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THE RESPONSES OF PRESCHOOL CHILDREN TO EARLY CHILDHOOD MUSIC INSTRUCTION CONTAINING TEXTED AND NON-TEXTED SONGS AND CHANTS

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THE RESPONSES OF PRESCHOOL CHILDREN TO EARLY CHILDHOOD MUSIC INSTRUCTION CONTAINING TEXTED AND NON-TEXTED SONGS AND CHANTS

By

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ABSTRACT

THE RESPONSES OF PRESCHOOL CHILDREN
TO EARLY CHILDHOOD MUSIC INSTRUCTION CONTAINING
TEXTED AND NON-TEXTED SONGS AND CHANTS

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The purpose of this research was to investigate the use of texted and non-texted songs and chants with preschool children in an early childhood music setting. The specific problem of this study was as follows: What are the differences in musical and nonmusical behaviors and responses between preschool children receiving instruction consisting of texted and non-texted songs and chants?

The participants (N=26) were 3- to 4-year-old children from two intact classes in a preschool kindergarten readiness program in Lansing, Michigan; one received instruction consisting of songs and chants with text and the other received instruction consisting of songs and chants on neutral syllables. The children participated in a weekly 30-minute music class, taught by the researcher, for a period of 10 weeks.

Throughout the 10-week period, the field notes and video transcripts were analyzed. I assigned codes to each behavior or response as the content and context categories began to emerge. There were four findings that appeared to be related to text condition. There was little verbal interaction with the song and chant text among children in the *Text Class*. During spontaneous independent singing, the children in the *Text Class* typically attempted class songs, while the children in the *No Text Class* rarely did so. Lastly, the children in the *No Text Class* responded to rhythm patterns more frequently and accurately, and simultaneously sang and chanted more often and continuously.

DEDICATION

To my mother, Diane Benfante

and my grandmother, Marion Aydinian,

two strong female role models who have provided

continual love and support towards my study of music.

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CHAPTER I

Review of Literature

Introduction

Throughout history, many music education researchers and specialists have advocated music in the lives of young children (Alvarez, 1989; Gordon, 1997; Greenburg, 1979; Holahan, 1987; Nye, 1979; Rogers, 1990; Sims, 1995; Swears, 1985). Back in the seventeenth century, when his book on early childhood education was first published, Comenius (1897/1633) commented that, since music is a source of delight for children from the age of two, they should be exposed to music early in life. Centuries later, at the Tanglewood Symposium of 1967, participants identified the need for improvements in early childhood music education. They contended that, since children do not appear to be receiving the necessary music exposure in the home, they should receive music instruction in school from the age of three (Murphy & Sullivan, 1968).

Early experiences in music form a foundation for all future music development and learning, making early childhood music all the more critical (Alvarez, 1989; Nye, 1979). Music development actually begins at or before birth, when the brain and body begin responding to sound (Valerio, Reynolds, Bolton, Taggart & Gordon, 1998). As Gordon (1997) explains, there are critical periods associated with surges of neurological connections and synapses before birth and during early childhood. Research has shown that, if cells are not used to make connections related to specific senses at these critical stages, those cells will be used for a different sense. For example, if children are not exposed to music from an early age, those cells intended for the aural sense could instead

enhance the visual sense (Gordon, 1997). Furthermore, if children do not hear a rich variety of music before they are eighteen months old, they become preoccupied with learning language, and music takes a much lesser role in their lives (Gordon, 1997a). For this reason, it is necessary that children develop a rich music listening vocabulary from birth so that they may use it to learn music later in life.

Along with this emphasis on early childhood music education comes the necessity to develop adequate teaching methods, procedures, and materials to best suit the musical needs and abilities of young children. This includes the organization of the music-learning environment, activities, and the song and chant material. While there is an abundance of song and chant material suitable for young children, the question of whether to use songs with text or without text remains. This question will be the focus of the current study.

On one hand, the majority of children's songs and traditional folk songs contain text, and children enjoy language, particularly silly words or rhymes (Andress, 1980). However, when listening to a song, there are several dimensions to which a child must attend, including tonal and rhythmic elements, and in many cases, interesting, enticing words (Gordon, 1997; Gould & Savage, 1972; Holahan, 1987; Levinowitz, 1989; Welch, Sergeant, & White, 1998). If the goal is music exposure and learning, then perhaps the text is limiting the amount of musical information that children can process cognitively. Since early childhood is a time of rapid language development and children already use language extensively throughout their day, presenting songs with text could be seen as either a natural choice or as a musical hindrance.

Support for Songs With Text

Aside from the fact that the majority of children's songs and folk songs contain text, there are a number reasons why people support using songs with text for young children. First, as children develop their language skills, words begin to carry meaning, making children more interested in songs. A teacher or parent could use music to explain what they are doing, and, in turn, encourage the child to spontaneously sing and experiment with music in the same way (Christianson, 1936).

Another viewpoint is that music can actually serve a secondary purpose: improving intellectual and language ability (Andress, Heimann, Rinehart, & Talbert, 1973; Tower, Davis, & Parker, 1989). As Bayless & Ramsey (1987) explain, singing can aide in promoting proper language use. Since songs contain repetitive sounds, they can help with speech problems and pronunciation. Additionally, children can understand sentence structure through musical phrases, and music can help develop vocabulary and listening skills, increase attention span, improve comprehension and memory, and encourage the use of compound words, rhymes, and images. While these are all important curricular goals for preschool education, some music educators would argue that music should be taught for its own sake, with a focus on learning musical elements and concepts (Feierabend, 1990; Gee, 2002; Reimer, 1999; Rudgers, 1987; Stewart, 1997).

Support for Songs Without Text

There has been support for using songs without text for both elementary and preschool song instruction, as well as for singing to children in an early childhood setting (Aronoff, 1969; Batcheller, 1975; Gordon, 1997; Gordon, 1997a; Gould & Savage, 1972; Katz & Hoffman, 1985; Levinowitz, 1989). Levinowitz (1989) explains

that, while a child's spontaneous songs typically contain texts that lack order and syntax, the texts of songs that adults choose are often the opposite. As a result, children might be drawn to the orderly arrangement of the words rather than the music elements. Furthermore, a child's language development also may influence his or her ability to learn or perform a song. Depending on the child's level of language development, he or she might be distracted by the text, or perhaps drawn away. In a study involving kindergarten children, Welch, Sergeant, & White (1998) observed that children begin school with a tendency towards the words of a song, with less ability to match the melodic components of the song.

When learning a rote song, the text can divert a child's attention from the musical elements, causing them to instead focus on the words (Gordon, 1997; Gould & Savage, 1972; Levinowitz, 1989; Welch, Sergeant, & White, 1998). In addition, using words can cause children to sing in a speaking voice quality rather than a singing voice quality (Gordon, 1997; Gould, 1968; Katz & Hoffman, 1985). A possible solution is to teach songs on a neutral syllable first, such as "loo" or "ba," and only add the text after the children can sing the pitches and rhythms accurately and musically (Gordon, 1997; Gould & Savage, 1972). This tactic is often suggested for "problem singers" in particular as a way to focus their ears on the musical elements and tone quality (Batcheller, 1975; Gould, 1968).

Singing songs without text can also serve a similar purpose in an informal, early childhood setting. This type of environment allows children to learn music informally, as they learn language, with adult guidance rather than instruction. It involves exposure to music and movement while encouraging children to participate in music activities

through play (Valerio et al., 1998). Gordon (1997a) contends that, when listening to music with words, young children have a difficult time focusing on both the music and the words. For this reason, he recommends that recordings and performed songs and chants be absent of text. Without text, children can devote their attention to the music, absorbing the tonality, meter, and singing or chanting voice quality. In fact, children often enjoy neutral syllables such as "la," "pop," or "dum" when paired with a catchy or interesting melody (Tower, Davis, & Parker, 1989). This is not to say that all children will have difficulty focusing on the music in the presence of a text, or that every song and chant be performed on a neutral syllable. For example, the authors of the early childhood music curriculum *Music Play* suggest using songs and chants with neutral syllables as well as some with words to provide variety and to allow the adults to interact musically with children in a more traditional way (Valerio et al., 1998).

Research Findings

The research on this topic falls into one of two general categories: memory for songs and text, and singing songs with and without text. The studies concerning memory for songs and text included a range of ages from preschool to adult. In most cases, the researchers were attempting to understand how the brain processes information, specifically whether songs and their texts are integrated in memory, or if they are processed and stored separately. The studies that examined children's ability to sing songs involved preschool or elementary-aged children, and typically measured their tonal and rhythmic singing accuracy. These singing studies also fall into two categories. Some investigated the difference in singing accuracy of a test song with or without text, while others examined the difference in singing accuracy following an experimental

instructional period involving songs with text or songs without text.

Memory and Song Recognition Studies

In general, memory and song recognition studies are designed to investigate one's memory and retention for new or unfamiliar songs. Serafine, Crowder, & Repp (1984) conducted such a study involving 32 undergraduate students with varying degrees of music training. The subjects were presented with the opening two to four measures of 24 excerpts from previously unfamiliar indigenous American folksongs, followed by a 20-item recognition test. The subjects were asked to decide if they had heard the exact song in the presentation, or if it contained either the words or the tune of a song they had heard. The subjects correctly recognized songs as being "old" (same as in presentation) 85% of the time. The incorrect responses were lowest for new words and highest for 'mismatch' tunes and words. Since subjects often failed to recognize the tune or words as being familiar when not paired with its original counterpart, the investigators concluded that words and tunes are integrated in memory to some extent. However, there was evidence that tunes, and more often words, were recognized when paired with new components as well. This suggests some separation of the two components, although it does not completely refute the possibility of integration.

Morrongiello & Roes (1990) undertook a similar study involving both preschool children and adults. In this study, the subjects were presented with three novel tunes adapted from children's songs, each having a rhyming text, followed by the same three tunes with nonrhyming texts. Following this familiarization (listening to each tune three times consecutively), they were given a recognition test. For each recognition task, the subjects heard one of five types of songs: the original song, a completely new song (new

words and tune), a mismatch of the tune of one song with the words of another, old words with a new tune, and lastly, new words with an old tune. The subjects were asked to decide if each test song was "exactly the same," "somewhat the same," or "not at all the same" as any of the original three songs. Both adults and children correctly judged those songs with words and tunes that were completely different from the originals "not at all the same." The major difference between the age groups was in the examples that retained some component of the original songs. For these songs, the children often judged those that retained the words as the "same" and those that changed words as "not at all the same," even if the melody was the same. Adults however recognized these examples as "somewhat the same" in comparison to the original songs. The children tended to display better memory for the words than the melody, while adults had somewhat more equal memory for words and melody, though words were still the salient feature in memory. For both age groups, the proportion of "same" responses was significantly greater for the original than mismatch songs, indicating that they were more likely to remember the exact pairing of text and melody than to remember the components individually, as in the Serafine, Crowder, & Repp study. When subjects responded "somewhat the same" for the "mismatch songs" (same tune, different words or vice versa), both age groups cited the "words" as the basis of similarity more often than the tune or mixture of same words and tune. The results of this study indicate some integration of text and melody for children and adults, with a greater degree of integration in adults, as evidenced by their ability to discern between the mismatched tune and words. It is interesting that both the children and adults seemed to base their comparisons on the text more than the melody, suggesting that perhaps text is the more salient feature

for the listener.

In a study designed to investigate the effect of song texts on the development of young children's aural comprehension, Feierabend, Saunders, Holahan, & Getnick (1998) examined the effects of songs performed with and without texts on preschool children's (ages 3-5) melodic-recognition ability. The children were divided into three treatment groups, and all parents were asked to have their child regularly listen to recordings of eight unfamiliar songs. In treatment A, all songs were sung with text and repeated twice in immediate succession. In treatment B the songs were sung twice as well, but the first performance had text while the second was sung on a neutral syllable, "bum." In treatment C, the songs were again sung twice, without text both times. Before each song was played on the tape, the title was announced and the parent showed the child a picture that corresponded to that song from the accompanying picture songbook. At the end of the 4-week experimental period, each child was tested individually on his or her ability to identify the songs from the tape with the appropriate picture labels. The vocal performances on the test tape were sung on a neutral syllable, and each song was presented twice in random order (16 test items total). The researchers found that the children were more accurate in recognizing familiar songs when they were previously performed with text. Based on the results, they concluded that song texts contribute to preschool children's melodic-recognition ability. The results also suggest that listening to songs repeatedly over a period of time contributes to the integration of words and music in long-term memory.

While these three studies do suggest that melody-text integration exists in the brain, they do not promote the exclusive use of songs with text for children. The fact that

subjects often relied on the text to identify or remember a song suggests that text plays a larger role than music in the memory and recognition process. If this is the case, perhaps performing melodies apart from text will help improve memory and recognition for melodies alone.

Singing Studies

There have been several studies concerning children's abilities to sing songs in relation to the text and no text conditions (Gault, 2000; Goetze, 1985; Jacobi-Karna, 1996; Lange, 1999; Levinowitz, 1987; Levinowitz, 1989; Smale, 1987). Two of these studies were investigative, simply measuring children's ability to sing songs with and without text. The remaining studies employed experimental treatment conditions in which the children received instruction containing varying amounts of songs with and without text before being tested on singing accuracy.

In an investigative study involving kindergarten, first-, and third-grade children, Goetze (1985) found that the kindergarten subjects performed more accurately on a neutral syllable than with the text. Smale (1987) replicated Goetze's study with 3- to 5-year-old children and found that, while the means for pitch accuracy on a neutral syllable were higher than for the text, the difference was not significant.

In an experimental study using two different test songs, Gault (2000) found that kindergarten and first-grade students performed the first song more accurately with text than without. For the second song, however, the scores were relatively the same when taught and performed with text or without text. In a study involving 3- to 5-year-old preschool children, Jacobi-Karna (1996) also found that text facilitated singing accuracy in some cases. She found that the 4-year-old subjects sang more accurately with text than

on a neutral syllable. In contrast, Levinowitz (1989) found that preschool children performed the criterion song without words with more tonal accuracy than the song with words. In a study involving kindergarten and first-grade children, Levinowitz (1987) found that those subjects who learned to sing songs both with and without words exhibited higher observed means for singing achievement in comparison to those who only sang songs with words, though it was not at a significant level. In a study involving kindergarten children, Lange (1999) found no significant difference in the criterion songs or resting tone performances between the two experimental groups.

These studies, which examined the use of text or no text during song performance and instruction, had contrasting results. Goetze (1985) and Levinowitz's (1989) results seem to suggest that young children (preschool through kindergarten) perform songs with more tonal accuracy on a neutral syllable. Gault's (2000) results for the first test song support singing with words, however. Jacobi-Karna (1996) found that the 4-year-old subjects sang significantly better with text than on a neutral syllable, but found no difference in the performances of the 3- and 5-year-old children. Levinowitz (1987), Lange (1999) and Smale's (1987) studies do not provide evidence for or against singing songs with text. Based on the conflicting results of these singing studies, it is not completely clear whether children sing more accurately with or without text, or if instruction with or without text is more beneficial to singing achievement.

Summary

With an increased emphasis on early childhood music education, it is only natural for questions to arise concerning the most effective way to teach these young children. While it seems that an informal music environment involving singing, chanting, and

movement activities is ideal, there are other more specific concerns to be explored (Alvarez, 1989; Andress, 1980; Bedsole, 1989; Gordon, 1997a; Holahan, 1987; McDonald, 1979; Sims, 1995; Taggart, 2003). One question that has not completely been answered is whether preschool children should be taught using songs with or without text. Since early childhood is a time of continual language development, it seems possible that children will naturally be predisposed to the language dimension of a song, perhaps diverting their attention from the musical elements (Gordon, 1997; Gould & Savage, 1972; Levinowitz, 1989; Welch, Sergeant, & White, 1998). Studies concerning this matter have offered conflicting, inconclusive results. Some have found no significant difference between singing songs with and without words (Lange, 1999; Levinowitz, 1987; Smale, 1987), while others have found that children sing more accurately with text (Gault, 2000; Jacobi-Karna, 1996) or without text (Goetze, 1985; Levinowitz, 1989). All of these studies involved formal music settings in which the children were asked to learn songs by rote and sing individually. This topic needs to be examined further in relation to the impact songs with text have on preschool children in an informal early childhood music setting.

Purpose and Problem

With the intent of improving early childhood music instruction, the purpose of this research was to investigate the use of texted and non-texted songs and chants with preschool children in an early childhood music setting. The specific problem of this study was as follows: What are the differences in musical and nonmusical behaviors and responses between preschool children receiving instruction consisting of texted and non-texted songs and chants?

CHAPTER II

Related Research

The following studies, all of which involve singing achievement in relation to the presence or absence of text, have several similarities and differences. Goetze (1985) chose to conduct an investigative study in which elementary children were taught a song with and without text and then tested on their ability to sing that song. Smale (1987) replicated this study with preschool children. Gault (2000) on the other hand, chose to teach elementary children one song with text over a period of 4 weeks, as well as a different song without text during a second four-week period. At the conclusion of each treatment period, the children were asked to sing the song they had learned and were rated on singing achievement. Jacobi-Karna (1996) conducted a similar study with two treatment groups, reversing the text condition for a brief time at the end of the main treatment period. Levinowitz (1987) and Lange (1999) designated treatment groups to receive instruction containing varying amounts of songs with and without text. At the end of the treatment period, the children were rated on their performance of two criterion songs with words. Levinowitz (1989) took a different approach. Instead of two different treatments, she used an equal amount of songs with and without text during the instructional period, and tested the children on singing achievement both with and without text. While these studies vary in approach, they all measure the effect of singing songs with and without text on children's singing achievement.

