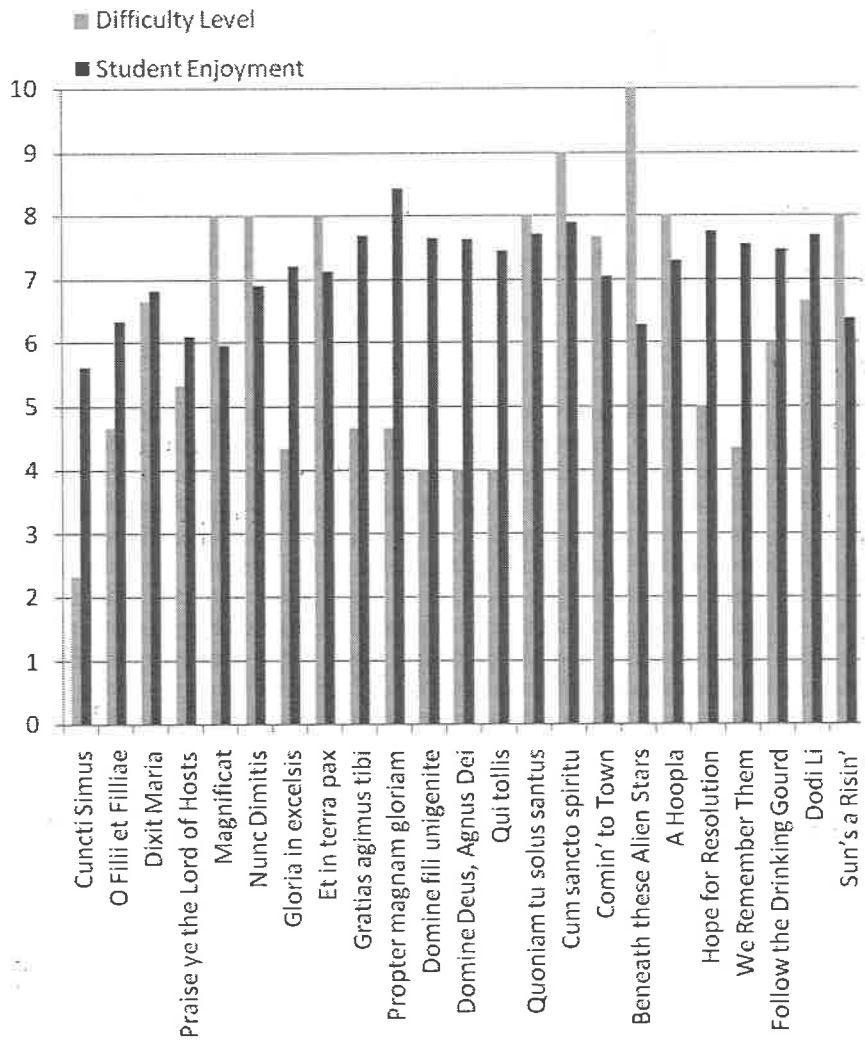

Figure 1. Relationship between Music Difficulty and Student Enjoyment.

Discussion

Teacher verbalization does not seem to be related to student attitude. There were no significant correlations between teacher verbalization and difficulty level of music, teacher verbalization and student enjoyment, nor between student enjoyment and difficult level of music. The least difficult piece was also the least enjoyed.

This study raises many interesting questions and possible follow-up studies. The lack of significant relationship between duration of teacher verbalization and student enjoyment seems to indicate that college choral students were not necessarily enjoying rehearsal less when they were not performing. They were still able to enjoy the rehearsal process of a musical selection even if the director spent a lot of the rehearsal time talking. Student enjoyment may depend on the rehearsal environment each individual conductor creates, what the conductor is talking about, or how well the student can relate to what the conductor is saying. Alternatively, the possibility also exists that some students will enjoy rehearsing a piece of music regardless of what the conductor does.

The lack of relationship between difficulty of piece and time spent on teacher talk is also noteworthy. Does a conductor need to spend more time talking to teach a piece if it's difficult? Or does he or she choose to allocate more time to student performance so that the students will have more repetitions and thereby become more familiar with the piece? It may not be a consideration at all if the conductor makes these decisions haphazardly and rehearses in a reactive rather than a proactive fashion. Perhaps the most relevant extension to this question is a follow-up study to see how the chorus' performance was affected as a result of the time each conductor spent in verbalization. Alternatively, another question could investigate what types of rehearsal issues involve more extended verbalizations and what is the corresponding effect of these verbalizations on performance accuracy?

This study had some important limitations. The first of these is the skewed scale used in data collection discovered after the fact. Because participants (and the judges) were given an exact middle point at 5, there were more options to choose the higher numbers (6-10) than the lower ones (1-4). It is also difficult to separate the conductor from the rehearsal process. Thus, even though students were asked to rate their enjoyment of the rehearsal process and not necessarily the conductor, one cannot say with accuracy that these could be separated or distinguished between. Additionally, the data for teacher talk was compiled for every rehearsal while the data for difficulty level and student enjoyment was taken only once—at the end of the study. Had student enjoyment been measured at every rehearsal, perhaps it would have been easier to determine whether their score was indeed related to teacher talk, whereas the measurement at the end of the semester presupposes that they will remember what happened during earlier rehearsals. Future studies could perhaps focus on fewer rehearsals and take measurements more frequently.

It is rather simplistic to assume that any one variable could really predict student enjoyment of the rehearsal process. Many other variables like personality of the conductor, approval conditions, associations with a particular piece, and many other intangibles (environmental conditions, peer relations, etc.) all contribute to student attitude during rehearsal. In addition, taking an average across the semester of teacher verbalization does not adequately reflect

the variability within the rehearsal process. Neither is limited teacher verbalization necessarily a sign of rehearsal efficiency, since the research literature is mixed as to whether teacher talk is even related to teacher effectiveness. Still, it is interesting for teacher educators to observe the results of this study in light of all the research in the area of teacher talk. Student enjoyment was high regardless of duration of teacher talk, and that finding alone merits further research. Many people seem to intuit that teachers should talk less, and while this may be true for its negative effects on student attentiveness, it may not necessarily be detrimental to student attitude. Further study is warranted, in order to glean further insight into which variables contribute to student enjoyment of the rehearsal process and how teacher talk relates to student attitude.

References

Blocher, L., Greenwood, R., & Shellahamer, B. (1997). Teaching behaviors of middle school and high school band directors in the rehearsal setting. *Journal of Research in Music Education, 45*, 457-469.

Brendell, J. K. (1996). Time use, rehearsal activity, and student off-task behavior during the initial minutes of high school choral rehearsals. *Journal of Research in Music Education, 44*, 6-14.