Investigative Studies

Goetze (1985) investigated two factors that may influence singing accuracy,

stating that information concerning the processes and ideal conditions for success in singing will lead to effective techniques for teaching singing skills to children. Her study explored singing individually or in a group, and singing on a neutral syllable or with text. Both conditions were examined in conjunction, resulting in four possible performance combinations. For the purposes of this review, only the second element, singing on a neutral syllable or with text will be specifically addressed. The investigator identified three problems in relation to this topic: (1) How does the effect of singing with "loo" versus text vary with grade level, (2) How does the effect of singing with "loo" versus text differ between girls and boys, and (3) What percentage of children sing accurately on the syllable "loo" but not on text, and what percentage sing accurately with the text but not on "loo"?

The subjects were 165 kindergarten, first- and third-grade children from intact classes in three different Colorado schools. All first- and third-grade students received music instruction from a specialist once or twice a week. While only one school included kindergarten instruction (15-minutes once a week), the other two schools had kindergarten teachers who emphasized music in the classroom. Since the samples were not randomly selected, the investigator was careful to choose schools that represented a variety of socio-economic levels and races/ethnicities.

The investigator gave each class a brief music lesson on the day of the data collection. She taught the song that would be used for the unison singing test: an eight-measure (2/4 time), D Major song in AABA form. While the children were taught to sing the entire song, only the second "A" was rated in the test performance. She also played "echo games" with four beat melodic passages, also in D Major, in preparation for the

individual singing test. Both the song and melodic material used in the "echo games" had a range from d^1 to a^1 and contained stepwise motion and skips of a third. The investigator chose a text about horses for both singing tasks, since it would be equally appealing to boys and girls. The students were taught the song and the short melodic passage with text, as well as on the neutral syllable, "loo." The investigator did not state the amount of instruction time for each class, but did note that she taught the song until the students could sing it as a group with little assistance.

For the singing test, three students joined the investigator and an assistant in a separate room. The students were each fitted with a microphone so the investigator could later hear recordings of individual students during the unison-singing task as well as the individual singing task. After "warming up" with the unison song, the students were asked to echo short melodic phrases individually as sung by the investigator. First, each student was asked to echo the four beat phrase on "loo;" then the order of the students was altered and they were asked to echo the same phrase using text. The next three students joined the group and were asked to sing the unison song with the original three students as well as the investigator. She only recorded the responses of the original students at this point, however. This served to enlarge the group for unison singing and was a warm-up for the new students. All students were recorded singing individually before being recorded in unison. Goetze hypothesized that the individual singing would be an easier task for the children, so she chose to begin each test with individual singing, followed by group singing. The order of condition was altered, however. Half of the subjects sang all melodic examples with text first, while the other half sang all melodic examples on a neutral syllable first.

The investigator analyzed the tapes of the performances using a Visi-Pitch and a tape player. The recordings were played into the Visi-Pitch, which analyzed the sound and provided a visual display of the melodic contour, complete with frequencies for each pitch. A second judge independently evaluated 30 randomly selected examples to assess reliability. The interjudge reliabilities ranged from .94 to .97. Goetze also analyzed the responses of seven randomly selected subjects using a computer program. Her frequencies were compared to the computer's evaluation, yielding an average coefficient of .98. Finally, the investigator reevaluated the same examples after a 10-month period.

The investigator performed t-tests on the unison and individual singing scores both separately, and in combination. The results in terms of pitch accuracy and contour accuracy scores were presented separately. For the pitch accuracy, Goetze found that the entire sample sang significantly ($p < .05$) better on "loo" than text. Further investigation revealed that significance was only reached at the kindergarten level, however. For contour, there were no significant differences between the neutral syllable or text condition. The kindergarten children seemed to benefit from the use of a neutral syllable, singing more accurately under this condition. However, there was no significant difference between the text and neutral syllable performances of first- and third-grade children. In addition, Goetze did not find a significant difference between the text and neutral syllable performances of boys and girls.

Since this study was investigative, the children were taught the song and tested on the same day. While it seems that this is an adequate technique to discover children's inherent tendencies or abilities, prior instruction may also influence their performances.

The investigator does not indicate whether the children were used to singing

songs primarily with or without text. Perhaps the children's past experiences would have an effect on their performance of this new song. It may have been more appropriate to introduce the song over a couple of class periods and then test the students. This would give the children a chance to become more familiar with the melody, rhythm, and text of the song. A final concern is the method for measuring singing accuracy. While the investigator includes evidence of reliability for the Visi-Pitch analysis, she does not provide any indication of validity for the actual pitch and contour measures. Limiting the analysis to just two pitches (the lowest and highest) might not be an accurate representation of the performance. Perhaps some sort of rating scale that accounted for those children who "droned" on one pitch would more adequately assess singing achievement than an analysis of the frequency of just a few pitches of an overall song.

In a replication of Goetze's study, Smale (1987) attempted to determine whether preschool children produce pitches as accurately singing alone as they do singing in unison with a vocal model, and whether they sing as accurately singing the text of a song as they do singing a neutral syllable. Ninety-three 4- and 5-year-old children enrolled in general music classes at a community music school served as participants. The activities emphasized in the music classes included singing, playing instruments, eurhythmics, creative dramatics, art projects and musical games. The children learned songs and were often asked to sing alone, activities that would be used in the data collection portion of this study. The classes were taught by four different teachers but were assumed to be similar since all teachers used the same curriculum.

A test song was chosen for its appropriate interval content and range. The song had a range of a fifth (c^1 to g^1) and was in Major tonality and Duple meter. The first

phrase consisted of the intervals "So Mi So" and "Mi Re Do" (six tones total), and the second phrase was a descending stepwise motive (So to Do). While the complete song was taught to the children, only the first phrase was analyzed for the purpose of this study. The song included a text about a clown to appeal equally to boys and girls.

Each class was taught the test song during the course of a normal music class and then individually recorded in a separate room. The investigator was introduced to the children, and after the opening greetings, song, and conversation, she sang the song for them using the text. After a few repetitions, she then sang the song on the neutral syllable "loo" and asked the children what song it was. After explaining that it was the same clown song, just without the words, she sang it again. Once the song had been sung at least 14 times with text and 3 times on "loo," the investigator showed the children the microphones into which they would be singing the song, and explained that they would be brought into another room to sing the song individually.

The child and investigator were recorded simultaneously using individual contact microphones, which were attached to an adjustable neckband. The microphones responded to direct contact with the vibrating body instead of air-borne acoustic signals, so the child and investigator's singing could be recorded on separate tracks. Each child was asked to perform four different singing tasks: (1) singing the first phrase with text as an echo to the investigator (Individual Text, IT), (2) singing the phrase with text in unison with the investigator (Unison Text, UT), (3) singing the phrase as an echo using the syllable "loo" instead of text (Individual "loo," IL), and (4) singing the phrase in unison with the investigator, using the syllable "loo, " (Unison "Loo," UL). Each child began with the individual tasks, but half the children echoed on "loo" first and the other

half echoed on the text first to control for order. After each child had completed the individual tasks, he or she was asked to sing the phrase with the investigator (unison tasks), again controlling for order.

Each recorded singing task was analyzed to determine the frequencies of each of the six tones using a Visi-Pitch and computer. Two measures of pitch accuracy in cents were calculated for each child's response, a "pitch score" and a "contour score." The "pitch score" represented the average deviation of the child's pitches from the investigator's model. The "contour score" represented the average deviation of the deviations for the child's pitches from the investigator's model, or how closely the child approximated the melody shape. Both scores were calculated for the four singing tasks, resulting in eight scores for each child. The investigator analyzed the data using the Visi-Pitch two times, and a second judge analyzed the data as well, resulting in a mean correlation of .99 between the three sets of scores.

Repeated measures analyses of variance were performed on the pitch scores and contour scores for the two between groups (Gender × Age) and four singing conditions. There was no significant difference ($p > .01$) in pitch accuracy between ages or between gender. There was a significant difference ($p < .01$) between the performance of 4- and 5-year-old children singing in unison with a vocal model and their performance singing individually by echoing the model. The children sang more accurately individually than in unison. While the means for pitch accuracy on the neutral syllable "loo" were higher than for the text, the difference was not significant ($p > .01$). Crosstabulations indicated that children who reproduced the contour inaccurately (deviation over 100 cents) also reproduced the pitch level inaccurately. In addition, one-fourth of the children who

reproduced the contour accurately were inaccurate with the pitch level, supporting the theory that young children reproduce contour more accurately than exact pitches.

Although this was an investigative study, it would have been helpful if the investigator indicated the normal song content for the classes: were songs normally sung with words or without? Perhaps the children's past experiences with song instruction would have an effect on their performance of this new song. Additionally, the test song was presented to the children primarily with words: at least 14 times with words compared to just 3 times without words. While one could argue that the words are a secondary element the children must learn, for the purpose of the experiment it would make sense to teach the song both ways equally. It might have been difficult for the children to sing the same song both with words and without, especially since it was a new song. Another solution would be to divide a random sample and have half the children sing with words and half without. A final concern is the method used to test singing achievement. The children were asked to echo phrases as sung by the investigator, which could simply be an imitation task. This is not measuring how well children can retain or reproduce a learned song with or without words, but rather how well they can imitate a phrase immediately after the investigator. Since the investigator sang with each child for the unison task, these performances could also be considered simultaneous imitation.

Experimental Studies

Gault (2000) investigated the influence of teaching sequence, presence/absence of text, and level of developmental music aptitude on kindergarten and first-grade children's ability to learn and perform songs. Of his four research questions, one is specifically related to the current study: Does the inclusion or omission of text during the

pedagogical presentation of a song influence performance accuracy?

The subjects were 112 kindergarten and first-grade students from a suburban, primarily middle-class and Caucasian elementary school in Connecticut. Four randomly selected intact kindergarten (N=57) and first grade (N=55) classes served as the treatment groups. The classes were randomly assigned to one of two groups based on teaching sequence, and further divided according to presence/absence of text. This resulted in four different treatment groups for each grade level. The study consisted of two consecutive 4-week treatment periods, each of which included one 35-minute class each week, taught by the children's regular music teacher. The students were taught one of two 4-measure Major Duple songs during each 4-week period. One song was taught with text; the other was taught without text. The researcher chose the neutral syllable "bum" for those songs taught without text. The songs were chosen for their simple rhythmic patterns, similar tonal material (both used Do, Re, Mi, So), and appropriate singing range (d^1 to a^1). The teacher devoted the first five to ten minutes of each class to listening and/or performing the test song, resulting in approximately 10 hearings of the test song during each treatment period. The students sang all songs a cappella. After the first treatment period, the text component was reversed, so each group learned both the song with text and the song without text.

During the final week of each treatment period, the students' individual performances of the test song were audio-recorded. The children sang the song they had learned over the 4-week period, either the song with text or the song without text. Three independent judges rated each performance using two 5-point continuous rating scales, one for pitch, and one for rhythm. The researcher conducted a pilot study to determine

the interjudge reliability of the rating scales. After some modifications to make the rating scales more age appropriate, the combined interjudge reliabilities were between .80 and .85. For the main study, the interjudge reliabilities ranged from .74 to .91 for the two test songs.

The performance ratings were compared using a three-way analysis of variance to test for main and interaction effects. The two-way interaction of the songs and text condition was found to be significant ($p < .01$). Further analysis revealed that results were significant for test song one, but not for test song two. Gault found that students performed the first song more accurately with text than without. For the second song, however, the scores were relatively the same when taught with or without text.

The researcher offers several reasonable interpretations of the results. He remarks that the first song may have been easier to perform with words, due to certain rhythmic elements that could have been easier to remember and reproduce with text syllables. He also suggests that the second song may have been more accessible to the students, making the rating scale less appropriate. This could have contributed to the lack of significance found when comparing the performances of this song. He concludes that the use of text may be helpful for certain songs when the combination of text and musical elements is the key to learning and singing the song.

This study was well designed and carried out. The two treatment periods allowed the researcher to switch the conditions between groups, allowing for a more in depth comparison of the treatment effects. Since the children were all taught by the same teacher, this controlled for teacher effect. The researcher was careful to ensure that the teaching procedures, aside from the treatment, were identical for each class, and

videotaped the classes to monitor this. However, since the researcher did not describe the normal classroom procedures, it is not clear whether the children were accustomed to learning songs with or without text. If they were normally taught songs with text, for example, the relatively short treatment period may not have been substantial enough to reveal significant findings for the one song they were taught without text.

In a similar study, Jacobi-Karna (1996) compared the effect of singing songs with text and without text on preschool children's singing accuracy. She addressed two specific questions: (1) Do children sing songs more accurately when taught with text or a neutral syllable, and (2) After the initial treatment and posttest, is there a difference in posttest scores after the children have learned to sing the melody in the opposite manner for a brief period of time? The researcher also attempted to determine the best approach for testing young children's singing: phrase by phrase or the entire song.

The subjects for this study were 89 children enrolled in three Eastern Maryland preschools. They were 3- to 5-years-old, primarily Caucasian, and of lower to upper-middle class socioeconomic status. The ratio of boys to girls was 1:1, and subjects were required to participate in 80% of the treatment period to be included in the final sample. Subjects were randomly assigned to one of eight groups to later serve as music classes, resulting in 10-12 students per class. Each child's ability to match pitch was assessed to control for pitch matching between the groups. Interjudge reliability for the pitch matching evaluation was reported at .89. The researcher does not explain the criteria for evaluation, nor does she indicate the distribution of pitch matchers to non-pitch matchers. It would be helpful to know this information when interpreting the results of the study.

Each of the eight groups was randomly assigned to one of two treatments. Four of the groups were taught using the Text Method, which involved learning the music and text simultaneously. The other four groups were taught using the Neutral Syllable Method, which involved learning the same songs on a neutral syllable, such as "loo" or "la." In order to avoid the neutral syllable serving as a sort of text, it was changed from day to day. The other syllables used included "lai," "moo," "toh," "nee," "koo," and "bum." All subjects participated in two 30-minute music classes each week. The main treatment period included 12 lessons over a span of 8 weeks, with all classes taught by the researcher. Activities included singing, moving, listening to music, and playing small, hand-held percussion instruments. All songs were taught by rote and sung without harmonic accompaniment. The instructor was careful to maintain the starting pitch of each song for all lessons.

The specific teaching procedures for this study are not clear. While the researcher provides a list of activities used throughout the treatment period, she does not indicate the precise amount of time devoted to learning the songs. In addition, she does not indicate how many different songs were taught during the main treatment period, or the specific characteristics of these songs. She did remark that the students were taught to sing multiple songs, but never explained how many lessons were devoted to each song or how many times they sang the test song prior to Posttest I. This information would be necessary for replication, and would also be valuable for interpretation purposes.

A pilot study was conducted to determine the song material, presentation of song material, testing method, and interjudge reliability. The subjects (N=12) attended six 15-minute lessons over a period of 2 weeks. Activities included singing, chanting, and

moving. Two different songs, the future test songs, were included in the lessons. In the end, both songs were rejected on the basis of being overly simplistic and not memorable. The researcher-developed Singing Accuracy Test (SAT) served as the criterion measure for the pilot and main study. SAT as used in the pilot study contained three components for a total of 42 points. The researcher found flaws in this measure; it did not account for singing correct intervals in the incorrect key, and the scoring for the phrase by phrase singing assessed the performance of each measure as opposed to the entire phrase. The revised SAT consisted of two continuous rating scales: Phrase and Whole Song. SAT is designed to measure pitch performance accuracy, not accuracy of text, rhythm, or use of singing voice.

The researcher decided that, since there is not a clear consensus as to whether singing patterns, phrases of a song, or a complete song is the most precise way to measure singing accuracy, she would use two different performances of the song. The first performance involved the subject echoing the song phrase by phrase (Phrase Performance) and the second performance involved the subject echoing the complete song (Whole Song Performance). The pitch accuracy per phrase was measured in the Phrase Performance, while the pitch accuracy per phrase as well as the overall sense of tonality was measured for the Whole Song Performance.

The Phrase rating scale was used to measure pitch accuracy per phrase in both the phrase and whole song performances, and the Whole Song rating scale was used to measure the sense of tonality in the whole song performance only. The Phrase rating scale is broken down into three categories of score ranges: At Pitch (6-9 points), Not At Pitch (1-5 points), as well as no response (0). "At Pitch" means the subject sang the

pitches with absolute pitch, or in the correct key, while "Not At Pitch" means the subject sang the correct intervallic relationships, but in a different key. The specific point values indicate the degree of accuracy, with descriptors such as "perfect response" or "some notes incorrect." The Whole Song rating scale, which was intended to measure the sense of tonality for the full performance of the song ranged from "no sung response" (0), to "maintains a single tonality throughout total performance" (5). The test song was considered to contain four phrases, which results in a maximum SAT score of 77 and a minimum of 0 for the two song performances combined.

While tonality is an important aspect of singing to assess, the fact that it only accounts for a maximum of 5 points out of 77 makes it insignificant in the final score. She gives justification for this component by stating that it was added to accommodate those children who moved out of the tonality and to reward those who remained in the tonality. If the researcher wanted to measure the subjects' overall sense of tonality, it would seem that tonality within phrases should have been accounted for as well.

The folksong *What'll We do with the Baby-O* was chosen as the test song for the main study because of its appropriate range (d^1-a^1), repetition of melody, rhythm and text, basic intervals, predominantly stepwise motion, Duple meter, and simple rhythms. The researcher chose to use the neutral syllable "bum" for testing purposes. The subjects were individually audio-recorded in a room with the researcher. Three independent judges rated each performance using SAT, and interjudge reliabilities ranged from .80 to .99.

Following the main treatment period and measurement (Posttest I) in the ninth week, the researcher then reversed the treatment between the two experimental groups. Those subjects who had originally learned the song with text now learned the song on a

neutral syllable, and those subjects who had originally learned the song on a neutral syllable now learned the song with text. Both groups were taught the test song in the opposite manner during the 11th week, and their subsequent performances were rated using SAT in the 12th week (Posttest II). The researcher later compared the two performances to check for effects of the original treatment.

The researcher reports the final sample size as 89: 38 five-year-olds, 33 four-year-olds, and 23 three-year-olds. She found no significant difference in singing accuracy between the two methods as indicated by the scores of SAT for Posttest I and Posttest II. Further analysis revealed a significant interaction ($p < .04$) between the method of instruction and time of test on the total SAT scores of the neutral syllable group. Their scores were significantly higher following the addition of text, as opposed to the text group, whose scores remained relatively constant from Posttest I to Posttest II. While the neutral syllable group did significantly improve from Posttest I (neutral syllable) to Posttest II (text), it is not necessarily due to the fact that they learned songs without text first and then added the text. It could be that singing the song with text was an easier task for them. The researcher does suggest that children are able to focus on the melodic aspects of a song without text and then later add the text. While the neutral syllable group was able to accomplish this task, neither the Posttest I nor Posttest II scores were significantly different, so there is no conclusive evidence to suggest that one method is more effective than the other.

The researcher also analyzed the data in relation to age. In comparison to the 4-year-old neutral syllable subjects, the 4-year-old text subjects scored significantly ($p < .04$) higher on Posttest I. In addition, the neutral syllable subjects' scores significantly

($p < .02$) improved with the addition of text as indicated by Posttest II. For this one age group, the researcher was able to conclude that children sing songs more accurately when taught with text rather than a neutral syllable.

In regards to the best approach for testing singing accuracy, the researcher concluded that children sing songs more accurately when those songs are echoed by phrases rather than when children perform the whole song. Since she found a significant difference ($p < .001$) between the phrase sores and the whole song scores, she concluded that it is more effective to test young children with short, two-measure phrases. This does not appear to be a legitimate argument, since choosing either a phrase or whole song performance could depend on what the researcher is attempting to measure. If one wants to measure a child's imitation skills, then it seems that short phrases would accomplish this. If, on the other hand, one wants to measure their ability to sing an entire song with tonal cohesiveness, then the whole song approach would be a more accurate measure. She does note, however, that many children omitted full phrases when singing the whole song, which subsequently impacted the Whole Song Performance scores.

In another study involving three different treatment groups, Levinowitz (1987) investigated the effects of instruction containing songs with and without text. The subsequent problems were: (1) to determine the comparative effects of song instruction with and without words on levels of developmental music aptitudes of children in kindergarten and first grade, and (2) to determine the comparative effects of song instruction with and without words on the singing achievement of children in kindergarten and first grade.

Three kindergarten and 3 first-grade intact classes served as the subjects for this

study. The children did not receive any music instruction prior to the experiment. Before instruction began, the researcher administered the tonal and rhythm subtests of *Primary Measures of Music Audiation* (PMMA) to measure each child's developmental music aptitudes. Each kindergarten class was then randomly assigned to one of three experimental groups (T_1, T_2, T_3), as was each first grade class. For a period of one academic year, each class met with the investigator 30-minutes per week. During each class, the children participated in rhythm activities and sang at least six rote songs. The children in experimental group T_1 sang songs primarily with words, with no more than two songs without words during the thirty-minute class. The children in experimental group T_2 sang songs primarily without words, with no more than two songs with words per class, and the children in experimental group T_3 sang songs only with words. The songs comprised Major, Harmonic Minor, Dorian, Phrygian, Lydian, Mixolydian and Aeolian tonalities and Duple, Triple and Unusual meters. The instructor used the immersion technique for song presentation, establishing tonality and singing the song several times before inviting the children to join in. The songs without words were sung on a neutral syllable, such as "bum" or an onomatopoetic sound.

In the last month of instruction, each class was taught two criterion songs with words: one in Major tonality and Triple meter, and one in Harmonic Minor tonality and Duple meter. At the end of the instructional period, the researcher re-administered PMMA, and each child was audio-recorded singing the two criterion songs. The researcher constructed two 5-point continuous rating scales to assess tonal and rhythmic achievement. Using these rating scales, two independent judges evaluated the performances. Interjudge reliabilities for both rating scales were above .82.

To determine the comparative effects of song instruction with and without words on the children's level of developmental music aptitude, the researcher organized the pretest and posttest PMMA scores into 2 three-factor designs, one for rhythm and one for tonal. The three factors were treatment (experimental group), levels (high or low aptitude), and time (growth of tonal and rhythm aptitude). The researcher used 2 three-way analyses of variance with repeated measures to analyze the tonal and rhythm aptitude scores for each grade level. Only the three-way interaction was statistically significant ($p < .05$) for the rhythm analysis of the kindergarten performance, indicating that, in all other cases the experimental treatment did not influence PMMA scores. Further analysis showed significant mean gains from pretest to posttest for children with high rhythm aptitude in Experimental Group T_3 (all songs sang with words). The researcher suggests that the words may provide rhythmic clarity and precise melodic rhythm for these children, allowing them to audiate the rhythm more accurately. The two-way interaction between the level of developmental music aptitude and the time of PMMA administration was statistically significant ($p < .05$) for the tonal analysis of the kindergarten children and the tonal and rhythm analyses of the first grade children. In other words, the mean gains from pre- to posttest were statistically significant. The researcher did observe that mean gains were higher for those subjects with low aptitude regardless of the experimental group than for those subjects with high aptitude. This is typical because of the phenomenon of regression toward the mean.

To determine the comparative effects of song instruction with and without words on singing achievement, the researcher used 2 two-factor designs, one for tonal achievement scores, and one for rhythm achievement scores. The first dimension was

treatment group, and the second dimension was tonal and rhythm developmental music aptitude (high or low). The tonal and rhythm achievement scores for each grade level were then analyzed using 2 two-way analyses of variance. The researcher found no significant interactions or treatment effects. However, she did observe higher means for those children in the experimental groups who sang a combination of songs with and without words at a level approaching significance. The researcher suggests that these inconclusive findings could be due to the fact that the children only received instruction once per week. There was a significant effect of rhythm aptitude on the rhythm achievement of kindergarten children, as well as a significant effect of rhythm and tonal aptitude on the rhythm and tonal achievement of first grade children. For example, those children with high rhythm aptitude performed with a higher degree of rhythmic accuracy than those children with low rhythm aptitude.

As a result of this study, the researcher arrived at four distinct conclusions. First, tonal and rhythm audiation of children with low tonal and rhythm developmental music aptitudes can be enhanced by instruction consisting of songs with and without words. Second, there was no evidence to suggest that one type of instruction is best for developing tonal and rhythm audiation in children with high tonal and rhythm developmental music aptitudes. Third, the audiation of first grade children with high rhythm developmental aptitude improved with song instruction that includes songs with words only. Lastly, there was no evidence to suggest that one of the three types of instruction is superior for developing singing achievement.

Lange (1999) conducted a similar study involving two treatment groups. The purpose of this research was to gather information about the effect of text in the

performance of songs and in the development of tonal understanding. The four problems were as follows: (1) to determine whether kindergarten students who are taught songs without text will perform with better intonation than students who are taught songs with text, (2) to determine whether kindergarten students who are taught songs without text can identify the resting tone through performance (audiate the tonic) of an unfamiliar song better than students who are taught with text, (3) to determine whether the use of text in song instruction has an effect on developmental tonal aptitude, and (4) to determine whether developmental tonal aptitude has an effect on the intonation performance and ability to identify resting tone of kindergarten students who are taught songs without text and with text.

The subjects were 58 kindergarten students from four intact classes in two different suburban elementary schools. The classes were randomly assigned to one of two experimental groups. One class from each school received instruction primarily with text, while the other received instruction primarily without text. For the text experimental group, no more than two songs per lesson were sung without text, and for the no text experimental group, no more than two songs per lesson were sung with text. Aside from the use of text, the classroom activities were identical for each group. The folk songs used consisted of a range from d^1 to a^1, and comprised a variety of tonalities and meters. The activities centered around singing, movement, resting tone, patterns and playing pitched and unpitched percussion instruments. Each class received instruction from the investigator for 30-minutes, twice a week, over a period of 24 weeks. The researcher administered the *Tonal* subtest of the *Primary Measures of Music Audiation* (PMMA) as a pre- and posttest to measure tonal developmental music aptitude.

In the 18th week of treatment, two criterion songs with words, one in Major and one in Minor tonality were taught to both experimental groups. At the end of the 24-week treatment period, each child was individually audio-taped performing the two songs as well as the resting tone for two unfamiliar songs. After playing the tonic and dominant pitches on resonator bells and establishing tonality, the researcher gestured for the child to begin singing the song. The song order was switched for each subsequent child to control for order. After performing the two criterion songs, the child was asked to perform the resting tone for two unfamiliar songs, one in Major and one in Dorian tonality. The song, as sung by the researcher, was played on an audiocassette player, and the child was asked to sing the resting tone whenever the singing paused. Song order was alternated to control for presentation order on this task as well.

Three independent judges rated the performances of each child using two researcher-designed, five-point, continuous rating scales. The Tonal Accuracy rating scale was used for the two criterion songs, and the Resting Tone rating scale was used for the resting tone tasks. In a pilot testing of the rating scales, the interjudge reliabilities were found to be .98 for the Tonal Accuracy scale, and .99 for the Resting Tone scale.

Lange computed means, standard deviations and gains scores, and split-half reliabilities for the pre- and posttest of PMMA. Based on the PMMA scores, the children were divided into high and low aptitude level groups for analysis. A two-way analysis of variance (treatment x aptitude level) was then conducted for both the singing and resting tone performance tasks to determine possible differences between the two treatment groups. Lastly, to determine the effect of instruction on developmental tonal music aptitude, a two-way analysis of variance (treatment x aptitude level) was used to

determine if there were significant differences between the treatment groups or aptitude levels of the groups. The researcher chose to set the level of significance at .05 for the analyses.

The split-half reliabilities coefficients for the PMMA scores were similar to, though slightly higher than those reported in the PMMA Manual. The combined interjudge reliabilities were .79 for the two criterion songs and .82 for the two resting tone songs. The ANOVA of the Tonal Accuracy and Resting Tone Performance ratings revealed that neither the interaction nor main effects reached significance. There was, therefore, no significant difference between the text and no text treatment groups in terms of tonal accuracy or resting tone performance. In her interpretations, the researcher notes that the text group had higher mean scores on the pretest PMMA and tended to get through the entire lesson plan each class period. The no text group, on the other hand, had discipline problems, and the researcher often failed to get to every scheduled activity, which could have influenced the results. She also found that the children had difficulty performing the resting tone task, perhaps because they did not understand it or had not had enough informal exposure to such a task in classroom experiences. Additionally, the researcher found no significant difference in singing performance according to aptitude level. In terms of tonal developmental aptitude gains, the researcher found no significant differences. There was, however, a significant difference for aptitude. Those students with low aptitude tended to have greater gains in aptitude than students with high aptitude, although the gains were not significant. The researcher explains that these results could have been due to a lack of understanding of the test directions or could be due to the treatment.

In response to the finding concerning tonal developmental aptitude gains for low aptitude children, the researcher suggests that teachers use a combination of songs with and without text at this level. She explains that, while the low aptitude children seemed to benefit more from songs without text, only using songs without text could cause a classroom management problem. For this reason, a combination of the two would be beneficial at the kindergarten level. In addition, since the children had difficulty with the resting tone task, she suggests including a more informal resting tone focus at this level, by singing the resting tone repeatedly at the end of songs in a variety of tonalities.

Levinowitz (1989) conducted a study to investigate whether there is a relationship between a young child's ability to sing rote songs and his or her language development. Her problem was articulated as follows: Does a child perform a rote song with words better than one without words? The participants for this study included 4- and 5-year-old children (N=35) from two nursery school classes. Children in both classes received music instruction from the investigator for 30-minutes, once a week, for five months. This instruction included rhythm, movement, and rote-singing activities in a variety of tonalities and meters. During each class, half of the rote songs were sung with words, while the remaining songs were sung without words, on a neutral syllable such as "bum" or an onomatopoetic sound.

In the last month of instruction, the children were taught two criterion songs, one with words and one on the neutral syllable "bum." The two songs had a similar melodic and rhythmic contour and harmonic structure. At the conclusion of the instructional period, each child was tape-recorded singing the criterion songs. To control for order, half of the children sang the song with text first and the song on a neutral syllable second,

and the remaining children sang the songs in the reverse order. Two independent judges rated the performances using two 5-point rating scales to assess tonal and rhythmic singing achievement. The two judges' combined scores for tonal achievement and combined scores for rhythm achievement for each of the two criterion songs resulted in four distinct singing achievement scores for each child: a tonal and rhythmic achievement score for the first song, and a tonal and rhythmic achievement score for the second song. Each child was also given the *Peabody Picture Vocabulary Test* (PPVT) to assess language development. The test, designed to measure a child's receptive vocabulary, asks the child to point to the picture of the word he or she hears. The standardized raw scores from this test served as indicators of language development for the purposes of this study.

The interjudge reliabilities for each rating scale and criterion song ranged from .78 to .94. The performances were analyzed in terms of the child's tonal and rhythm capability to sing a song with and without words. Correlated sample *t*-tests were then used to determine the differences, if any. In addition, the relationship between language development and tonal and rhythm capability to sing a song with and without words was calculated using first-order partial correlation coefficients, with the constant being age in months.

There was no significant difference between the rhythm performances of the song with words and the song without words. The investigator speculates that this could be because there actually is no difference, or it could be due to a faulty rating scale. A significant difference ($p < .01$) was found between the tonal performances of the criterion songs, however. The criterion song without words was performed more accurately tonally than the song with words. The investigator concludes that this could be an error, or

children may in fact learn the melody better when there are no words to distract them.

This study revealed low correlation coefficients between language development and tonal and rhythm singing achievement. At most, 4% of the variation in children's language development was accounted for by the tonal performance of the song with words. The researcher concludes that young children should receive rote-song instruction including songs with and without words. She also suggests that since there does not appear to be a relationship between young children's language development and their tonal and rhythm performance of rote songs with and without words, perhaps children depend on two mental processes when learning a song with words: one for audiation of the music and one for learning the words.

Comparison to Current Study

The current study had several similarities, as well as a number of differences in comparison to these seven quantitative studies. The participants were of a similar age range, children approximately 4-years-old enrolled in a kindergarten readiness program. Unlike Goetze and Smale's investigative studies, this study involved instruction over a period of time. As in the Gault, Jacobi-Karna, Levinowitz (1987) and Lange studies, there were two separate treatment groups according to instruction with text or without text. The researcher chose one class to receive instruction consisting primarily of songs with text, and a second class to receive instruction consisting primarily of songs without text. The main difference is that the current research did not attempt to quantitatively measure singing achievement, but rather used a qualitative approach. The researcher recorded weekly field notes and videotaped three class periods throughout the study so that the children's behaviors and interactions could be observed and analyzed within and

between groups. This approach allowed the researcher to observe the children's interactions with the music over a period of time. Rather than looking at a final product, this study examined the process; observing the musical or nonmusical behaviors exhibited by the children from week to week. The data were analyzed and presented in terms of overall child behaviors and observed differences between the two groups. While the previous studies related to singing achievement, the current study focused on children's natural responses to music presented with text compared to music presented without text.

Summary

The findings concerning the use of text or a neutral syllable for children's singing and music instruction are varied. The investigative studies involving singing the same song material with and without text have contrasting results. While Goetze (1985) found that kindergarten children sang significantly better on "loo" than text, Smale (1987) did not find a significant difference between the two conditions with preschool children. Experimental studies involving treatment groups that receive instruction comprised of varying amounts of text have also returned inconclusive findings. Gault (2000) found that kindergarten and first-grade students performed one of the two criterion songs more accurately with text than without. Jacobi-Karna (1996) found that the 4-year-old subjects performed significantly better with text than with a neutral syllable. In addition, while Levinowitz (1989) found no significant difference between the rhythm accuracy, she did find an increased level of tonal accuracy for the song without words. In contrast, Levinowitz (1987) and Lange (1999) found no significant difference in singing achievement between the text and no text groups.