Duke, R. A., & Henninger, J. C. (2002). Teachers' verbal corrections and observers' perceptions of teaching and learning. *Journal of Research in Music Education, 50*, 75-87.

Dunn, D. E. (1997). Effect of rehearsal hierarchy and reinforcement on attention, achievement, and attitude of selected choirs. *Journal of Research in Music Education, 45*, 547-567.

Forsythe, J. L. (1977). Elementary student attending behavior as a function of classroom activities. *Journal of Research in Music Education, 25*, 228-239.

Grechesky, R. N. (1985). *An analysis of non-verbal and verbal conducting behaviors andtheir relationships to expressive musical performance.* Unpublished doctoral dissertation, University of Wisconsin-Madison.

Kostka, M. J. (1984). An investigation of reinforcements, time use, and student attentiveness in piano lessons. *Journal of Research in Music Education, 32*, 113-122.

Madsen, C. K., & Alley, J. (1979). The effect of reinforcement on attentiveness: a comparison of behaviorally trained music therapists and other professionals with implications for competency-based academic preparation. *Journal of Music Therapy, 16*, 70-82.

Madsen, C. K., & Geringer, J. M. (1983). Attending behavior as a function of in-class activity in university music classes. *Journal of Music Therapy, 20*, 30-38.

Madsen, C. K. & Madsen, C. H. (1998). *Teaching/ Discipline.* Raleigh: Contemporary Publishing Company.

Moore, R. S. (1987). Effects of age, sex, and activity on children's attentiveness in elementary school music classes. In C. K. Madsen & C. Prickett (Eds.), *Applications of Research in Music Behavior* (pp. 26-31). Tuscaloosa: University of Alabama Press.

Murray, K. C. (1975). The effect of teacher approval/disapproval on music performance, attentiveness, and attitude of high school choruses. In C. K. Madsen, R. D. Greer, & C. H. Madsen, Jr. (Eds.). *Research in music behavior: Modifying music behavior in the classroom pp.* 165-180. New York: Teachers College Press.

Pontious, M. F. (1982). *A profile of rehearsal techniques and interaction of selected band conductors.* Unpublished doctoral dissertation, University of Illinois.

Sherill, M. H. (1986). *An analytical study of videotaped rehearsal and conducting techniques of selected junior and senior high school band conductors.* Unpublished doctoral dissertation, University of Rochester.

Siebenaler, D. (1997). Analysis of teacher-student interactions in the piano lessons of children and adults. *Journal of Research in Music Education,45,* 6-20.

Spradling, R.L. (1985). The effect of timeout from performance on attentiveness and attitude of university band students. *Journal of Research in Music Education, 33*, 123-37.

Thurman, V. L. (1977). A frequency and time description of selected rehearsal behaviors used by five choral directors. *Dissertation Abstracts International, 38*, 3135-A.

Wagner, M. J., & Strul, E. P. (1979). Comparisons of beginning versus experienced elementary music educators in the use of teaching time. *Journal of Research in Music Education, 27*, 113-125.

Watkins, R. C. (1993). Nonperformance time use in middle and junior high school choral rehearsals. *Update: Applications of Research in Music Education, 11*, 4-7.

Witt, A. C. (1986). Use of class time and student attentiveness in secondary instrumental music rehearsals. *Journal of Research in Music Education, 34*, 34-42.

Yarbrough, C., & Price, H. E. (1981). Prediction of performer attentiveness based on rehearsal activity and teacher behavior. *Journal of Research in Music Education, 29*, 209-217.

Appendix A

Please fill out the following survey to indicate the how much you enjoyed the rehearsal process of each of the pieces (not necessarily how much you enjoyed the piece or how much you enjoyed the conductor). Thank you for your time.

Male ___ Female ___ Undergrad ___ Grad ___
Music Major ___ Non-Music Major ___

1=hated it 3= mostly disliked it 5= didn't like it or hate it
8=liked it 10= loved it

Cuncti Simus (Kevin)	1	2	3	4	5	6	7	8	9	10
O Filii et Filliae (Carlton)	1	2	3	4	5	6	7	8	9	10
Dixit Maria (Isaiah)	1	2	3	4	5	6	7	8	9	10
Praise ye the Lord (Jessica)	1	2	3	4	5	6	7	8	9	10
Magnificat (Gerald)	1	2	3	4	5	6	7	8	9	10
Nunc Dimitis (Mary)	1	2	3	4	5	6	7	8	9	10
Gloria (Paul)	1	2	3	4	5	6	7	8	9	10
Et in Terra (Paul)	1	2	3	4	5	6	7	8	9	10
Gratias Agimus (Carlton)	1	2	3	4	5	6	7	8	9	10
Propter Magnam (Carlton)	1	2	3	4	5	6	7	8	9	10
Domine Fili (Mary)	1	2	3	4	5	6	7	8	9	10
Domine Deus (Mary)	1	2	3	4	5	6	7	8	9	10
Qui tollis (Mary)	1	2	3	4	5	6	7	8	9	10
Quoniam tu solus (Isaiah)	1	2	3	4	5	6	7	8	9	10
Cum Sancto Spiritu (Isaiah)	1	2	3	4	5	6	7	8	9	10
Comin' to Town (Craig)	1	2	3	4	5	6	7	8	9	10
Beneath these Alien Stars (Jose)	1	2	3	4	5	6	7	8	9	10
Hoopla (Josh)	1	2	3	4	5	6	7	8	9	10
Hope for Resolution (Kevin)	1	2	3	4	5	6	7	8	9	10
We remember Them (Craig)	1	2	3	4	5	6	7	8	9	10
The Drinking Gourd (Jessica)	1	2	3	4	5	6	7	8	9	10
Dodi Li (Inga)	1	2	3	4	5	6	7	8	9	10
Sun's a Risin' (Inga)	1	2	3	4	5	6	7	8	9	10

Appendix B

Please fill out the following survey to indicate the difficulty level of each of the pieces. Thank you for your time.