While the past research concerning the use of text or no text has observable strengths, the method of data collection does not compliment a structured, informal early childhood music setting. In such a setting, singing achievement is not a curricular goal. Rather, the intent is to expose the children to a variety of music so that they may begin to experiment and eventually understand it. For this reason, the comparative use of text and no text remained, but the method of collecting and analyzing the data was altered. A qualitative approach was employed, with the intent of providing a more thorough investigation of the overall child behaviors. One class received instruction consisting of music primarily with text while the other class received instruction consisting of music primarily without text. Weekly field notes and periodic video recording allowed the researcher to observe the children's musical and nonmusical responses to music with and without text over time. With this qualitative approach to data collection and analysis, the researcher was able to document specific responses and recurring trends within and between the two groups.

CHAPTER III

Methodology

Researcher Lens

From the time I was about twelve years old I can remember having aspirations to become an orchestra teacher. I had a strong desire to teach beginning strings, to start students off on the right foot, so to speak, a goal that remained throughout my undergraduate study. I can remember sitting in my elementary general music methods course thinking, "yeah, this seems like a great way to teach general music, but that's just not for me." It was during that course that I was first introduced to Edwin Gordon's Music Learning Theory. I was inspired by this approach to teaching music; it seemed so logical yet so well developed at the same time. I started reading Gordon's *Learning Sequences in Music* (Gordon, 1997), attended a workshop he presented at the university, and eventually began incorporating some aspects of the theory into my private teaching. In the summer of 2004, I attended a summer certification workshop, receiving an Instrumental Level One Music Learning Theory certification.

By the time I began my senior year, I was beginning to have second thoughts about teaching strings, but did not feel qualified to teach general music either. I decided to apply for graduate study in music education so that I could receive my master's degree before I began teaching. I saw it as an opportunity for me to learn more about applying Music Learning Theory in a general music setting so that I could do so after completing the degree. On my first visit to Michigan State University, I had the opportunity to observe an early childhood music class at the Community Music School (CMS), and fell

in love with it. During my first year, I had numerous experiences with early childhood music. I took Dr. Cynthia Taggart's *Music In Early Childhood* course, assisted as well as taught Infant/Toddler (ages 0-3) and Preschool (ages 3-5) level classes at CMS, and taught preschool children at a preschool kindergarten readiness program in Lansing (the site for this study). My training and subsequent teaching is centered around the philosophical, theoretical and music teaching methods of the early childhood music curriculum *Music Play* (Valerio, et al., 1998), of which Edwin Gordon and my thesis advisor, Cynthia Taggart, are co-authors.

When I worked with the children at the preschool kindergarten readiness program last year, one thing that struck me was the difference in responses I observed when performing a song with text in comparison to a song without text. While the children appeared to enjoy the songs without text, few attempted to sing along or experiment with the musical material. When I performed a song with text, however, the majority of children joined in and would often continue singing after I had finished. In a few cases, I could hear a child singing one of the songs with words before class or between other activities. I noticed that many children spoke or chanted the words of the song instead of singing, however. From this experience, I became interested in studying the differences in children's responses to music with and without text.

While the children involved in this study were new to me, my past experience teaching in this setting served as a preparation for the study. I had a sense of the environment, which is quite different from CMS since there are teachers and aides present as opposed to parents. In addition, I had previously discovered what types of songs, chants and activities work best in this setting. The main difference from my past

experience was the treatment of the text condition. Normally, 85% of the songs and chants I use in a lesson do not contain text. For the purposes of this study, I taught one class using songs and chants primarily with text, and the other class using songs and chants primarily without text. While this was a departure from what I would normally do, I felt it was necessary in order to observe both ends of the Text/No Text continuum.

Participants

The participants for this study included 26 three- to four-year-old children from two intact classes in a preschool kindergarten readiness program in Lansing, Michigan. This state-funded program is intended for residents of the Lansing School District who are 4-years-old before the December 1st cutoff and meet program eligibility criteria. A child must meet at least 2 of 25 specific risk factors to be considered eligible for the program. According to the program director, each child enrolled meets an average of six risk factors. Examples of these risk factors are low birth weight, developmentally immature, nutritionally deficient, diagnosed handicap condition, language deficiency, family history of low school achievement, single parent household, low family income, and housing in rural or segregated area. As a result of the eligibility criteria, the children enrolled in this program are diverse economically, racially, and developmentally. I obtained approval for the study from the University Committee on Research Involving Human Subjects (UCRIHS), Michigan State University's Institutional Review Board (IRB). The human subjects application approval and parent letter and parental consent form are included in Appendix A and B, respectively.

Design

I employed a mixed methods design, with qualitative data collection, presentation

techniques, and analysis. While the research question was comparative, which is usually quantitative in nature, I felt it would be best addressed using a qualitative paradigm given the age of the children and because of my interest in the process rather than the product. I was interested in comparing children's responses to music with text and music without text in a naturalistic manner. Rather than asking the children to perform a specific musical task outside the context of the class, I observed their natural behaviors and responses to the music over a period of time. While the concern of this study was the possible differences between instruction containing texted and non-texted songs and chants, I chose to present the data in terms of common child behaviors overall before making comparisons between classes.

As with much qualitative research, this study included a purposeful sample. Since I taught four classes at this site, I chose two of the classes to serve as the participants for this study. For the first lesson, I taught all four classes without text. I observed the quality and quantity of responses I received, and then designated one class as the *Text Class* and one class as the *No Text Class* for the remainder of the study. I chose the two classes that provided the most responses initially, since it would be likely that they would provide a sufficient amount of data for the study. Two of the classes were very responsive: singing, chanting and speaking frequently, while the other two classes were more quiet and reserved. The choice of which two classes to select was clear. I made the further designation of Text and No Text based on classroom management issues. One of the classes was substantially larger (16 children compared to 10), and was more difficult to keep under control. The children called out and raised their voices more frequently, and their attention would often waver. I decided to make this group the *Text Class*, in hopes

that the text would draw them in and limit classroom management issues. In her study, Lange (1999) experienced classroom management problems with the class that received instruction without text, often failing to get to every planned activity. She reasoned that using non-texted songs exclusively might cause classroom management problems. The *Text Class* received instruction consisting of songs and chants primarily with words, while the *No Text Class* received instruction consisting of songs and chants performed on neutral syllables such as "bum," "la," or "da." As it turned out, the participating classes were from two different primary classroom teachers and the *Text Class* was a morning class, while the *No Text Class* was an afternoon class.

Teaching Procedures

Each class participated in a weekly music class taught by myself for a period of 10 weeks. All classes were held in the children's normal classroom, the same day and time each week, with the children's primary teacher and classroom aide present. In a couple of instances, the day or time had to be altered slightly to accommodate school closings. Since instruction began at the start of the school year, the children did not have previous music instruction in school, other than what the classroom teachers provided.

Aside from the use of text or a neutral syllable, the teaching procedures and repertoire were as similar as possible for both groups. I followed the general principles outlined in *Music Play*, with songs and chants from a number of sources. The same songs and chants were used for each group, and comprised a variety of tonalities and meters. This included Major, Minor, Dorian, Phrygian, Lydian, Mixolydian, Aeolian and Multitonal tonalities, and Duple, Triple, Unusual, and Multimetric meters. Activities included singing and chanting for the children as well as inviting them to move to music

with an emphasis on beat, continuous fluid movement, or creative movement. Small, handheld percussion instruments, such as rhythm sticks and egg shakers, as well as other props, including beanbags and scarves, were used in conjunction with some of the activities. While the musical material or activities varied slightly from week to week, the same lesson plan was followed for both classes in a given week. A sample lesson plan can be found in Appendix C, and repertoire sources can be found in Appendix D.

The music environment was informal, but structured. The children and I sat in a circle on the floor, in a carpeted area of the classroom. While I planned the specific activities, I also responded to the children's spontaneous responses through pattern imitation, vocal sound or syllable imitation, and movement suggestions. In each class, the children were encouraged to supply the resting tone through the frequent "dominant-tonic exchange" procedure. This is something I generally initiated at the conclusion of each song. I would typically stick up my hands and sing the 5^{th} scale degree (dominant), then tap my hands to the ground, leaving a space. The intended response was the 1^{st} scale degree, or tonic pitch, and I would sing this pitch on "bum" if the children did not respond, as well as in response to their attempts. The children also echoed tonal and rhythm patterns as a group and individually on the neutral syllable "bah" during some activities. This was a way for me to assess each child's music development and progress during the normal course of the class. It was the only time that the *Text Class* experienced music that did not include words, though pattern instruction was a small part of the overall class.

Data Collection

As the music teacher as well as the researcher, I assumed a participant-observer

role in this study. Field notes and video recordings constituted the data. I recorded field notes at the conclusion of each music class, while the video recording occurred in the 3rd, 6th and 10th weeks of instruction. I used a JVC GR-DF450u digital video camera with Maxell MiniDV digital videocassettes. The video camera was set up on a tripod atop a table, which was placed behind me so that the children could easily be seen. I later viewed the videos and recorded observations concerning the children's musical as well as nonmusical responses during the class. I took measures to ensure trustworthiness through data triangulation and peer review. The field notes for weeks 3, 6 and 10 were compared to the corresponding video transcripts for data triangulation purposes. In addition, a fellow early childhood music teacher and doctoral student at MSU served as a peer reviewer. She evaluated a data sample and my accompanying codes to verify that they were logical and consistent.

Analysis

Throughout the 10-week period, the field notes and video transcripts were analyzed. I assigned codes to each behavior or response as the categories began to emerge. I also indicated specific evaluative phrases (in reference to use of singing voice, accuracy of singing, steady beat movement, etc.) where relevant. The emergent categories referred to content: *Tonal, Rhythmic, Expressive or Verbal/Vocal*, as well as the nature of the behavior, or context: *Independent* or *Dependent.* The most salient behaviors were then described and discussed in detail. Any observed differences between the *Text* and *No Text Classes* were addressed, along with possible explanations for the findings.

Limitations

There were several limitations to this study in terms of the design and participants. First, the mixed methods design in itself poses several problems. Since I employed qualitative data collection and analysis techniques involving a small, purposeful sample to answer a comparative, more quantitative question, the results are not generalizable. In fact, since there were inherent differences between the two classes and individual children, it was difficult to even compare the children within this study. In order to make any comparisons between the classes, I had to view them as more or less equal. In addition, my participant-observer role required me to perform two duties essentially simultaneously: that of teacher and data collector. Since I was teaching and attempting to observe and remember the children's behaviors at the same time, I undoubtedly forgot many details of the class when I sat down to record the field notes. On the other hand, since I was both the teacher and the researcher, I had control over the class content and teaching techniques as well as the recorded data. I was able to determine what the most meaningful components of any one music class were based on my research purpose and problem. The video-recording was also useful in providing a more detailed account of the classes in those particular weeks.

There were also a number of limitations concerning the participants. Although the children represented an at risk population, I did not take this into account in my analysis. For issues of privacy, I did not inquire about specific children in my classes, nor did I feel it would have been relevant to the purpose of this study. Since this is a unique population, transferability of results is further diminished. I also observed differences in child personalities and the dynamics of each class. This impacted my ability to compare the

two classes or draw conclusions from my observations, and will be described in more detail forthcoming. A final limitation of the participants was that these children were not previously familiar with me as a teacher, or the concept of music class for that matter. I was a new teacher to them, and they had only been in school a few weeks when the study began. Perhaps this affected the comfort level of some of the less outgoing children, limiting their desire to offer responses. However, I feel it was necessary to begin the study at the start of the school year, so that the children did not have prior school music experiences to influence their behaviors in relation to the Text/No Text condition.

CHAPTER IV

The Setting and Main Characters

The Classroom Environment

Since the classes were located in the same school, the physical classroom environments of the *Text Class* and the *No Text Class* were quite similar. For this reason, I have chosen to describe just one classroom in detail, that of the *Text Class*.

Approaching room 115, you first observe the essential "outside of classroom" items. There are brown metal shelves with alternating black and orange coat hooks affixed to the off-white cinderblock walls. Below each hook is a picture of a child with his or her name printed underneath, so there is absolutely no confusion as to whose coat and backpack goes where. On the left side of the door is a metal rolling cart with white and gold-speckled shelves. A large bulletin board above proclaims "PARENT INFO," and a "Sign-In/Sign-Out" sheet sits atop the cart. Before entering the classroom, the incoming visitor or class member is greeted by a tall yellow pencil with eyes, a big open red mouth, and white-gloved hands. This vertical poster reads, "Welcome to our Class!" at the top and "Glad to Have You Here!" below, with "115" filled in for the "Room" blank, and "Mrs. Spencer and Mrs. London[1]" filled in for the "Teachers" blank.

Upon entering the classroom, one is shocked by the incredible amount of stuff packed into one room. Starting from the right, there is a low cabinet with doors below for storage, and a sink above with the necessary "wash-up" supplies for curious little hands. Continuing around the corner along the right wall are various shelves jam-packed with art supplies including paints, brushes, every imaginable color of construction paper, glue,

[1] Teacher names have been changed to insure confidentiality.

glitter and pipe cleaners, among other things. On the floor is a double-sided easel covered with fuchsia laminated paper on one side and royal blue on the other. Shiny red smocks occupy the space between the two sides of the triangular easel. In the corner sits a nearly 6-foot tall stack of boxes and miscellaneous toys and supplies, patiently awaiting the arrival of a much needed storage cabinet.

Next is the "Sensory Table." The removal of a white plastic lid reveals the current item for free play enjoyment, which could range from sand or water with various scoops and containers, to colored construction paper and scissors. Bulletin boards adorn the wall, with items such as a U. S. map, friendly cartoon-like colored shapes with their appropriate names printed below, or the children's latest seasonal art projects. There is a dress-up area with soft feather boas, tacky handbags, glamorous dresses, and stylish jackets. Right next-door is the "House Area," with a kitchenette, a table, a couch and a high chair, each of which is occupied by the appropriate family member in the form of large fabric stuffed dolls.

Across the rear wall is a carpeted play area with a small table and various cubbies filled with toys including blocks, puzzles and toy trains. The next area is the "Library Center," with two large red and blue floral pillows, a couple of blue vinyl beanbag chairs, and a few large colorful people puppets. A few steps down in the far corner of the room are different colored milk crates filled with the main attraction: the books. Along the left wall is the computer station. The removal of a quilt in muted greens, pinks, blues and browns reveals a computer and printer on a desk with a black rolling chair tucked underneath. Adjacent to the computer station is a small Lego table. It is a low, light-colored wooden table with a red Lego top, and a bag filled with blocks hanging beneath

it. A child could sit in the single wooden chair and create a Lego masterpiece connected right to the table.

Headed back towards the entrance is a single door with the word "bathroom" appropriately written on it, as well as a few file and storage cabinets. In the center area of the room is a small wooden craft cart with even more art supplies including scissors, paper, markers, crayons, and glue sticks. There are also three mismatched tables with small chairs for those activities that warrant a table, such as art projects, writing, coloring or eating. There are often a few latecomers or slow eaters enjoying a breakfast of Cocoa Puffs or a snack-sized yogurt and a small carton of apple juice when I enter the room.

The final stop is the "Carpet Area," where many of the day's activities take place, including music. On one side of the carpet area is a wooden cubby cabinet with a fish tank on top. Inside is a large stone octopus along with the residents: a handful of small silver fish, and one large reddish orange fish. The other side of the cubby cabinet contains even more toys including blocks, fireman and construction hats, tiny people figures, and trucks- all very tempting to the child seated there during circle time. The carpet has a large, bright red border, with black letters evenly spaced around it, which proves to be quite useful when directing a child to a specific spot. Inside this border is a royal blue center, with an inner circle of various colored shapes with a black number printed inside each. Against the wall are all the supplies needed for the morning activities: the weather wheel, the calendar, a chart with the helpers for the day and a green chalkboard. When I enter the classroom, the children are typically participating in the daily morning routine. The calendar helper for the day puts the colored shape with the new date up and points to each number with the pink sparkly wand as the class cheerfully counts up to the present

date. The weather helper adjusts the arms on the weather wheel to represent the weather for the day based on the children's explanations of what they saw when they went outside that morning. The final helper is the music helper, who chooses a "musical popsicle stick" out of the clear plastic pitcher atop the bookcase. Each large wooden popsicle stick has a laminated circle with a picture and song title on it. "Who stole the cookie from the cookie jar" is invariably a choice, and I gladly join in when a child enthusiastically points one finger at me, exclaiming, "Miss Kristen stole the cookie from the cookie jar!"

The Main Characters

The Text Class

While there were 16 children in this class, the following children were the most vocally active, musically and/or verbally. They tended to the be the children who appeared in my field notes and video transcripts most often, and thus their descriptions and behaviors can offer insights into the findings of the study. I have changed their names, choosing alternate names that start with the same letter and, in my mind, seem to "suit" the child as closely as possible.

Sophia.

Sophia was a pint-sized girl with delicate blond hair falling just below her chin and large brown eyes that were always wide open and full of life. Most Wednesday mornings when I entered the room, she could be found sitting at one of the short blue tables enjoying a breakfast of Cocoa Puffs or Fruit Loops along with a small carton of apple juice. Mrs. London would often encourage her and any other "slowpokes" to finish up so they could join the circle activities that Mrs. Spencer was currently leading.

Sophia was very quiet, rarely talking during music class, aside from offering color

or movements suggestions when I questioned her, or the occasional comment or response to a nearby classmate. If she attempted to sing or chant along with me at all it was very soft. While I could often see her lips moving, I had difficulty hearing any vocal sounds. Occasionally she would join me for the last word of the song, in a singing voice and frequently in tune. She also responded to my tonal patterns, even when no one else did. She did not always seem to be directing her pattern responses at me, however.

> Sophia then echoes me softly with the same pattern, in tune. She is staring off in the distance to the other side of the circle with her beanbag just resting in her hand (*Text Class*, Week 10 video transcript, 12/7).

A number of times I observed Sophia singing or chanting between activities. Sometimes she would incorporate some sort of body movement or toy movement.

> Sophia is singing very softly, clapping, rocking from side to side, or moving her arms like she is doing "motions" for the song. She starts off with the words "Me oh my pickles and pie" (the song we just did), though they are a little mumbled. The pitches are very close to the melody from the song. She goes on and is softer and mumbling, then comes in again with that melody. She stops for a few seconds, then sings "Me oh my oh my" going from the 5th scale degree to a half step below, back and forth. It is hard to hear her so I cannot tell if she has all the words, and can only really hear fragments, but she is in a light singing voice (*Text Class*, Week 10 video transcript, 12/7).

Tessa.

Tessa was a very vocal child, musically as well as verbally. She had dark brown hair that was typically pulled half up or in a ponytail firmly affixed to the top of her head.

She had a big smile and a lively, often times silly laugh. She usually chose to sit close to me and would ask me questions such as "Where'd you get that music from," "What are we gonna do with them?" (in reference to a toy), or make comments and offer suggestions for toy movements. One week after we did the song *Bubblegum* and "popped" down to the ground like bubbles, she pretended to wipe off her face and said "Let's, let's take off the gum," which got a number of other children doing the same, repeating this behavior throughout the activity.

Tessa often combined her silliness into music endeavors. During the *Hello Song* one week she chose an interesting singing style.

> Tessa is holding her hands together and hitting her mouth repeatedly as she attempts to sing along continuously. I can hear most of the words as well as some accurate fragments, and overall the contour is the same (*Text Class*, Week 10 video transcript, 12/7).

During *Scarf Dance* another week, she incorporated a silly voice with movements that reflected the music.

> In the part of the song where the flutes play repeated short notes in parallel, Tessa takes little baby steps towards me and says "I'm a baby, wa wa wa" in a light whiny voice, then continues with these little steps and moves around and around in a circle, gradually closing it in until she is just turning around in one spot (*Text Class*, Week 10 video transcript, 12/7).

Renee and Ally.

Renee and Ally come as a pair; they almost always sat next to one another, and frequently interacted throughout the class.

> Renee is moving form side to side and bumping into Ally. Ally responds, "Stop wiggling, you're like a little worm," laughing. Ally says, "Renee" and Renee responds, "What??" Ally repeats, "You're like a little worm" (*Text Class*, Week 6 video transcript, 11/9).

Both girls were social and outgoing, often shouting out suggestions or making special requests. When I announced, "We are going to paint the floor," Renee would enthusiastically shout "Pink!" with her long brown pigtails flopping from side to side. Incidentally, she was often dressed from head to toe in her color choice. Renee also asked me questions that I could not help but chuckle at, including "Why do you like to sing?"

> After the *Hello Song* Renee asks, "Why do you go around...why do you go around when you sing?" moving her upper body around with flow. I say that is how I like to move when I sing, and you can move how you like when you sing. She lifts up her feet and moves her arms and feet, asking, "Can I move like this?" and I say, "Yup you can do that if you want" (*Text Class*, Week 10 video transcript, 12/7).

Ally enjoyed playing with the toys independently, and was a sort of ringleader for encouraging silly toy play.

> When Ally got her sticks she said, "Make fire make fire," in a deep silly voice and started rubbing them together. Parker did the same with his sticks, as did Tessa. She continued repeating "I want to make fire," then switched to "Burn burn fire, burn burn," repeating it in the same voice (*Text Class*, Week 7 field notes, 11/16). Ally put her hot pink scarf on her head like a kerchief and said, "I'm an old lady," a behavior she repeated throughout most of *Scarf Dance*, as well as in the next

activity involving the scarves (*Text Class*, Week 10 video transcript, 12/7).

As for musical responses, Renee incorporated her outgoing, at times loud speaking tendencies. From the first week, she responded to my sung dominant during the dominant-tonic exchange in a calling voice, on a pitch slightly higher than dominant, though she was not really singing. This came to be her "personal pitch," as she responded this way repeatedly throughout the weeks. There were instances during which she would respond in a singing voice, sometimes on an accurate dominant or tonic pitch, particularly when I asked, "Can we use our inside singing voices this time?" Renee seemed interested in receiving recognition for her dominant responses. I would often echo a child's response then sing the accurate pitch if they were not in tune or in a singing voice, and if I failed to do so for her, she let me know.

> During a dominant-tonic exchange, Renee exclaimed, "That was me, I sang bum!" (*Text Class*, Week 4 field notes, 10/26)

She repeated this same phrase a few different weeks, and seemed satisfied when I echoed one of her responses the next time. Renee also attempted to either sing or chant along with me on a weekly basis. In some instances she would perform a song or chant independently in a silence with some accuracy.

Ally also exhibited musical behaviors on occasion. She would attempt to respond to dominant or tonic, though she was typically not in a singing voice. She did not attempt to sing or chant along with me much, though she sometimes chimed in with one word, usually in a silly voice.

The No Text Class

For this class of 10 children, I have again chosen the most active children to

describe in detail. The five children are represented as one pair and three individual children. I have again chosen alternate names beginning with the same letter that seem to fit the child.

Chrissy and Jacob.

Chrissy was a friendly girl, always bouncing about and full of life. She had long light brown hair with shortly trimmed bangs, which she often wore in two braided pigtails atop her head. She had a laugh loud enough to belong to a person twice her size, and found everything funny. At times Chrissy would be a bit outspoken or bossy; she liked to get her two cents in and loved sharing stories with the class. Jacob was similar to Chrissy in many ways, though he was a bit more soft-spoken. He was constantly smiling or laughing with his big toothless grin (he was perpetually missing a tooth in the front of his mouth). He was a small boy with thin dark brown hair that was neatly cut, resting above his eyebrows. He could usually be found sitting next to Chrissy during music time, and the two of them tended to imitate each other's behaviors.

> Jacob drops his eggs on the floor and says "A-choo, a-choo," then Chrissy drops both of her eggs, saying "A-choo a-choo" a little louder (*No Text Class*, Week 10 video transcript, 12/6).

Other times Jacob assumed the "teacher role," reminding Chrissy of the class rules when need be.

> Chrissy is still on her hands and knees leaning across Jacob towards me, and Jacob, sitting cross-legged, taps on his lap with both hands, saying, "Chrissy sit on your bottommmmm!" (*No Text Class*, Week 10 video transcript, 12/6).

Chrissy frequently sang and chanted along with me or responded to tonal and

rhythm patterns. She came to the class a few weeks after music classes started, and from her first week took to singing in this loud, high voice, which was sometimes an octave higher than what I was singing. It was not quite a singing voice, and sometimes came out as more of a squeaky vocal sound. This voice returned each week, but gradually became less prevalent during the course of the class. I also observed instances of her singing in an appropriate range.

Jacob was active musically, moving with flow and attempting to sing or chant along with me or echo rhythm and tonal patterns. He also independently sang and chanted on occasion. He always seemed to have fun while interacting with music.

> Jacob immediately springs towards me and slaps his hand on the floor while singing "bum" on an in tune tonic pitch with a huge smile on his face (*No Text Class*, Week 10 video transcript, 12/6).

He also enjoyed making vocal sounds, his signature being a high-pitched "mi mi," which appeared several weeks throughout the study. Sometimes he would use this syllable in conjunction with a sung response to dominant, while other times it would not have a pitch associated with it.

Annabelle.

Annabelle was a sweet, quiet girl with long golden blonde locks and soft green eyes. Often times if I sang dominant and there was no initial response, she would sing. Her responses were always very soft, though she seemed to desire recognition.

> At the end I sing dominant, and wait for a few seconds until Annabelle comes in with a very soft, in tune tonic pitch on "bum," then repeats it a little louder when she sees that I am looking at her (*No Text Class*, Week 3 video transcript, 10/18).

While Annabelle was not very verbal in comparison to some of the other children, she would talk during toy play or activities.

> Annabelle puts her scarf on her head and says in an animated voice, "I got green hair," patting her "hair" on her head. There is silence and she repeats again, "I got green hair" (*No Text Class*, Week 6 video transcript, 11/9).

She also independently sang or chanted a number of times when there was complete silence in the room, incorporating her own movement while staring straight ahead on one occasion.

> The children are quiet while I collect the eggs, then when I go to put the box back in the tote, Annabelle chants, "ba ba ba ba ba ba ba ba ba ba" in Duple meter (like the last song) and a similar tempo to the song we just did. She chants with inflection, and steady meter, tapping her hands on the floor to the macrobeat (not quite steady in the beginning, but lining up with the macrobeats she chants at the end), looking straight ahead as she does it (*No Text Class*, Week 6 video transcript, 11/9).

Ella.

Ella was a bright, cheerful child, always excited by the activities and the fun that music class would bring. She had long black hair, which she usually wore down. Her large brown eyes illuminated her face, often staring straight ahead in a sort of musical trance while softly singing along with me, smiling the whole time.

Ella seemed very focused on the music and what I was doing. She would imitate my flow movements, even when I did not invite the children to do so, and also imitated patterns or syllables I used.

> I sing dominant on "ya" and then Ella echoes dominant twice on "ya ya." I sing dominant on "bum" and Ella lets out a big "bummm" closer to a growl, and not in a singing voice. I sing tonic again and she does the same thing, but closer to tonic and in a singing voice (*No Text Class*, Week 3 video transcript, 10/18).

I also found that, while she typically appeared to be in her own world while she simultaneously sang, she would frequently end on the resting tone with me, sometimes holding that pitch out after I had stopped singing.

Taylor.

Taylor was a real character: outgoing, loud, and spunky. She was taller than the rest of her classmates and wore her hair in braids, often with three or four placed in different locations on her head. Taylor was a class clown, always eager to have all eyes on her and get attention in any way possible.

> She said, "No Taylor isn't here," to which some children laughed and said "You're Taylor," and she responded, "No my name isn't Taylor" (*No Text Class*, Week 8 field notes, 11/22).

> Taylor puts her eggs on the floor and covers her face with her hands. Jacob comments, "She made her eggs go down," looking towards me to get my attention. Taylor peeks out of her hands then covers her face again. A few seconds later she takes her hands off her face, laughs and exclaims "I was playing," tapping her eggs together and hitting her feet and knees together, then apart repeatedly, accompanied by vocal sounds in a high pitched voice, "ah ya yaaa" (*No Text Class*, Week 3 video transcript, 10/18).

Taylor enjoyed using silly voices any chance she could. During chants and

rhythm patterns she liked using a very low voice, sometimes incorporating syllables such as "boom" or "ra." When she attempted to sing along with me she was often in a silly speaking voice rather than a singing voice.

> When I got to Annabelle in the *Hello Song*, Taylor, her neighbor, gave her a personalized "Hello" in a silly high-pitched voice, and for Ella she used a deeper voice. She continued with different silly voices for the last two children (*No Text Class*, Week 3 video transcript, 10/18).

Taylor was very active rhythmically. She always attempted to chant along with me, though she was usually engaged in her own babble. When I stopped, her chanting often spilled over into the silence. There were a number of times where she chanted rhythm patterns from two to eight beats in length in the same meter of the chant. I tried to echo her patterns, but this did not seem to phase her, as she simply continued on with her chanting, as if she could continue on that way forever.

Fundamental Differences Between the Two Classes

I observed overall differences in class dynamics and child personalities between the *Text Class* and the *No Text Class* from the very start of instruction. For one thing, the *Text Class* was quite a bit larger, with 16 children compared to the *No Text Class's* 10, and the children were often louder. The children in the *Text Class* frequently called out ideas during activities, or color requests as I distributed toys. They also tended to chant or shout loudly during rhythm pattern instruction. Once one child got excited and raised his or her voice, others soon followed.

There was also more conversation in the *Text Class*, sometimes related to the activity, other times not. While there were a number of quiet children who rarely said a

word in the *Text Class*, there were also many more talkative, outgoing children than in the *No Text Class*. There were rarely instances of complete silence during the music class. In the *No Text Class*, however, the children were often very quiet at the start of class or between activities, patiently waiting to see what we were going to do next. I think I can partly attribute this to their teacher, however. Ms. Cohen expected them to be on their best behavior at all times, raising their hands instead of calling out. I observed her getting stern with the children if she felt their behavior in music class was at all inappropriate. She also told me that if I ever had a problem with a child misbehaving, I should not hesitate to give the child a book and send him to the reading area. This is not to say that the children in the *Text Class* did not have boundaries in their classroom, but it seemed that their teacher was not quite as firm with them.

The children in the *Text Class* also seemed more interested in the toys, sometimes lost in their own world of play, paying little attention to what I was doing. The children in the *No Text Class*, on the other hand, while they too enjoyed the toys, typically appeared to be more engaged and interested in the music and what I was doing. These differences in class dynamics and child personalities need to be considered when comparing the behaviors of these two classes and drawing conclusions regarding the Text/No Text issue.

A Glimpse at a Typical Music Class

Since the data for this study were collected during music classes, an understanding of what happened in a typical class might illuminate the results of the study. The following is a picture of what a typical music class looked like, with some examples of activities I often included and resulting child responses. Each 30-minute class contained the *Hello* and *Goodbye Song*, a movement activity with recorded music

(*Move & Freeze* or *Scarf Dance*), and generally seven other activities. This particular description involves observations from the *No Text Class*, but a similar scenario could occur in the *Text Class* as well, with the addition of text to the songs and chants.

When I arrive, some children greet me, "Hi Miss Kristen," while others eagerly alert one of the teachers that "Miss Kristen is here!" I carefully maneuver my large white tote filled with toys over to my designated spot on the carpet, and then proceed to set up for class. The children are spread out at stations throughout the classroom, engaged in the overwhelming fun that is free playtime.

> Most of the children are busy scooping and pouring birdseed in the deep sensory table, using various sized spoons, shovels and cups. Ethan and David play in the tent in the "Hibernation Station" for a bit before proceeding to the nearby kitchen center. They make some pizza, which Ethan douses with hot sauce before offering to David, who has already made his way over to the Lego table (*No Text Class*, Week 6, field notes, 11/9).

When it is time for music to begin, the teachers ask the children to stop what they are doing, clean up and come over to the carpet.

Once the final stragglers have found a seat, I flick my "A" and "D" tone bars and stick up both my arms, beginning what I refer to as the "dominant-tonic exchange." Some children join in this movement with me, while others stare straight ahead waiting to see what I will do next, and still others quietly talk to their neighbor, still in play mode. I sing the "A," or 5th scale degree (dominant) pitch repeatedly, "bum ba da dum bum" with the typical rhythm I use,  , then touch both hands to the floor. Most of the children beat me to it and let out a "bum," attempting to supply the tonic pitch. I echo one

of the attempts I hear, followed by an accurate tonic on "bum," causing other children to imitate me and give another "bum." I repeat this procedure a few more times as a way to focus the children before we began and to encourage some responses from them early in the class. This gets the children excited and elicits some different vocal sounds.

> When we tap our hands on the ground for tonic, Taylor again does a sort of rough sing on "baalluum" while simultaneously lunging forward on her hands and knees, singing a flat tonic. I sing her pitch in a similar voice and then go up to my tonic. Ethan, Ella and Taylor all roar at me in close succession, leaning forward on their hands on knees like lions (*No Text Class*, Week 3 video transcript, 10/18).

Music class formally begins with the *Hello Song*: "Let's sing hello to _____, hello hello hello..." I insert each child's name into the song one by one, moving with flow while I sing and waving hello with each greeting. Some children imitate my continuous flow motion and wave along with me, while others choose to watch. A couple of children join in on the repeated "hello hello hello" part, though they are in a speaking voice.

The next activity of the class is "making soup." The children each get an opportunity to suggest an item to add to our big pot of soup. After adding each new ingredient or two, I sing *The Wind* while we stir the soup. This activity focuses on continuous flow motion and emphasizes dominant-tonic as well.

> Every time we picked up an ingredient and dumped it in the pot I sang dominant, then waited and sang tonic. The children enjoyed doing this, often attempting to sing dominant even before I did, and tonic when it dropped in the pot (*No Text*

Class, Week 4, field notes, 10/25).

The children enjoy this activity, suggesting a variety of soup ingredients ranging from strawberries or noodles to snakes, Play Dough or a bear, and tasting our soup along with me at the end.