1=Very easy 3= mostly easy 5= neither too difficult nor too easy
8=mostly difficult 10= extremely difficult

Cuncti Simus (Kevin)	1	2	3	4	5	6	7	8	9	10
O Filii et Filliae (Carlton)	1	2	3	4	5	6	7	8	9	10
Dixit Maria (Isaiah)	1	2	3	4	5	6	7	8	9	10
Praise ye the Lord (Jessica)	1	2	3	4	5	6	7	8	9	10
Magnificat (Gerald)	1	2	3	4	5	6	7	8	9	10
Nunc Dimitis (Mary)	1	2	3	4	5	6	7	8	9	10
Gloria (Paul)	1	2	3	4	5	6	7	8	9	10
Et in Terra (Paul)	1	2	3	4	5	6	7	8	9	10
Gratias Agimus (Carlton)	1	2	3	4	5	6	7	8	9	10
Propter Magnam (Carlton)	1	2	3	4	5	6	7	8	9	10
Domine Fili (Mary)	1	2	3	4	5	6	7	8	9	10
Domine Deus (Mary)	1	2	3	4	5	6	7	8	9	10
Qui tollis (Mary)	1	2	3	4	5	6	7	8	9	10
Quoniam tu solus (Isaiah)	1	2	3	4	5	6	7	8	9	10
Cum Sancto Spiritu (Isaiah)	1	2	3	4	5	6	7	8	9	10
Comin' to Town (Craig)	1	2	3	4	5	6	7	8	9	10
Beneath these Alien Stars (Jose)	1	2	3	4	5	6	7	8	9	10
Hoopla (Josh)	1	2	3	4	5	6	7	8	9	10
Hope for Resolution (Kevin)	1	2	3	4	5	6	7	8	9	10
We remember Them (Craig)	1	2	3	4	5	6	7	8	9	10
The Drinking Gourd (Jessica)	1	2	3	4	5	6	7	8	9	10
Dodi Li (Inga)	1	2	3	4	5	6	7	8	9	10
Sun's a Risin' (Inga)	1	2	3	4	5	6	7	8	9	10

Missouri Journal of Research in Music Education, No. 45, 2008, 25-38

A One-Year Longitudinal Study of Three-to Six-Year-Old Korean Children's Rhythmic Abilities

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The study was designed to examine children's ability with rhythmic duplication in a longitudinal investigation. Participants (N = 32) were children 6 years old (n = 8), 5 years old (n = 8), 4 years old (n = 8), and 3 years old (n = 8) from a Korean community in a small Midwestern city. Each child was tested on individually duplicating 10 kinds of rhythmic patterns by tapping and chanting. Parents of the participants were interviewed. One year after the first investigation, the phase II was conducted with the same participants (N = 26) and the same test items. Age level was a significant predictor of children's rhythmic development, but gender was not. Children at all age levels could duplicate the rhythmic patterns better by chanting than by tapping. The response mode of the age 3 and age 4 groups did not significantly differ from each other; the same was found for the age 5 through age 7 groups. However, there were significant differences between the age 4 and age 5 groups. An informal observation based on parent interviews indicated that cognitive development, weekly musical exposure time, and family involvement may be variables that need further study.

Introduction

For many years, music educators have been interested in young children's musical ability, perception, responses, and developmental stages. Because understanding children's musical development can provide essential pedagogical information to music educators (e.g., phases of song acquisition in early childhood, development of rhythmic skills), researchers have examined children's musical ability in various ways. Among musical elements, rhythmic skill is a critical component of learning music. Consistent with the results of Moog's (1976) study, which indicated that early rhythmic imitations occurred before imitation of pitch, young children often may be observed spontaneously producing rhythmic movements. The behavior has been of great interest to music educators (Atterbury, 1983; Gilbert, 1980; Hargreaves, 1986; Lucchetti, Caccio, & Mira, 1997; Persellin, 1992; Rainbow, 1977, 1981; Schleuter & Schleuter, 1985; Thackeray, 1969), and inspired the current study.

Gardner's (1971) study about children's duplication of rhythmic patterns indicated that longer items were more difficult to reproduce than shorter items. The author also reported that age was one of the important factors related to rhythmic skills, despite individual differences within age groups. The results

of Persellin's (1992) study indicated that age was one of the significant factors in the accuracy of reproducing rhythmic patterns regardless of which of three rhythmic presentation modalities was used. Schleuter and Schleuter's (1985) results also supported the age factor, suggesting that the accuracy of all rhythm response tasks, including clapping, chanting, and stepping, increased as age increased. Rainbow's (1977, 1981) longitudinal study of preschool children's rhythmic ability indicated that 4-year-old children could perform all rhythmic response tasks more successfully than 3-year-old children could. Similar findings appeared in the studies of Gilbert (1980) and Ramsey (1983). Gilbert investigated motor musical skill development of children from ages 3 to 6, and Ramsey examined the effects of age, singing ability, and instrumental experiences on preschool children's melodic perception. Both of researchers indicated that performance of these skills was positively related to chronological age.

Gender also was examined as a predictor of children's rhythmic ability in several studies (Gilbert, 1980; Schleuter & Schleuter, 1985; Zdzinski, 1992). In these studies, girls were found to have better rhythmic and motor responses than boys (Gilbert; Schleuter & Schleuter). However, Zdzinski (1992), in a study of several musical ability tests given to middle school students, indicated that boys scored significantly higher than girls in the musical achievement test, although there were no gender differences among the other types of musical tests administered.

In studying another factor of children's musical development, many researchers investigated children's music experience and family's music involvement, including musical parenting, which is the musical interaction between parent and child (Brand, 1986; Custodero & Johnson-Green, 2003; Ilari, 2005; Zdzinski, 1992, 1996). Brand's study supported a strong relationship between home music environment and music achievement, and Zdzinski's study indicated that parental involvement was related to overall performance, as well as affective and cognitive musical outcomes. Some studies examined more concrete factors among home music experiences. According to Custodero and Johnson-Green's research, parents' previous music experiences were associated with the frequency of singing and playing music to their children as well as the style of music played. Ilari also investigated the effects of musical parenting on young children and found that maternal occupation and previous musical experiences determined mothers' uses of music with their babies. These studies inspired curiosity regarding factors that contribute to improving children's rhythmic performance.

Authors of previous studies investigating children's rhythmic skills have expressed the need for further investigation to identify possible variables related to children's rhythmic development. Furthermore, duplication of rhythmic patterns has been frequently used as a teaching tool in a music classroom setting, perhaps without clear understanding of age-appropriate practice. For example, music teachers often introduce rhythm with clapping or

tapping, although they may not be not sure what kinds of modes or rhythmic patterns are the easiest approaches for young children's initial to rhythmic pattern learning, given that there is little research to inform them. It may provide valuable pedagogical implications to know more about the degree to which young children can duplicate rhythmic patterns and the variables affecting rhythmic duplication ability.

Researchers have used several different response modes when testing children's rhythmic development, such as tapping, clapping, or chanting. Rainbow (1977, 1981) and Rainbow and Owens (1979) indicated that preschool children could perform more successfully with vocal responses than in any other physical response mode, and Bennet (1991) found that kindergarten students could respond most accurately in chinning and least accurately in tapping. Results of a study by Schleuter & Schleuter (1985) supported that chanting was an effective mode of response for young children as compared with clapping and stepping. As a result of these findings, the present study incorporated tapping and chanting to help identify variables related to children's rhythmic duplication ability.