I reach into my white tote of toys and pull out a large green bag with a purple drawstring. The children immediately realize what it is, and there are excited yells of "I want blue, I want red, I want purple..." I remind them that they will get whatever beanbag I take out of the bag and they seem satisfied with what they receive. I ask Jacob, "Where can we put the beanbag first?" He places his beanbag on his head, smiling up at me. I say, "Ok, can we all put our beanbag on our heads like Jacob?" I begin singing *My Pony Bill* and moving my upper body with flow and many children imitate me. At the end of the song I sing dominant and dump the beanbag off my head and onto the floor. The children do so along with me, and some attempt to sing a soft tonic as their beanbags land. I continue asking different children for suggestions and repeat the song. In between a couple of repetitions, I sing tonal patterns on "ba" in Minor tonality, such as "La Ti Do" or "La Si La," giving the children an opportunity to echo me before moving on to a new one. At the end, I go around the circle with the green drawstring bag, holding it open in front of each child so they can deposit their beanbag.

I say, "Ok let's stand up, we're going on a train ride!" The children stand up with me and I can hear a few stray "choo choos." We march around in a circle while I chant *Clackety Clack.*

After doing a "regular" train, I suggested we do a "baby train" and demonstrated little, light steps and chanted in a high-pitched voice. The children thought this

was funny, and many joined in with me in a high-pitched voice. Next I did a big train with big heavy steps and a very deep voice (*No Text Class*, Week 4, field notes, 10/25).

I chant a two beat Triple meter rhythm pattern on "ba" in a deep voice while marching forward. From across the carpet, Taylor echoes my pattern in the same voice, and then chants her own pattern. I chant a different pattern and Sarah attempts to echo it, but it is not the same. I began the chant again and we go on one final train ride.

I go over to the tote and take out the bag of scarves, handing one to each child. Some children begin playing with their scarves: blowing them in the air, tossing them, or placing them on their head. I turn on the CD and begin moving around the carpet, swirling my scarf around. The children quickly begin playing or dancing with their scarves.

Taylor, Chrissy and Ella are doing ballet, lifting one leg up while they gracefully swish their scarf through the air (*No Text Class*, Week 8, field notes, 11/22).

After a few minutes, I ask the children to have a seat back where they were and turn off the CD player. I go around with the scarf bag and allow each child to roll his or her scarf into a ball and stick it into the small bag.

I dig through the plastic tote once again and emerge with the children's favorite toy: the egg shakers. Ella sees the clear plastic box with the purple lid and claps her hands, exclaiming "Eggs, Eggies!"

As soon as the children get their eggs they shake them in the air, tap them together, or hold them in their hands while rolling their hands around each other in circles (*No Text Class*, Week 6 video transcript, 11/9).

I begin shaking my eggs to the macrobeat while singing *Pickles and Pie*, and the majority of the class does so along with me, though not to the steady beat. Some children continue their rolling or tapping from earlier. Ella attempts to sing along with me and sings one fragment accurately, and Chrissy also attempts to sing along in her high singing voice. At the end I shake my eggs in the air and sing dominant, then touch them to the ground. Annabelle sings a very soft, in tune tonic as she taps her eggs on the ground. I ask Taylor what we can do with the eggs next and she says "Our head." The children tap their head along with me as I begin singing the song again. Each child gets a chance to suggest a movement for a repetition of the song before I collect the eggs.

At the end of the class I begin singing the *Goodbye Song*: the same melody as the *Hello Song*, but with "goodbye" substituted for "hello." Some children move with flow like I am and wave to each of their classmates as I sing their name. At the end of the song I wave goodbye to myself and tell the children I will see them next week.

As I get up to gather my things, Chrissy says, "Bye Miss Kristen," then Ella waves, saying "Byeeee" in a silly voice, followed by Taylor who says "Byeee," also in a silly voice (*No Text Class*, Week 6 video transcript, 11/9).

CHAPTER V

Data, Analysis and Interpretations

Children's Behaviors

In coding the field notes and video transcripts, I identified 20 distinct types of child behaviors in the context of music class. The child behaviors or codes that I will focus on for data presentation and analysis purposes are those that I perceive as musically meaningful or relate specifically to the use of Text or No Text. Through analysis of these codes, four content categories emerged: *Tonal*, *Rhythmic*, *Expressive*, and *Verbal/Vocal* (see Figure 1). *Tonal* behaviors include some form of singing, while *Rhythmic* behaviors include both chanting and beat movement. *Expressive* behaviors are characterized by movement without an emphasis on beat: either flow or some form of creative movement. The *Verbal/Vocal* category contains verbal, speech-related behaviors, as well as vocal behaviors with an emphasis on sound experimentation, such as vocal sounds or the use of different syllables.

Categories also emerged based on the nature, or context of the behavior: *Independent* or *Dependent*. A *Dependent* behavior is generally a direct result of something the teacher or another child does, and was typically a response to or imitation of another person. This includes singing along with a song, echoing a rhythm pattern, or imitating a vocal sound. In other instances, a child's behavior was not a direct result of another person, but rather a response to a class song or activity. This could include a child verbally responding to the song text or moving expressively to the recorded music during *Scarf Dance* or *Move & Freeze*. An *Independent* behavior is one that the child exhibits

without the influence of a child or teacher behavior, and is not a direct result of something in the music environment. This includes spontaneous independent singing or chanting, or in some cases, movement. I will describe each type of behavior, providing examples from the data, and then discuss any differences or tendencies observed between the *Text* and *No Text* classes.

Figure 1. Child behaviors organized by content and context

	Tonal	**Rhythmic**	**Expressive**	**Verbal/Vocal**
Independent	• Spontaneous Independent Singing	• Spontaneous Independent Chanting • Movement	• Movement	• Vocal Sounds • Syllables • Speech Babble
Dependent	• Simultaneous Singing • Continuation of Simultaneous Singing • Alter a Song • Tonal Pattern Response • Dominant Response • Dominant Anticipation	• Simultaneous chanting • Continuation of Simultaneous Chanting • Rhythm Pattern Response • Movement	• Movement	• Vocal Sounds • Syllables • Response to Song or Chant Text

Independent Behaviors: Tonal

Spontaneous Independent Singing

Spontaneous independent singing involves a child singing something alone in a silence, without an immediate, direct stimulus. This singing included tonal patterns, a single isolated or repeated pitch or alternation between two pitches, an original tonal fragment or babble, or fragments from class songs. I observed this type of behavior in various silences during dominant-tonic exchanges, during pattern instruction, between song repetitions or activities, as well as at the start and conclusion of class. On a few occasions, I came over to the circle and a child was singing something alone before class even began, perhaps anticipating the start of music class. For example, in the *No Text Class*, Taylor sang "ba" on her own pitch, which encouraged the rest of the class to join in with various repeated "ba's" on different pitches.

While the independent singing often occurred in a silence during a particular activity or immediately following a song, it did not appear to be a direct result of these musical stimuli. In about half of the cases, a child's independent singing related to the tonality, keyality or meter of the preceding activity. The remaining times, the child was in a different tonality, keyality or meter, or there was not a strong tonal or metric structure to his or her singing. With the *Text Class* in particular, I observed children attempting to sing class songs in silences, but children in both classes also sang unrelated material.

I observed children singing tonal patterns independently, outside of tonal pattern instruction. In the *No Text Class* for example, Jacob sang a repeated scalar tonal pattern following *Scarf Dance*.

I ask Jacob to go over next to Chrissy because that is where he was. As he goes to

sit down he sings "la la la la la la" on pitches that form the pattern "Mi Re Do" twice on a repeated rhythm pattern (*No Text Class*, Week 10 video transcript, 12/6).

The children also sang single, isolated or repeated pitches at the start or end of class or between activities. Sometimes these pitches fit into a previously established tonality, while other times they did not. I observed a unique alternation between dominant and tonic by a child in the *Text Class* one week.

> Charity held up and shook one of her eggs, singing dominant, followed by the other egg, singing tonic. The pitches were not quite in tune, so I echoed her movement on the correct pitches, at which point she gave a new pattern, alternating between the two eggs (the "tonic egg" and the "dominant egg"). Then, she started making up a melodic pattern of about 8 pitches, with many of the pitches repeating. I echoed her pattern, shaking the eggs along as she did, but she paid no attention, simply going on to a new pattern (*Text Class*, Week 2 field notes, 10/12).

I also observed a few examples of children singing short independent fragments consisting of dominant and tonic pitches with words. One child in the *No Text Class* sang her classmates' color suggestions during our "painting the floor" activity.

> I asked Stephanie what she would like to paint with, she responded "Red," and then Taylor responded "Pink." Ella sang. "Red Pink" on dominant-tonic, like I typically do (*No Text Class* Week 9 field notes, 11/29).

In the *Text Class*, a child sang the word, "Good-bye" on pitches very close to dominant-tonic while I was packing up to leave at the end of music class. On another occasion, a

child voiced his objection to standing up again for an activity.

> I asked them to dance back to their spot again and have a seat. Once they were settled I flicked the dominant tone bar and asked them to stand up again...Ben sang "Not A-gain" on pitches close to "So So Do." A few other children imitated him right after he said this, also in a singing voice, and very close to dominant-tonic (*Text Class* Week 5 field notes, 11/2).

When a child sang his or her own melodic fragments, I could occasionally identify specific patterns in a tonality. In other instances, this singing was more of a tonal babble, lacking structure. I also noticed that this independent singing typically lacked a strong rhythmic feel or sense of meter; it was free babble with a tonal emphasis. There were only a few instances during which I was able to identify a specific rhythm associated with a child's singing. The melodic fragments I observed were typically short: as little as three or four, but no more than about eight pitches in length. When I could decipher specific patterns in a child's melodic fragments, there was typically some type of repetition, either with specific pitches or short patterns. I observed independent singing that resembled the following patterns: "So Mi So Mi Mi Re Do," "So So La La La Fa Fa So," "So So Mi So So Mi So So," "Do Re Mi Fa Fa Fa," and "La Ti Do Re Mi Mi Mi Re." As illustrated by these examples, the tonal fragments rarely ended with a sense of tonal completeness or resolution. There were only a handful of instances during which a child ended on a pitch that would be considered the resting tone.

I also observed children attempting to sing one of the songs that I had previously sung, typically while I was collecting or distributing toys, or between repetitions of the song. This type of spontaneous independent singing occurred mainly in the *Text Class*.

This might be because the songs were more accessible or more memorable to the children because of the words. The words might have given the children something more tangible to latch on to, so while their melody may not have been completely accurate, they were able to focus on the words and still sing something that resembled the melody.

> I begin passing out the eggs, and Ally sits holding onto her feet with her knees up, singing *Sally Go Round the Sun*, not quite accurately or in a singing voice, but recognizable. The first section in particular is similar. I look towards her and she gives me a big toothy grin, and then completes the song (*Text Class*, Week 3 video transcript, 10/19).

A child rarely sang the whole song from beginning to end. It was usually just one or two phrases before stopping.

In the *Text Class*, the children typically attempted to sing the songs with the text, though I observed a few instances during which a child chose to sing on a neutral syllable instead.

> After the song is over, Charlie is leaning forward and playing with his eggs on the floor and I can hear the first part of *Sally Go Round the Sun* on "whooo," though not quite in a singing voice (*Text Class*, Week 3 video transcript, 10/19).

Since I presented the songs on a neutral syllable in the *No Text Class*, the children sang this way when attempting a class song.

There was one instance during which several children attempted to sing a song we had done in the last activity. I had just distributed the beanbags and was about to sing a new song for the first time.

> I suggested we put the beanbag on our shoulder first, and the children did so. Ella,

> Taylor and Chrissy all started singing something that resembled *Round and Round*. When their singing gradually faded away I playfully asked, "How do you know what song I'm going to sing?" and they laughed (*No Text Class*, Week 5 field notes, 11/1).

In terms of the text condition I did observe some tendencies within the individual classes. For one thing, the children in the *No Text Class* rarely sang independently with words. There were just a few exceptions, including a time Annabelle started singing the *Goodbye Song* (since that was a song I always sang with words) before me, Ella spontaneously singing on a neutral syllable then singing the text, "1 2 3 4 5 6," Ella singing "Red Pink" on dominant-tonic, and Taylor beginning her own song with a short phrase before mumbling on neutral syllables. Otherwise, the children in the *No Text Class* always sang with some sort of neutral syllable. This is probably due to the fact that the songs I sang did not have words, so I was providing a "No Text model" for the children. More importantly, in order to incorporate text, the children would have to create both a melody and words simultaneously, or add words to a class song that is normally sung on a neutral syllable.

When the children in the *Text Class* chose to sing songs that I sang in class, I expected that they would include the words just as I did in my model. That being said, it was interesting that children chose to attempt a familiar song without words on a few occasions. Perhaps the children were not certain of the words but did have a concept of the tune, so they chose to leave the words out. This is further supported by the instances during which a child began a song with the words and then changed to a neutral syllable. There were a few times when a child would mix up the words, perhaps repeating a phrase

more than once or singing the words in a different order. I also observed children purposefully changing the words. One day, as I came around to collect the beanbags, I saw Tessa hitting her hand with her beanbag and singing something that resembled the song I had just been singing.

> She is singing a melody very close to the tune of *Sally Go Round the Sun*: almost the exact pitches and rhythm, but with different words. From what I hear it is "I smack my hand, I smack my hand, it hurt a lah, ah ah ah ah..." then fading away (*Text Class*, Week 10 video transcript, 12/7).

I found that the children in the *Text Class* attempted to sing class songs more frequently than original singing or tonal babble, while just the opposite was true of the *No Text Class*. When the children in the *Text Class* did sing their own material, they would use various neutral syllables, aside from the two aforementioned examples of children singing with words on dominant and tonic pitches. This is not surprising, since the children would have to add their own words to their independent singing in order to use text, while in the case of class songs the text was already provided for them.

Independent Behaviors: Rhythm

Spontaneous Independent Chanting

As with spontaneous independent singing, spontaneous independent chanting involves a child chanting something alone in a silence, without a direct stimulus. The children chanted rhythm patterns, original rhythmic chants or babble, or repeated macrobeats[2]. I observed these behaviors in silences between song repetitions or activities, as well as during dominant-tonic exchanges in a few cases. In both classes, I observed

[2] Macrobeat refers to the large beat associated with music, typically referred to as simply "the beat," while microbeats are the subdivisions of the macrobeat into two in Duple meter or three in Triple meter.

children who chanted in a steady meter as well as those who were rhythmically babbling or not steady the entire time. When a child's chanting was in a steady meter, sometimes it was in the same meter as the song or chant I had just performed, while other times it was in a different meter. In addition, I frequently observed spontaneous independent chanting that contained rhythm patterns that I typically used during rhythm pattern instruction (particularly 2-beat macrobeat and microbeat patterns). It is possible that they learned these patterns through pattern instruction, be it intentionally or unintentionally, and subsequently used them in their own chanting.

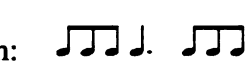
Overall, the children used a variety of neutral syllables in their spontaneous independent chanting, either exclusively or in combination. This includes "ba," "de and da," "chi and cha," "chee," "ha," "ah," "oww," and "bum." In the *Text Class*, the children often chanted on "pop" during the *Popcorn* chant activity. A child might yell a single "Pop!" at the end, which caused other children to do the same or make up their own short rhythm patterns. I would sometimes perform rhythm patterns on "pop," to encourage their independent chanting. I observed a child incorporating a word into an independent chant on one occasion.

> Ally responds, "Two pink!" when she receives her pink eggs. She shakes them and chants "Pink pink pink" aligned with her shaking, stops for a few seconds then continues her "Pink Chant," chanting "Pink pink pink, (rest) pink," with each "pink" on a steady macrobeat (*Text Class*, Week 10 video transcript, 12/7).

When the children chanted a single rhythm pattern, this was typically at the end of a chant. I would usually echo this child's pattern and then give him or her a new pattern, causing other children to join in with their own patterns or imitation attempts. A couple

of times I noticed children in both classes echoing each other's independent patterns and making up new ones rather than echoing me.

As with the spontaneous independent singing, I noticed some examples of repeated patterns in the children's chanting.

> Annabelle chants, "ba ba ba ba ba ba ba ba ba ba" in Duple meter and a similar tempo to the song we just did, on the rhythm: 
>
> (*No Text Class*, Week 6 video transcript, 11/9).
>
> Renee has her pink scarf on her head, and leans towards her neighbor, chanting "chi chi chi cha chi chi chi cha" on the rhythm: 
>
> (*Text Class*, Week 10 video transcript, 12/7).

The example with Renee is particularly interesting because she used different syllables for the shorter note values ("chi") and longer note values ("cha").

There were two instances in the *No Text Class* during which Taylor and Ella chanted together; one child began chanting and the other quickly joined in.

> After I shut of the CD player and sat down, Ella started chanting in Duple meter, immediately followed by Taylor. They chanted together for about 7 or 8 beats and then laughed (*No Text Class* Week 9 field notes, 11/29).

In this example, Ella's chanting would be considered independent, while Taylor's was dependent since it was a response to another child's behavior.

There were a number of times where Taylor chanted repeated macrobeats in a silence. For example, once after the *Clackety Clack* chant, she continued one of the movements from the song while chanting.

> Taylor keeps pulling the horn and says "chee chee chee chee" to the macrobeat

very softly (*No Text Class*, Week 10 video transcript, 12/6).

I also observed spontaneous independent chanting during dominant-tonic exchanges in the *Text Class*. This typically involved a child attempting to sing tonic, but instead repeating "bum" in a speaking voice. Sometimes this would just be a "string of bums" without a sense of rhythm or steady beat, while other times the children would chant actual rhythm patterns. This was one of those behaviors that quickly spread throughout the class. Once one child started "bumming," others would soon follow. Since there were often a few children doing this at once, with some yelling, it was difficult to hear who was chanting patterns and who was just speaking "bum" repeatedly.