Because preschoolers' musical development was the primary interest of the researcher, participants from 3 to 6 years of age were chosen. The researcher was especially interested in how children's abilities differ as a result of age. The purpose of this study was to examine children's ability with rhythmic duplication and factors that contribute to improving children's performance. The following research questions were established:

1. Are there significant differences across age groups in children's rhythmic duplication ability?

2. Do children of different ages show a similar pattern of progression in their rhythmic scores after one year?

3. Is there a significant difference in rhythmic duplication performance as a result of gender?

4. Is there a significant difference of between the response modes of tapping and chanting in terms of young children's success with rhythmic duplication?

Method

A pilot study was conducted with two 28-month-old children, two 3-year-old- children, and two 6-year-old-children. The 6-year-old-children reproduced 10 rhythmic patterns with few errors. The children younger than 3 years old were unable to sit on-task and follow directions. They seemed not to understand instructions and to lose attention too quickly, so participants younger

than 3 years of age were excluded from this study. The 3-year-old children were able to sit on-task and follow directions. The pilot participants reproduced 1 or 2 of 10 rhythmic patterns.

Based on the pilot study, participants (N = 32) were delimited to children from 3 to 6 years old. Each age group included eight participants: 6 year old (n = 8), 5 years old (n = 8), 4 years old (n = 8), and 3 years old (n = 8). The children were recruited from a Korean community in a small Midwestern city. Among the 6 year old children, two attended a gifted program in the public school system.

This study was designed to investigate children's rhythmic duplication ability in a longitudinal investigation. One year after the first investigation (Phase I), a second investigation (Phase II) was conducted with the same participants and the same instruments. The sample was a fairly small and unique group; therefore, collecting longitudinal data allowed for investigation of the individual's developmental aspects, and used participants as their own controls, an advantage to the cross-sectional approach. Besides providing more information regarding participants' baseline and current skills, the longitudinal design offered stronger implications for future practice.

Phase I

The participants (N = 32) in the first year were from 3 to 6 years of age and included 14 girls and 18 boys. Each age level comprised 8 participants. Of 32 parents who participated in the interviews, two were music majors in the past. All children who participated were from a Korean community in a small Midwestern city, and school age participants experienced music classes for two 30-minute periods per week. All of participants' parents had academic backgrounds ranging from master's to postdoctoral degrees, and they were in the middle and upper socioeconomic classes. This population was chosen for convenience because the researcher had easy access to the community, and was able to fully communicate the instructions and interview questions with the children and their parents. The participants' names were coded so that Phase I data could be matched with Phase II for further statistical analysis at the conclusion of this study. The Institutional Review Board had approved this study and consent forms were obtained for each child and parent participant.

The researcher introduced 10 rhythmic-pattern activities to the children individually. Because results of previous research (Bennett, 1991) indicated that four-beat patterns were the most commonly perceived pattern length for kindergarten children, the present study's 10 rhythmic patterns each contained four beats, arranged in order of difficulty (see Figure 1). *Tapping* was defined as performing the rhythmic patterns by tapping with two hands on the legs and *chanting* was defined as singing or saying the rhythmic patterns without words, one pitch per syllable allowing changing tone from syllable to syllable. The activity started with a song to serve as an initiating activity, to gain the child's

interest and attention. After the brief introduction with the 8-measure "tapping song," the researcher started tapping and pointed for the child to duplicate the testing patterns. After introducing all 10 rhythmic patterns for the tapping activity, the researcher sang a chanting song of four measures to introduce the chanting activity. Then, the researcher demonstrated chanting and led the child throughout the 10 chanting items.

All activities were audio recorded for subsequent data analysis. Due to the children's short attention span and interest, the activity was provided as a type of rhythmic song game. All children were presented the same 10 rhythm patterns in the same order. The tapping activity was presented first and the chanting activity was presented as a follow-up, because the researcher thought children might be more comfortable tapping rather than chanting for the first activity. In coding for accuracy of the response, the researcher compared the child's response to the pattern modeled. The child's score was the number of patterns reproduced correctly, with a total of 10 possible for each response mode.

After the activity, the children's mothers were interviewed for approximately 20 minutes. Each mother was asked the following questions:

Previous music lesson experience:

Did your child have any music lesson experiences previously? If so, what was the child's previous music lesson, and for how long?

Weekly musical activity involved:

Please tell me your child's involvement in music during the week. Could you estimate total minutes of weekly exposure to music activities, including preschool music class, church worship time, siblings' music practice time, listening to music, music lesson, etc.?

Family music involvement:

Are there any music majors in your family, such parents, grandparents, relatives?

Do you have any family music involvement such as going to concerts, family worship time, or singing together?

Cognitive development:

How would you estimate your children's developmental growth overall, based on your experiences? For example, "My child was a fast learner in cognitive development or physical development." Is your child involved in any gifted program?

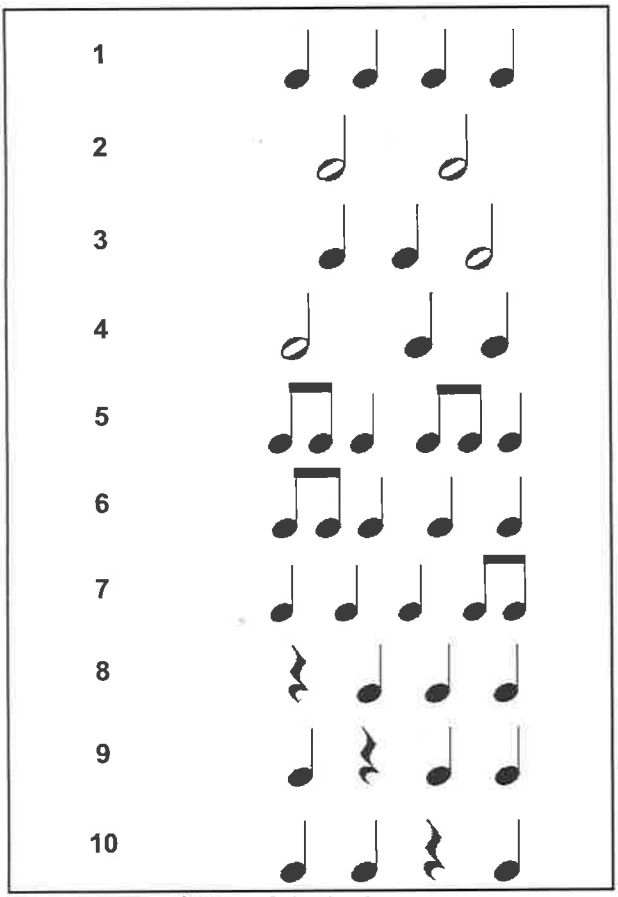

Figure 1. Test items of rhythmic patterns.