There were not any concrete differences between the spontaneous independent chanting I observed according to text condition. There were numerous examples of spontaneous independent chanting throughout the weeks in both classes, and I did not observe many instances of children in either class chanting with text. The only thing I might be able to attribute to the text condition is that there was one time that Renee in the *Text Class* attempted the entire chant in a silence. I was waiting for a child to suggest a new movement, and Renee, perhaps becoming impatient, decided to begin *Popcorn* herself.

> She got through the whole chant, with words, but without a steady pulse. The tempo was a bit fast and some parts were rushed as well, but she went from start to finish (*Text Class* Week 4 field notes, 10/26).

Perhaps the text, which is quite repetitive, made the chant more memorable so she was able to recall it without my chanting. This was the only time I observed a child performing an entire chant in a silence, and, even so, it lacked a steady tempo and meter.

Movement

A beat movement initiated by a child is considered independent rhythmic movement. This may include movements during independent spontaneous singing or chanting, or during a song or chant in an activity. There were some instances during which a child moved to a steady beat, but this movement typically wavered between a steady and unsteady beat. There also were many examples of rhythmic movement that was not steady at all.

I observed a few examples of beat movement during the children's spontaneous independent singing or chanting, including marching, tapping the floor, or clapping. Children also chose to perform their own beat movements while I was singing or chanting. Although my music making may have stimulated the movement, the child created the movement rather than imitated it. One day, Ally was making a "brum" sound during the dominant-tonic exchange at the start of the class, and once I started singing the *Hello Song*, she continued with this sound while rocking from side to side and tapping her hands on the floor, alternating to the steady beat for a brief time. In the *No Text Class*, Stephanie chose to clap along with a song instead of imitating my movements, aligning with the steady beat for the majority of the activity.

Children from both classes sometimes combined a repeated vocalization with beat movement. For example, in the *Text Class*, Melissa tapped her sticks while singing "dum" repeatedly on a pitch lower than tonic. Another week, Renee tapped her feet on the floor, alternating to a steady beat while chanting "bum" continuously. In the *No Text Class*, Taylor tapped her sticks on her toes and said "ow" repeatedly to the macrobeat, causing a few other children to join in. The following week, she said "chee" to the

macrobeat while taking baby steps and pretending to pull the train horn, also to the beat, at the end of *Clackety Clack*. Later in that class, she repeated "tap" with each tap of the egg shakers on her shoulders. This behavior is notable because the children chose to coordinate their voice with their movements, which is something that I never demonstrated. While the children were not always steady with their beat movement and chanting, they attempted to coordinate the voice with a movement in a repeated pattern.

Independent beat movement was not a common behavior among the children in either class, and I did not perceive any differences between the *No Text Class* and the *Text Class* children. Even so, it was interesting to see how the children chose to incorporate their own movements into spontaneous independent singing and chanting and within teacher-led activities.

Independent Behaviors: Expressive Movement

Any other type of independent movement to music that does not emphasize beat is considered expressive. I observed such expressive movements in conjunction with patterns, and more frequently, with independent singing and chanting.

Children combined expressive movements with patterns in the *No Text* class on a few occasions. One time, Chrissy echoed a rhythm pattern while jumping up and down, and another time Taylor echoed a rhythm pattern while "walking across the carpet" with her fingers. During tonal pattern instruction one day, Chrissy was repeatedly lifting her scarf over her head slowly and then bringing it down again, a movement she continued while echoing a pattern.

During spontaneous independent singing or chanting, the children sometimes

performed motions associated with a specific song, or flow with the body or scarves. In both classes I observed a child attempting to sing one of the songs, *Bubblegum* in a silence, with the song movements.

> At the end, Daniel remained standing and pretended to "grow" and "pop," kind of mumbling quickly, but I could not hear any words. It seemed like he was going through the song, at a fast rate, with the motions and some verbal sounds (*Text Class* Week 8 field notes, 11/21).

Taylor did a similar type of mumbling and motions with this song in the *No Text Class*.

> I stay down on the ground and Taylor begins "blowing up" again, saying "ba da da," in a type of mumbling voice, laughing, and the other children join her, making their own sounds and doing the movements (*No Text Class*, Week 10 video transcript, 12/6).

Sophia incorporated expressive body movements with her independent singing on one occasion.

> While I am collecting the eggs, Sophia is singing very softly, clapping, rocking from side to side, or moving her arms a bit like she is doing "motions" for her song (*Text Class*, Week 10 video transcript, 12/7).

Aside from this example, the only other type of expressive movement I observed with spontaneous singing or chanting was a child moving a scarf with flow. This occurred a number of times, either in silences between songs or as soon as I gave a child a scarf for *Scarf Dance* or some other activity.

> Ally holds out her scarf, open in a square, and moves it up and down as she chants "da da da" in a silly voice. The first thing she chants is a four beat Triple pattern,

then she goes on with babble that is not as rhythmic (*Text Class*, Week 6 video transcript, 11/9).

Taylor is singing a melody on "do, di and da" syllables (sounds like "So So So La So Mi Do") in Triple meter, and sways her scarf along with her singing once she gets it (*No Text Class*, Week 10 video transcript, 12/6).

As with independent rhythmic movement, I did not observe any differences in the types or frequency of expressive movements between the two classes. I found it interesting that this type of movement was mainly limited to reproducing movements I introduced or flow movement with a toy. There were only a few examples of a child incorporating expressive movement during independent singing or chanting that did not involve a scarf. Perhaps the toy encouraged this type of flow movement, and if a child had it in his or her hand it was only natural to swish it through the air while singing or chanting.

Independent Behaviors: Verbal/Vocal

Vocal Sounds

The children exhibited independent vocal sounds at the start or end of class, in silences, during dominant-tonic exchanges, during pattern instruction and during songs or chants. I have divided vocal sounds into two categories: sound effects and vocal manipulation. Sound effects include anything from a "shh" sound urging a classmate to quiet down to a clucking noise, a cat meow, or a roar.

When we tap our hands on the group for tonic, Taylor again does a sort of rough sing on "baalluum" while simultaneously lunging forward on her hands and knees, singing a flat tonic. I sing her pitch in a similar voice and then go up to my

tonic. Ethan, Ella and Taylor all roar at me in close succession, leaning forward on their hands on knees like lions (*No Text Class*, Week 3 video transcript, 10/18).

A child might also make some sort of sound effect to accompany toy play or an activity.

Renee says, "Lets try our soup," and pretends to dip her spoon in and makes a "slurp" sound as she brings it towards her mouth (*Text Class*, Week 6 video transcript, 11/9).

There were some sounds, including the roar, which returned throughout a class period or even between weeks. In the *No Text Class*, David often did what I refer to as a "blip blip sound," moving his tongue in and out of his mouth like a snake while humming, resulting in a subtle sound effect. A few times he provided a tonic response with this sound, humming the pitch. In the *Text Class*, Melissa made a "brrr" sound by vibrating her lips together as if she were shivering, while humming. Later in the class, she adapted this sound by strumming her index finger across her lips. Throughout the course of the study, other children made this sound as well, sometimes as "brumm" in response to dominant in the dominant-tonic exchange, or simply for the sake of producing a fun sound.

Any time a child plays with his or her voice by manipulating the quality (how high it is, how low it is, or the overall sound quality), I consider it vocal manipulation. I observed children using a high-pitched voice in combination with different syllables such as "chi," "bee" or "mi," either in isolation or while singing or chanting.

Ally responds to each pattern with "bah bah" (two macrobeats) in a high-pitched voice, telling Renee, "Like a baby," and laughing (*Text Class*, Week 6 video

transcript, 11/9).

> For the final time I suggest tip toeing around like baby horses. Taylor simultaneously attempts to sing in a very high-pitched squeaky voice (more speaking than singing) and Ella does the same with intermittent high-pitched squeaks (*No Text Class*, Week 3 video transcript, 10/18).

The children also used very deep voices, though it was not as common as the high squeaky voices. Taylor enjoyed using a low roar-type voice while chanting.

> When I was chanting *Noble Duke of York*, Taylor was doing this roar/monster-type voice. I imitated her voice, which caused a few others to join in upon seeing how much fun she was having (*No Text Class*, Week 2 field notes, 10/11).

She also used a rough "roar-type" voice while simultaneously singing, especially in the opening *Hello Song* on the repeated "hello hello hello" part. As a result, she was not typically in a singing voice.

I also observed children singing, chanting or speaking with silly-sounding voices. Children sometimes used a silly voice quality when chanting or singing along with me or when conversing with another child.

> I say, "What do you think Taylor?" and Ella, still sticking out her tongue, says "Tay-loooor" in a silly voice (*No Text Class*, Week 6 video transcript, 11/9).

The children made different sounds in a head voice, as well as vocal slides. The head voice sounds were typically spontaneous or in silences, on the syllables "ahh" "whoo" "oooh" or "choo." A child would make one or two utterances and that would be it. On occasion I also heard children produce a slight downward or upward slide in a head voice.

> Melissa shakes her eggs and taps Jack's eggs and "roars." He laughs and shakes his back, reciprocating the roar. They continue with shaking and tapping each other's eggs, but the roar changes to a "whooo" or "yahhh" in a head voice (*Text Class*, Week 3 video transcript, 10/19).

The children performed vocal slides in conjunction with toy play on a few occasions. This is something I typically modeled with scarves, but children would also initiate this sound while tossing the scarf on their own or while dropping the egg shakers on the floor.

I see these vocal sounds as the children's initial experimentation with manipulating their voices so that they might eventually find their singing voices. While I heard many of the children using their singing voices throughout my time with them, none of the children were completely consistent, and they often would waver between a singing and speaking voice even within the same activity. The children did not have complete control over their vocal mechanism yet, and perhaps the vocal slides and head voices in particular are tools for developing this. Fredrickson (1994) and Swears (1985) suggest that children experiment with their voices in an attempt to discover new sound possibilities and develop future singing skills.

In practically every class I observed at least one instance of a child playing with the highness or lowness of his or her voice through chanting in the *No Text Class*. While I saw it a few times in the *Text Class*, it was not nearly as frequent. There were more instances of children chanting (including spontaneous independent, simultaneous and rhythm pattern responses) in the *No Text Class* in general, so this resulted in more opportunities for voice manipulations. Aside from this particular issue of high/low voices, I did not find any differences in the use of vocal sounds between the two classes.

The children in both classes produced various sound effects and played with the quality of their voices, and it appeared to be something they enjoyed.

Syllables

One concept that carried through both musical and non-musical behaviors was the children's use of different syllables. Sometimes it would be in conjunction with some sort of musical response, such as dominant-tonic exchange responses, independent and simultaneous singing or chanting, or tonal and rhythm pattern responses. Other times, children used syllables in conjunction with a voice manipulation as mentioned previously in the *Vocal Sounds* section, or spoke the syllable as a form of verbal play.

The children frequently experimented with different syllables during dominant-tonic exchanges in particular. While I typically began by singing dominant on the syllables, "bum ba da dum bum," the children responded with a variety of syllables, perhaps repeating their syllable several times. Sometimes these attempts were in a singing voice and in tune, while other times they were inaccurate or in a speaking voice.

> Melissa taps the floor in front of her, singing "bop" close to tonic (*Text Class*, Week 3 video transcript, 10/19).
>
> Annabelle sings tonic on "bum" at the same time as me, then repeats it on "dum," and again on "dum ba bum bah," smiling, with her pitch wavering a little, but close to tonic (*No Text Class*, Week 6 video transcript, 11/9).
>
> When I touched my hands on the floor, there was no tonic response at first, until Taylor gave a "boom boom," though not in a singing voice (*No Text Class*, Week 9 field notes, 11/29).
>
> If the children simultaneously or spontaneously sang or chanted, they might

choose a specific syllable of their liking. Some syllables I observed in conjunction with singing or chanting were: "da," "ya," "chi," "bee," "na," "blu," "ha," and "ah." Sometimes a child would use the same syllable for the whole performance, while other times the child might combine syllables, without one particular syllable dominating. On several occasions, I chanted a rhythm pattern on "ba" and a child responded to the pattern with a different syllable, such as "bee," "da" or "dee," but this was not a frequent occurrence.

I also observed instances of children speaking syllables or making vocal sounds with a particular syllable during silences, dominant-tonic exchanges, or pattern instruction. In these instances, it seemed that the child was playing with the sound as a form of verbal play or experimentation, or using it to accompany some other type of play.

> Taylor hits her beanbag saying "yah" with each hit (*No Text Class*, Week 3 video transcript, 10/19).
>
> Tessa hits her mouth with her hand and says "glick glick" and laughs (*Text Class*, Week 10 video transcript, 12/7).
>
> Chrissy then leans forward and says "na na na na na" in a silly voice, then "paws" a hand in the air ands says "neow neow" as Jacob does another single "meow" (*No Text Class*, Week 10 video transcript, 12/6).

Sometimes these syllables would reappear in future weeks, but this did not happen very frequently. One child who often used the same syllable was Jacob in the *No Text Class*. Early in the study he used a high-pitched "mi mi" sound during a dominant-tonic exchange. He continued using this sound throughout the study, sometimes on tonic or dominant pitches, but generally just making a high-pitched vocal sound with it.

I did not observe a difference in the children's use of syllables between the classes, but since the *No Text Class* tended to respond to patterns and simultaneously sing and chant more frequently, there were a larger variety of syllables used in that class. I view the children's use of syllables as more of a verbal play that is combined with singing or chanting at times, than a purely musical behavior. Using a syllable during dominant-tonic exchanges or independent singing or chanting is a way for the child to interact with music in a playful way, giving him or her an additional element to manipulate and as a means of exerting agency. When a child uses a nonsense syllable with a silly sound or voice, he is experimenting with his voice in the music environment, which could possibly translate to experimentation through music at a future time. While playing with syllables may not be an overt musical behavior, it may contribute to a child's overall desire to play with music and participate in this informal music environment.

Speech Babble

I observed just a handful of examples of speech babble or language play for both classes combined, and it was primarily in the *No Text Class*.

> While I was coming over to the circle to begin, Ella was in the middle of babble talk, and Taylor decided to join in.
>
> Ella: "...ee yi yi..."
>
> Taylor: [laughs] "...ah yee, ta ah ee.."
>
> Ella: " da ku"
>
> They both continued babbling on ahh, eee and ku while I hit the dominant then tonic tone bar to signal the start of class (*No Text Class*, Week 3 video transcript,

10/18).

In the *Text Class*, a similar scenario occurred when Ally said something on nonsense syllables and Renee imitated her.

> Ally says something to Renee that sounds like "yo yo mi ko," then laughs. Renee echoes this phrase back to her with a tonal inflection to the phrase (*Text Class*, Week 6 video transcript, 11/9).

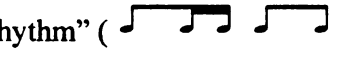
Considering the age of these children, I expected to see more instances of independent speech babble or play with language. I was particularly surprised that there was not more of this play with language in the *Text Class*, since language was a component of the music making. There were however, a few examples where a child took a word or phrase from the song or chant and repeated it or played with it. This will be discussed in the *Dependent Behaviors: Verbal/Vocal* section.

Dependent Behaviors: Tonal

Simultaneous Singing

Any time a child attempted to sing along while I was singing either dominant in a dominant-tonic exchange, tonal patterns, or a song, I considered it simultaneous singing, regardless of the accuracy or similarity of their singing. In fact, I noticed that in the case of songs, the majority of the time, with the *No Text Class* in particular, it seemed a child was more interested in his or her own singing than what I was singing. I observed varying degrees of accuracy, including accurate or close fragments, similar contour, similar overall, and completely different, which I often considered a child's own tonal babble. Through my coding and analysis, I further qualified the responses in terms of voice quality (singing, speaking, or wavering between the two, silly voices/sounds) and the

length or continuity of singing (continuous or intermittent). I also noted the child's use of text where applicable.

When simultaneously singing during the dominant pitch of a dominant-tonic exchange, the children would sometimes attempt to come in with me right from the beginning, putting their hands up and wiggling their fingers. Most of the time, however, the children joined in after I began singing, towards the second half of my "dominant rhythm" ().

> I sing dominant, and the children gradually join in, singing different "bums," some in a speaking voice, some yelling, and some close to a singing voice. I do not hear any dominants or tonics though (*Text Class*, Week 6 video transcript, 11/9).

As evidenced by the above example, the accuracy of responses varied between the children. In some instances, a child sang the correct pitch, but in many cases he or she was inaccurate or not in a singing voice. While the rhythm was never identical to what I did, some children would perform the second half accurately or use their own rhythm.

As for tonal patterns, there were examples in each class during which a child attempted to sing along rather than echo. In fact, in the first week, no one in the *No Text Class* echoed me, with children attempting to sing each pattern with me instead. In a few cases, a child would accurately imitate me simultaneously, while at other times the child was not accurate. Their singing would not always begin at the start of my pattern, either. In both classes, children joined me for the third and final pitch of the pattern, at times holding it out past my singing.