Phase II

One year later, phase II was conducted using the same process as phase I. Due to the characteristics of the sample, several of the children had returned to Korea, which reduced the sample size ($N = 26$). The numbers of participants from Phase I, now a year older, were as follows: age 4 ($n = 6$), age 5 ($n = 6$), age 6 ($n = 6$), and age 7 ($n = 8$).

Results

Phase I

Children could receive a score from 0 to 10 on the rhythmic duplication test indicating the number of correct rhythm duplication responses.

A two-way repeated measures analysis of variance (ANOVA) was computed to determine whether there were differences between the two response modes among the four age groups, 3, 4, 5, and 6 years old. Results of the analysis indicated that there were significant differences among groups, $F(3, 28) = 13.349$, $p < .001$, and between response modes (tapping and chanting), $F(1, 28) = 30.912$, $p < .001$. There were no significant age- by-mode interactions, $F(3, 28) = 0.964$, $p = .423$).

In order to investigate the age trend more precisely, a polynomial contrast was used for trend analysis. The trend was linear ($p < .001$). Results of a Fisher's least significant difference (LSD) post hoc test revealed that the means for the age 3 and age 4 groups did not differ significantly from each other (mean difference = 1.4375, $p = .511$). The age 5 and age 6 groups also did not differ significantly from each other (mean difference = 0.3750, $p = .983$). However, the difference between age 4 and age 5 was significant (mean difference = 3.6250, $p = .008$).

Table 1
Overall Mean of Each Response Scores by Age in Phase I

	Age (year)	Mean	*SD*	*n*
Tapping 1	3	2.000	1.690	8
	4	3.750	2.765	8
	5	7.750	2.121	8
	6	8.000	1.414	8
Total		5.375	3.270	32
Chanting 1	3	4.500	3.505	8
	4	5.625	3.068	8
	5	8.875	0.991	8
	6	9.375	0.518	8
Total		7.094	3.104	32

To examine the significant relationship between age and each response mode more precisely, Pearson product moment correlations were computed comparing age by tapping Phase 1 and by chanting Phase 1, respectively. Overall, as shown in Table 1, the mean number of correct responses for chanting ($M = 7.0937$) was higher than for tapping 1 ($M = 5.3750$). The correlation between each response mode and age was significant. There was a high positive correlation between tapping and age ($r = .764$, $p < .001$) and between chanting and age ($r = .650$, $p < .001$).

As can be observed in Table 1, individual differences, as indicated by standard deviations, varied widely by age and response mode. Four-year-old children had the greatest individual differences for tapping ($SD = 2.76$), whereas 3-year-old children had the largest individual differences for chanting ($SD = 3.50$). For chanting, the 3- and 4-year-old children's responses were clearly

more divergent than those of the older children.

Phase II

A two-way repeated measures ANOVA was computed to determine differences between the two response modes (tapping 2 and chanting 2) among the four groups, 4 to 7 years old. Results of the analysis indicated significant differences among groups, $F(3, 22) = 10.614$, $p < .001$, and between response modes (tapping and chanting), $F(1, 22) = 37.550$, $p < .001$. There was a significant age-by-mode interaction, $F(3, 22) = 15.783$, $p < .001$. The 4-year-old children had a larger within-group difference between tapping ($M = 3.000$) and chanting ($M = 8.333$) than the other age groups' within-group differences between the two response modes, resulting in the significant interaction (see figure 2; age Phase 2 x mode Phase 2).

As with Phase I, in order to examine the significant relationship between age and each response mode more precisely, Pearson product moment correlations were computed, comparing age 2 by tapping 2 and by chanting 2, respectively. Overall, the mean number of correct responses for chanting 2 ($M = 9.2308$) was higher than for tapping 2 ($M = 7.5385$). The correlation between each response mode 2 and age 2 was significant. There was high positive correlation between tapping 2 and age 2 ($r = .747$, $p < .001$) and between chanting and age 2 ($r = .495$, $p < .005$).

To examine the relationship between response modes of Phase I and Phase II, Pearson product moment correlations were also computed. There was high positive correlation between Phase I and II tapping scores ($r = .789$, $p < .001$) and between Phase I and II chanting scores ($r = .731$, $p < .001$).

Table 2
Overall Mean of Each Response Score by Age in Phase II

	Age (year)	Mean	*SD*	*n*
Tapping 1	4	3.000	3.098	6
	5	7.833	2.137	6
	6	9.000	1.095	6
	7	9.625	0.744	8
Total		7.539	3.178	26
Chanting 1	4	8.333	1.751	6
	5	8.333	1.472	6
	6	9.500	1.225	6
	7	10.000	0.000	8
Total		9.231	1.336	26

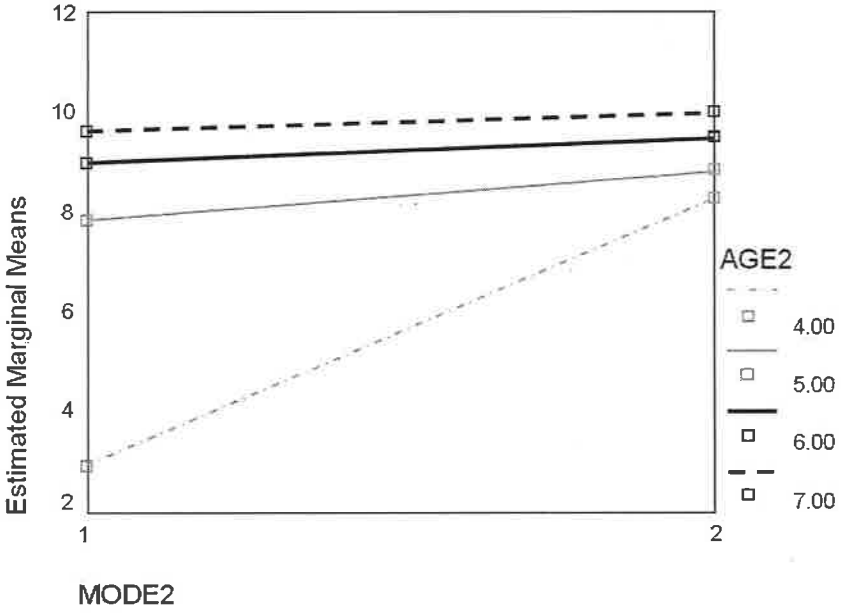

Figure 2. Significant interaction between age and mode in Phase II (tapping and chanting).

As can be observed in Table 2, individual differences, as indicated by standard deviations, varied by age and response mode. Of the age groups, 4-year-old children had the greatest individual differences for tapping Phase 2 (*SD* = 3.098) and for chanting Phase 2 (*SD* = 1.751). For both response modes of tapping and chanting in Phase 2, individual differences were clearly reduced as age increased. Because the test was designed to investigate young children from 3 to 6 years old in Phase I (based on the pilot study of children between 3 and 6 years of age), it proved to be easy for the children who were 7-year-olds by the time of Phase 2, all of whom responded with chanting without an error.

As with Phase I, in order to investigate the age trend more precisely, a polynomial contrast was used for trend analysis. The trend was linear ($p < .001$). According to results of a LSD post hoc test, the means among age 5 through age 7 groups did not significantly differ: between age 5 and age 6 (mean difference = -.9167, $p = .279$), between 6 and 7 (mean difference = -.5625, $p = .474$), between age 5 and age 7 (mean difference = -1.4792, $p = .069$). However, the difference between ages 4 and 5 was significant (mean difference = -2.6667, $p = .004$).

According to the results of Phase I and Phase II, age and response mode were highly correlated. In both phases, tapping showed more errors than chanting in reproducing rhythmic patterns. The responses of Phase I and Phase II were also highly correlated. In both phases, the largest mean difference was obtained between ages 4 and 5. Of the age groups in both phases, 4-year-old

children had the greatest individual differences to reproduce rhythmic patterns. The total test results of both Phase I and Phase II revealed no significant difference between genders: Phase I: $F(1, 30) = .659$, $p = .423$; Phase II: $F(1, 24) = .015$, $p = .903$.

Discussion

The findings of this study indicated that children's rhythmic duplication ability was significantly related to age and corroborated findings of previous studies (Atterbury, 1983; Gardner, 1971; Gilbert, 1980; Luchetti, Caccio, & Mira, 1997; Norton, 1980; Persellin, 1992; Schleuter & Schleuter, 1985). The 6-year-old children successfully reproduced most of the rhythmic patterns, and the same group successfully reproduced all of the patterns when chanting one year later. Some of them scored the same or lower than the 5-year-old children did in tapping in Phase I, but all of them scored the same or higher than the younger children in chanting. The significant difference between the age 4 groups and age 5 groups in both phases corresponds to the division of preschool and kindergarten groupings, and is consistent with Ramsey's (1983) findings of large differences between 4- and 5-year-old children in perception of melodic intervals.

Because children might experience formal music instruction from kindergarten on, the lessons might affect the division of the response differences. However, because this study was conducted during summer before school starts, the differences between age 4 and age 5 could be explained more by a developmental factor than an instructional factor. Regardless of the age trend, as Gardner's study showed, there were large individual differences, especially among 4-year-old children. Music teachers should consider children's individual differences as well as children's developmental stage when implementing rhythmic activities and instruction. For example, teachers should allow for various levels of children's performance when they instruct rhythm activities and plan to introduce rhythm activity using multiple response modes.

Young children reproduced the rhythmic patterns more successfully by chanting than by tapping. This supports previous research findings (Bennett, 1991; Frega, 1979; Rainbow, 1977, 1981; Rainbow & Owen, 1979; Schleuter & Schleuter, 1985). Especially in Phase II, it was much more difficult for 4-year-old children to reproduce tapping than chanting. This provides the pedagogical implication that with young children, chanting may be an easier method than tapping to initiate teaching rhythms. Music teachers for children at the young age levels may need to provide chanting activities before they introduce new rhythms by tapping or other physical response modes. However, because the chanting activity in this study was conducted after the tapping activity in order to initiate children into the testing activities more comfortably, the activity order

might have resulted in a practice effect, which could have led to the children's higher scores for chanting. Therefore, further studies should examine larger samples, with testing modes presented in a random or counterbalanced test order.

As a casual observation, items 7 and 9 (see Figure 1) of the rhythmic pattern tasks seemed to be difficult for the young children. This may be because it is somewhat awkward to end a pattern on two eighth notes (item 7), the placement of the rest I item 9, or unfamiliarity due to children's previous music experiences. Further investigation for comparison of difficulty of each item is warranted. This indicates that music teachers should consider the age appropriateness and potential difficulty of the specific rhythm patterns they expect children to perform.

The responses to the parents' interview questions, such as children's previous experience, family involvement, weekly music involvement, and cognitive development, were not analyzed statistically because the data were based on parents' perceptions, and thus were very subjective. However, informal observations based on the interview data provided several implications. Two authors (Norton, 1980; Young, 1971) have presented relationships between intelligence and musical ability. In the present study, cognitive development seemed to be related to children's rhythmic duplication ability, as found those authors. Five of 32 parents answered that their children's cognitive development levels were low. Because most parents were inclined to regard their children's ability as average or high, those five parents' answers could be meaningful. These parents seemed to be accurate, because their children received low duplication scores. By contrast, the two children who were involved in the gifted program received high scores.

Interestingly, several children revealed dramatic improvement in correct responses. When the researcher reexamined carefully the children who had very low scores in Phase I, the score of a 3-year-old child improved from 1 to 4, and a 4-year-old child improved from 1 to 7. When I asked those children's parents about any other musical assistance or lessons during the year between phases, it seemed there was no change in their musical environment. It may indicate that the developmental factor had a stronger implication than any other factor, especially in the young age group.

Because the age 6 group performed better than the other age groups, and all of the age 6 group had regular music classes at kindergarten, previous experience in music classes may have affected the children's rhythmic development. This study did not control for possible effects of previous music experience, however, so that may be a variable confounded with age. Additional research is warranted to examine the importance of early musical experiences on rhythmic development.

Gender was not revealed as a significant factor affecting children's rhythmic duplication performance in either phase of this study. This corroborated the findings of Gardner (1971) and Luchetti, Caccio, and Mira

(1997) but was not consistent with other research (Gilbert, 1980; Schleuter & Schleuter, 1985). Because it has been over 25 years since the previous research, and the results were contradictory, further investigation to compare gender to rhythmic response is necessary.

Parents were asked about weekly music involvement, including children's exposure time to any musical environment, such as siblings' practice time and listening to CDs in the car and at home. None of the parents answered that there was no exposure time. The mean of music exposure time was 150 minutes per week but time did not predict children's performance, perhaps because the time included "unintentional" listening activities, such as background music during driving time.

There were limitations to this study. All participants were from a Korean community in a small Midwestern city and all of their parents had a high educational background. Although the parents said they did not have a musical background or involvement, most had been involved in some type of musical activity, because they had attended public school in Korea, which has mandatory music classes from kindergarten to high school, and church services that included music. Therefore, the parents may be a unique group and the results of this study may not be generalizable to the young Korean population as a whole. However, the purpose of this study was to investigate the differences of rhythmic duplication ability in the respect of developmental aspects, so the results may provide several valuable implications for further studies. Further studies should use a larger and more diverse sample, such as members of various ethnic groups, various socioeconomic classes, and with parents representing different educational backgrounds.

To assess possible relationships between children's musical and cognitive development, further studies are needed that use standardized tests designed to examine children's cognitive abilities as well as their music abilities. Also, it would be desirable to use a more varied approach than two rhythmic methods, such as comparisons among tapping, clapping, drumming, chanting, and babbling. The results of this study have pedagogical implications for teaching rhythm to young children and suggest important areas for further study. Additional studies to expand the results of this study would provide insights on young children's rhythmic development for music educators as well as for parents.

References

Atterbury, B. W. (1983) A comparison of rhythm pattern perception and performance in normal and learning-disabled readers, age seven and eight. *Journal of Research in Music Education, 31,* 259-270.

Bennett, P. D. (1991). Children's patterns perception, accuracy, and preference in three response modes. *Journal of Research in Music Education, 39,*

74-85.

Brand, M. (1986). Relationship between home musical environment and selected musical attributes of second-grade children. *Journal of Research in Music Education, 34,* 111-120.

Custodero, L. A., & Johnson-Green, E. A. (2003). Passing the cultural torch: Musical experience and musical parenting of infants. *Journal of Research in Music Education, 51*, 102-114.

Frega, A. (1979). Rhythmic tasks with 3, 4, and 5-year old children: a study made in Argentine Republic. *Bulletin of the Council for Research in Music Education, 59*, 32-34.

Gardner, H. (1971). Children's duplication of rhythmic patterns. *Journal of Research in Music Education, 19*, 355-360.

Gilbert, J. (1980). An assessment of motor music skill development in young children. *Journal of Research in Music Education, 28,* 167-175.

Hargreaves, D. J. (1986). *The developmental psychology of music.* Cambridge, England: Cambridge University Press.

Ilari, B. (2005). On musical parenting of young children: Musical beliefs and behaviors of mothers and infants. *Early Child Development and Care, 175*, 647-660.

Lucchetti, S. , Caccio, L., & Mira, R. D. B. (1997). The development of rhythmic perception in eight- to ten-year-old Italian children. *Bulletin of the Council for Research in Music Education, 133,* 52-56.

Moog, H. (1976). *The musical experience of the preschool child* (C. Clarke, Trans.). London: Schott.

Norton, D. (1980). Interrelationships among music aptitude, IQ, and auditory conservation. *Journal of Research in Music Education, 28*, 207-217.

Persellin, D. C. (1992). Responses to rhythm patterns when presented to children through auditory, visual, and kinesthetic modalities. *Journal of Research in Music Education, 40*, 306-315.

Rainbow, E. L. (1977). A longitudinal investigation of the rhythmic abilities of pre-school aged children. *Bulletin of the Council for Research in Music Education, 50,* 55-61.

Rainbow, E. L. (1981). A final report on a three-year investigation of the rhythmic abilities of preschool aged children. *Bulletin of the Council for Research in Music Education, 66-67,* 69-73.

Rainbow, E. L., & Owens, D. (1979). A progress report on a three-year investigation of the rhythmic ability of pre-school aged children. *Bulletin of the Council for Research in Music Education, 59*, 84-86.

Ramsey, J. H. (1983). The effect of age, sing ability, and instrumental experiences on preschool children's melodic perception. *Journal of Research in Music Education, 31*, 133-145.

Schleuter, S. L., & Schleuter, L. J. (1985). The relationship of grade level and sex differences to certain rhythmic responses of primary grade children.

Journal of Research in Music Education, 33, 23-29.

Thackeray, R. (1969). Rhythmic ability and their measurement. *Journal of Research in Music Education, 17*, 144-148.

Young, W. T. (1971). The role of musical aptitude, intelligence, and academic achievement in predicting the musical attainment of elementary instrumental music students. *Journal of Research in Music Education, 19*, 385-398.

Zdzinski, S. F. (1992). Relationships among parental involvement, music aptitude, and musical achievement of instrumental music students. *Journal of Research in Music Education, 19*, 114-125.

Zdzinski, S. F. (1996). Parental involvement, selected student attributes, and learning outcomes in instrumental music. *Journal of Research in Music Education, 44*, 34–48.

The Effect of Lecture-Based Instruction versus Performance Preparation on High School Students' Self-Reported Preference and Aesthetic/Emotional Response to Choral Music Excerpts Using the Continuous Response Digital Interface

Andrew Heath Homburg
University of Missouri - Kansas City
October 2008
Committee Chairperson: Charles Robinson

Dissertation Abstract:

This study examined the effect of two types of instruction on high school students' aesthetic/emotional response to and preference for recorded choral music excerpts. Subjects (*N=116*) were students enrolled in a rural Midwestern high school. Subjects were grouped based on their enrollment in existing curricular courses. The Lecture-based Instruction Group (n=49) were students in music appreciation classes. The Performance Preparation Group (n=28) was an advanced choir. Twenty-five students enrolled in an entry level choir and fourteen non-choir student volunteers served as the Control group (n=39).

Subjects participated in a series of five sessions, listening to choral excerpts while manipulating the Continuous Response Digital Interface (CRDI) depicting their aesthetic/emotional responses. Following each listening excerpt subjects reported their own liking of the excerpt using a ten-point Likert-type scale. After the initial listening/response session, subjects in the Lecture-based Instruction and Performance Preparation groups received one week of routine classroom instruction between each of four subsequent sessions. Lecture-based Instruction subjects learned facts and concepts pertaining to the recorded excerpts, while Performance Preparation subjects rehearsed to perform the choral pieces from which the excerpts were drawn.

One-way Analyses of Variance (ANOVA) revealed only one significant (p<.05) preference increase following the initial response session in the Performance Preparation group's liking. Descriptive analyses of CRDI graphic representations revealed Control group responses remained stable for all excerpts across time. Lecture-based Instruction group responses showed changes for one of the four excerpts. Performance Preparation Group responses exhibited a positive increase in intensity for three of the four excerpts following the initial week of treatment. Post hoc comparisons of the Control group (choir versus non-choral students) found similarity between Performance Preparation subjects and choral Control group subjects, and differences between combined choral students and non-choral students. Future research is suggested to explore differentiated effects of performance-based instruction and non-performance instruction on students' aesthetic/emotional responses to music.

A Short Term Study of the Effects of the Orff-Schulwerk Musical Approach on Reading Fluency and Reading Comprehension in Second-Grade Students

Lori C. Kennedy
University of Missouri - Kansas City
December 2007
Committee Chairperson: Joseph Parisi

Dissertation Abstract:

This study examined the effects of short-term participation in an Orff-Schulwerk musical experience on reading fluency and comprehension scores of second-grade students. Students (N=20) were randomly assigned to one of two groups: Group A (n =8) and Group B (n =12). Reading fluency and comprehension assessments were administered to both groups pre-experiment, mid-experiment, and post-experiment during each phase of the study. During phase one, Group A served as the experimental group and Group B served as the control group. The experimental condition included instruction before-school twice a week focusing on the Orff musical process for a total of 16 sessions. In phase two of the study, the two groups reversed treatment conditions and identical study procedures were followed.

Students' scores in reading fluency and comprehension were tabulated and analyzed. Results indicated no significant differences (p<.05) in reading fluency and comprehension scores as a function of treatment conditions.

The Effect of the Middle School Band Experience on Participation in High School Band

Jeremy McMahon
August 2008
Missouri State University
Committee Chairperson: Daniel Hellman

Thesis Abstract

Retention of students in band as they transition from middle school to high school has been a common problem for many years. The purpose of this study was to determine which factors were most influential to students when they considered whether or not to participate in high school band. Eighty-six students currently enrolled in high school band and eleven students who completed middle school band program but did not continue band in high school were surveyed to determine which factors most influenced their decisions. T-Tests were used to compare means. Results indicated that students who participated in optional band activities in middle school were more likely to continue band in high school, and students who continued in band did so because they wanted to continue playing their instrument. Students who discontinued band in high school identified conflicts with sports, class schedules, and loss of interest as reasons not to pursue band in high school.

A Survey of Missouri Middle-School and High-School Instrumental Music Teachers Regarding the Use of Recording Technology and the Effectiveness of Recording Techniques in the School Music Classroom

Jeffrey A. Melsha
Southeast Missouri State University
June 2008
Committee Chairperson: Carol McDowell

Thesis Abstract:

The purpose of this study was to survey middle-school and high-school instrumental music teachers in eastern Missouri to determine directors' attitudes and knowledge of recording and recording technology for classroom use as well as the use of these recordings in the music classroom.

This study surveyed 132 instrumental music teachers in two of the eleven Missouri Music Educator Association (MMEA) districts. All of the instrumental music teachers who participated in the survey were band directors. The St. Louis Suburban and the East Central districts were asked to describe or rate: (a) grade level taught and school classification, (b) level of importance placed on recording, (c) knowledge of recording and recording techniques, (d) frequency of recording, (e) level of satisfaction with recordings made, (f) reasons to record a performance, the recording equipment used,
(j) satisfaction with the play-back system used, (k) whether a professional audio company was ever hired, and (l) level of interest in attending a clinic or workshop on the use of recordings and recording technology in the music classroom.

Survey respondents agreed that the use of recordings in the classroom was helpful for critique and evaluation for both director and student. While recordings of an ensemble can be used as a tool for improvement and can raise the level of critical thinking, a significant number of directors are not utilizing this technology for several reasons.
The survey shows that directors may not record their ensembles due to: (a) a lack of time to set up the equipment, (b) budget constraints that do not allow purchases of recording equipment, and (c) a lack of knowledge of recording technology. The study offers potential solutions to these problems and others, including specific information regarding microphone configurations and effective microphone placement for effective recordings.

Student Motivation to Participate in Instrumental Music

Page R. Mitchum
University of Missouri – Kansas City
December 2007
Committee Chairperson: Lindsey Williams

Thesis Abstract:

This study sought to identify student motivation to join and continue in school instrumental ensembles as well as reasons for student attrition. Instrumental music students (N = 363), in grades 5-12 completed surveys by selecting possible motivators from a list provided. Responses were analyzed according to ensemble, gender, and grade. Enrollment data was analyzed as well.

Results indicate that most students are intrinsically motivated by a personal love of music. Non-musical factors include social influence, self-perceived fun, preference for the teacher, and field trips. Most attrition occurred during the first or second year of instruction, followed by a steady decline. Students ceased participation for a variety of reasons, including loss of interest, disliking practice, and not having fun.

South Korean Parents' Goals, Knowledge, Practices, and Needs Regarding Music Education for Young Children

Hyun Kyung Youm
University of Missouri – Columbia
December 2008
Committee Chairperson: Wendy L. Sims

Dissertation Abstract:

The purpose of this study was to explore South Korean parents' understanding of and desires for music education for their children. Following a constructivist paradigm and qualitative research methodology, data collection involved in-depth interviews, observations, written questionnaires, family musical materials, and the researcher's journals. The participants were 22 South Korean parents whose children (younger than 5 years old) attended music programs in the Seoul metropolitan area. Data were analyzed by coding, description, constant comparison, inductive analysis, contextualization, negative case analysis, classification, and interpretation. To ensure the trustworthiness of this study, the researcher conducted triangulation, member checks, peer debriefings, and cross-checking of translations.

Analyses revealed that parents' goals for their children's participation in music programs included facilitating the child's development, enriching the child's life, preparing for future learning, and providing the opportunity to play through music. With respect to their knowledge about music education, parents described the music programs according to the activities they observed or experienced, but they did not show deeper understanding about a program's philosophy or history. Findings related to family music practices indicated that the primary activities were singing, listening to music, playing instruments, and dancing/movement. In describing their needs, parents expressed the desire to learn musical skills and knowledge not only for their children, but also for themselves. The findings of this study imply the necessity of education for parents of young children relating to a variety of aspects of children's music education.

INFORMATION TO CONTRIBUTORS

The editorial committee welcomes contributions of a philosophical, historical, or scientific nature, which report the results of research pertinent in any way to instruction in music.

Manuscripts should be addressed to Joseph Parisi, Editor, Missouri Journal of Research in Music Education, University of Missouri-Kansas City Conservatory of Music, 4949 Cherry Street, Kansas City, MO 64110. Four copies of the manuscript must be submitted and must conform with the most recent style requirements set forth in the PUBLICATIONS MANUAL for the American Psychological Association (APA, 5th edition). For historical or philosophical papers, Chicago (Turabian) style is also acceptable. An abstract of 150-200 words should accompany the manuscript. All figures and tables should be submitted camera ready.

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