I sing another pattern and Chrissy again sings along in the high voice, continuing

to sing after I have finished. Ethan attempts to sing along, ending on a pitch close to tonic (the pattern was "Mi Re Do"), and holding it out as a hum. Ella also attempts to sing along with me, singing something close to the pattern (*No Text Class*, Week 6 video transcript, 11/9).

The final and most frequently observed instance of simultaneous singing was during actual songs. I saw continuous and intermittent singing in each class, though there was much more continuous singing in the *No Text Class*. If a child sang continuously, it does not necessarily mean he or she sang through every repetition of the song in that activity; this rarely occurred. A child who sang intermittently might sing for a small section of the song, and then stop before coming in, sing just the beginning or ending fragment of a song, a held note, the last note in a song, or a specific word or repeated word.

> As soon as I start singing the *Goodbye Song*, a chorus of children joins in, most in a shouting voice, but a few audible singing voices, including one that is very close to the pitches and contour for the first time through. The voices gradually die out or simply sing or speak the "goodbye goodbye goodbye" as I go through each child's name-with about 15 children it takes a few minutes (*Text Class*, Week 3 video transcript, 10/19).

I observed varying degrees of accuracy in both classes, as well as among individual children from week to week. I heard accurate fragments frequently, which could include just a small pattern, a short phrase, or the final pitch of the song. In the *No Text Class*, Ella often ended the song on the resting tone with me, even if her singing had been different up until that point.

> There is some soft simultaneous singing from the beginning, I believe coming from Ella. It comes in and out, and is never quite what I am singing, but she ends on tonic with me (*No Text Class*, Week 3 video transcript, 10/18).

I never actually heard a child sing a song along with me that was completely accurate. Ella in the *No Text Class* often had similar fragments, and in the *Text Class* Pamela sang *Sally Go Round the Sun* almost accurately one time, though I did not observe this in subsequent weeks. Since I used a fair amount of repetition from week to week, I expected to hear more accuracy with the children's simultaneous singing as the weeks progressed. However, this may require more than 10 weeks to manifest itself.

There were many instances during which a child sang something completely different from me. I heard this more frequently in the *No Text Class*, though the children in this class sang along more often and continuously, and were louder with their singing in general. Overall, the children in the *No Text Class* sang their own tonal babble along with my songs. I cannot be certain if this was intentional or if they were unsuccessfully attempting to match what I was singing. From what I observed through the study, I tend to feel that my singing prompted them to make music, acting as a sort of music-making initiator. As a teacher, I was delighted to see the children experimenting with music on their own, and I viewed this as a positive effect of informal instruction throughout the study. I wonder whether the children's singing along with me limited the amount of music absorption that could take place, however. Rather than listening to my model, they were making their own music and were most likely focused on what they were doing. While this could be a negative consequence of the children's frequent simultaneous singing, I feel the benefit of making and creating music overshadows any negative

aspects associated with this behavior.

Between classes and even within individual children, there was no clear trend in terms of singing voice use. In one class there would be some children who used their singing voice most of the time, others who used their speaking voices most of the time, and still others who wavered between the two. No individual child was even consistent within a single class period or from week to week. There were children who used very deep voices, and still others who used very high, squeaky voices while simultaneously singing as well. Sometimes Taylor would use silly voices on purpose, causing other children to imitate her. Chrissy took to singing in a very high-pitched head voice early on. This voice returned each week, but eventually she started bringing her voice down to an appropriate range, sometimes just for a short period. At times, Renee and Taylor would get excited and do a sort of "shout-sing" in a calling voice.

These observations concerning the children's use of singing voice concur with the research. In a naturalistic study aimed at observing the behaviors of 4-year-old children, Veldhuis (1985) found that the children's spontaneous singing was more speech-like, often lacking a clear singing-voice quality. According to Welch, Sergeant and White (1998), in early childhood, the distinction between singing and speech is often unclear, perhaps because spoken language is a primary part of the preschool child's intellectual and social development. In addition, young children hear speaking voice models substantially more than singing voice models (Gordon, 1997a). They typically enter school prepared to use language and thus their speaking voices, but not necessarily their singing voices (Welch, Sergeant & White, 1998).

In the *Text Class*, I observed only one example of a child simultaneously singing

without the use of text. One week, following the opening dominant-tonic exchange, the children were doing repetitive "bumming." I went right into the *Hello Song* and Ally continued with her "bums" to the tune of the song, not quite in a singing voice, but with some accurate fragments. She dropped out after the first few repetitions. It is not surprising that I only observed this once. Since the model I provided included text, the children who attempted to sing along were inclined to imitate my model.

There were a couple of differences between the two classes that could be attributed to the use of text. In general, simultaneous singing was much more frequent in the *No Text Class*. In the *Text Class*, there were rarely more than one or two children attempting to sing along, and they seldom continued throughout the entire song or activity. In the *No Text Class*, which was significantly smaller, there were usually at least three children singing along. In addition, while I heard practically every child in the *No Text Class* simultaneously sing multiple times throughout the study, there were many children in the *Text Class* whom I never observed simultaneously singing. The children in the *No Text Class* typically sang louder, clearer and more continuously as well. Perhaps I saw less continuous singing in the *Text Class* because they were trying to "get the words," causing them to come in and out during the song, stopping if they were not sure of the text. Since language was something they interacted with on a daily basis, the children could tell if they were singing the song correctly by looking at the text component of the song. In the *No Text Class* on the other hand, the children did not have words to measure their singing against, so they were often content continuously singing, even if they were not doing the same thing that I was musically.

The focus on getting the words in the *Text Class* often resulted a sort of "mumble-

singing" or speaking. It seemed if a child was not sure of the words, he would softly mumble to himself. I could usually faintly hear the child or see his lips moving, and he did not appear to be using words. Instead, I heard neutral syllables or attempts at words. Sometimes the child would chime in with a word or a short phrase from the song, then resume the "mumble-singing." Eventually a few children became more familiar with some of the songs and could sing more continuously and louder, but there were others who continued this mumbling through all 10 weeks. The majority of the time, from what I could hear, the children were in a speaking voice rather than a singing voice during the "mumble-singing." That being said, it would seem that this particular "mumble-singing" behavior, which was a result of the text condition, encouraged children to use a speaking voice as opposed to a singing voice. Perhaps the children were focusing on the text, so they used their speaking voices. This was particularly evident when a child would chime in loudly with a particular word in a speaking voice during the "mumble-singing." There were children in the *Text Class* who used a singing voice, as well as children in the *No Text Class* who used a speaking voice despite the absence of text, however, so I did not observe a clear and consistent relationship between the use of text and the singing voice.

Continuation of Simultaneous Singing

This type of behavior involves a child continuing his or her simultaneous singing attempts once I have completed the song. This could range from one held out pitch to a short fragment or tonal pattern, a tonal babble or improvisation, or beginning the song again.

> At the end of the repetition, Taylor continues babbling in more of a singing voice, but very high. It appears to be in the same tonality however, with her pitches

being very close to "Do Do Do Do Ti Do Ti La," also in Triple meter like the song (*No Text Class*, Week 3 video transcript, 10/18).

Overall, this was not a common behavior, though I did observe it more frequently with the children in the *No Text Class*. This is most likely due to the fact that they simultaneously sang more frequently and continuously to begin with.

Alter a Song

If a child altered a class song in some way, I considered it a dependent behavior since it generally occurred in the context of simultaneous singing. There was just one example in which a child sang an altered version of a class song at the end of the activity, making it spontaneous singing and thus an independent behavior. However, for organizational purposes, I have chosen to include all the "alter a song" codes in one category. The children altered songs in terms of style and text.

I observed instances of style change through simultaneous singing in both classes, though there were more examples in the *No Text Class*. The majority of the examples involved a child singing a song in a harsher, detached style, while I sang it legato.

> In *Round and Round*, during one repetition Taylor was babbling along, very close to the actual melody but with a much different style. I sing this song very legato and connected, and she sang it more detached and "march-like" (*No Text Class*, Week 2 field notes, 10/11).

There were two text changes I observed in the *Text Class* that appeared to be intentional. One day during the song *Monkey Monkey* (the text begins "Monkey monkey up in a tree..."), Tessa was playing with her sticks in a creative way, which later translated to her changing the text of the song.

> Tessa held her sticks vertically and placed them on the floor in her lap. She moved them back and forth like levers and said, "I'm a robot." After I finished singing the song, Tessa came in, singing, "Robot robot in a tree..." to the tune of *Monkey Monkey*, the song I had been singing. The first part was in tune and in the tonality, but then she continued and lost the tune. After she sang this she laughed (*Text Class*, Week 7 field notes, 11/16).

The same week, Ally joined in with a song in a silly voice, slightly altering the words I was singing to reflect her mood. In *Swinging*, the text begins "When mommy pushes me on the swing, I go up so high..."

> I began singing *Swinging* and moving from side to side. Ally joined in from the beginning, in a silly speaking voice, but with a similar contour. She sang, "When mommy pushes me on the swing, I have so much fun," moving very fast from side to side and laughing (*Text Class*, Week 7 field notes, 11/16).

While this altering a song behavior was interesting, it only happened a handful of times in each class. Perhaps it is an example of experimentation and creativity with music, and in the case of the *Text Class*, words, so I consider it meaningful overall.

Tonal Pattern Response

This dependent behavior includes the children's responses to tonal patterns performed by me on a neutral syllable during pattern instruction. Between repetitions of a song, I would sing a pattern to the group and wait for imitation responses, or sing a pattern to an individual child, perhaps going around the circle with the plastic echo microphone.

Annabelle echoes my pattern, softly but accurately. Ella responds to my pattern,

attempting to echo it, but jumbling the pitches together in a sort of slide. I sing another pattern and Ella responds with a slide from a pitch close to tonic and up, while Ethan sings a loud "bummm" on a pitch close to tonic. I sing "So Do" using a neutral syllable, and Ethan echoes it, though it is not exactly in tune or in a singing voice, as does Derrick, whose response is in tune and in a singing voice (*No Text Class*, Week 6 video transcript, 11/9).

As displayed by the above snapshot of tonal pattern instruction, I observed varying degrees of accuracy in the children's tonal pattern responses. This includes inaccurate echo attempts (completely inaccurate, or in a speaking voice), accurate echoes, similar echo attempts (could be close to the pattern, perhaps just a bit out of tune, or with the same contour but different pitches), a different pattern (either in the tonality or not), or some sort of different response (either a song with words or fragment from a class song, a vocal sound, tonic, or the first or last pitch of the pattern I sang).

As with simultaneous singing, there were children who were not in a singing voice, either wavering somewhere between singing and speaking or completely in a speaking voice. I observed this in both classes, and some children responded differently from week to week or even within the class period. When a child was not quite in a singing voice, his or her contour was often the same as the pattern I sang, ascending or descending in a similar fashion.

In both classes, I observed children responding to tonal patterns with the tonic pitch, either as a single "bum" or repeated several times. Perhaps the children were relating this activity to the more common dominant-tonic exchange, during which I sing the dominant pitch, and they supply a single sung tonic pitch.

There were only a couple of times that a child responded with a vocal sound during tonal pattern instruction. When I used the microphone for the first time, almost every child in the *No Text Class* responded with a sound or syllable, either "ah," "cha," or a clucking sound. There was also one verbal response; Ethan responded to his pattern with "Banana ram." In the *Text Class* this did not happen. Most of the children who chose to respond attempted to sing my patterns back to me.

There were a couple of instances in the *Text Class* when a child chose to sing a song, with words, in response to my pattern. Renee did this on two occasions. The first week I went around with the microphone she responded with the "Alphabet Song," singing "A B C D E F G...." There was another time that she responded to one of my group patterns with "Jeremiah Jeremiah," a fragment from the song I had just sung. She did not sing the precise pitches or rhythm of the song, however. Another week, I used the microphone for tonal patterns again and Charlie responded with a song from *Thomas and Friends* (his favorite television program) at a very fast tempo and not really in a singing voice. He sang with words, but it was difficult for me to understand them.

Between the two classes there was not much difference in the types or quality of tonal pattern responses. Aside from that first week with the microphone in the *No Text Class*, when the children gave "non-musical" responses, this did not happen again. When I just sang patterns without the microphone and waited for someone in the group to respond, I found that more children in the *No Text Class* were likely to respond than those in the *Text Class*. Perhaps it is because some children in the *Text Class* tended to be quieter. Some of the children only responded to my tonal patterns when I used the microphone, while others did not even respond with the aide of this prop. There were

some weeks in the *Text Class* where I only heard one child respond to patterns. In addition, there were more accurate pattern responses among the children in the *No Text Class* as evidenced by the fact that I was able to present difficult patterns more frequently. This may be more a result of the level of music involvement and interest of the children in the *No Text Class*, than a result of the text condition, however.

Dominant Response

Dominant responses include any vocal response a child provides after I sing the dominant pitch as part of the dominant-tonic exchange procedure. I would typically stick up my hands and sing the dominant pitch, then tap my hands to the ground, leaving a space. The intended response was the tonic pitch, and I would sing this on "bum" if the children did not respond, as well as in response to their attempts. Since this was a procedure I initiated repeatedly throughout a given music class, the children came to expect it and knew that after I sang, they would "bum." There were a variety of responses to dominant throughout my observations. These ranged from accurate tonics, inaccurate tonics, other pitches in or outside of the tonality, sung or spoken vocal sounds, or speaking voice responses. Sometimes a child would echo me if I sang a single tonic pitch or if I sang dominant followed by tonic.

The children always seemed to enjoy this dominant-tonic exchange and were eager to respond with their own "bum" or imitate me or another child.

> I sing dominant and hear Jack gives a soft response, so I tap the floor towards him and sing tonic on "bum." He looks at me and opens his mouth, letting out a very soft echo of my "bum." Renee sees this and taps the floor, giving me a "bum," followed by Melissa and Ally (*Text Class*, Week 6 video transcript,

11/9).

Sometimes a child responded with a different pitch within the tonality I had just been singing in. I heard the third scale degree once, as well as subtonic a number of times during an activity with a Mixolydian song. This happened several times in the *No Text Class*. Sometimes a child would sing just subtonic, while other times a child would sing subtonic followed by tonic. In both classes I observed children singing the dominant below tonic, as opposed to above tonic as I initiated. In some instances a child sang that pitch after I sang dominant, echoing my pitch an octave below. In other cases, a child sang dominant up to tonic alone or as a group effort.

> Taylor responded with a dominant below tonic, but close in pitch. Before I had a chance to echo this or sing tonic, Jacob leaned forward and tapped the floor near me with one hand and sang "bum" on tonic (*No Text Class*, Week 10 video transcript, 12/6).

As was true with other singing behaviors, with dominant responses, there were children who were rarely in a singing voice in both classes. In the *No Text Class*, Taylor often responded in a silly speaking voice, perhaps playing with different sounds or syllables, though she was generally higher in her speaking voice range. In the *Text Class*, Renee typically responded with her own "pitch," which was slightly higher than dominant but in a light speaking/calling voice. Renee did provide some accurate dominant or tonic pitches when she used a singing voice, however.

In terms of vocal sounds, there were many different sound effects and syllables that the children used in conjunction with dominant responses. Some of these were in singing voices or accurate, others not. They included "whack," "pa," "blip," "brrrr,"

"bop," "aggggh" and humming. On a couple of occasions, Ally responded in a speaking voice with a slight downward slide in pitch. Another time, Charlie responded with repeated "bums" in a very light speaking voice with inflection, almost like he was having a conversation.

I observed accurate and inaccurate responses in both classes, though it seemed the *Text Class* responded more frequently with "yells" or speaking voice responses overall. I found that, especially in the beginning of the class, the children would be very excited and yell "bum bum bum," repeating it many times, or give some other type of response, such as a "roar," leaning forward on their hands and knees. These repeated bums were something that returned each week and throughout the class period with the *Text Class*. There were typically one or two children who would get this behavior started, and before long other children were imitating. The children were rarely in a singing voice or on a specific pitch or even steady rhythm. I considered it more of a repetition of a sound, though I tend to think that the children were attempting to sing. They knew that when I sing "bum ba da dum bum," they respond with "bum," not understanding the difference between a spoken or yelled response versus a singing one. Sometimes I would ask, "Can we could use our nice indoor singing voices?" and, though this resulted in some accurate tonics in a singing voice, the children would quickly revert back to their excited "yell-sing."

Overall, I did not observe as much accuracy in dominant responses as I would have expected over the 10 weeks in either class, though there were always a number of accurate tonic responses each class period, with responses from a variety of children.

Dominant Anticipation

Dominant anticipation involves a child attempting to sing dominant at the end of a song before I do, according to the established routine. Sometimes this was initiated by a nonverbal cue by me, such as raising my hands in the air, which then encouraged a child to attempt to sing dominant, since that is what I normally do when I raise my hands.

> I stick up my hands but do not sing anything yet, and Renee sticks up her hands and does a quick "yum ba dum bum" on a pitch a little lower than dominant (*Text Class*, Week 10 video transcript, 12/7).

The children also anticipated dominant in the context of pretend movements within an activity such as picking up "paint" or dropping items in our pot of "soup"

> Every time we picked up an ingredient and dumped it in the pot I sang dominant, then waited and sang tonic. The children enjoyed doing this, often attempting to sing dominant even before I did, and tonic when it dropped in the pot (*No Text Class*, Week 4 field notes, 10/25).

In other instances, the children attempted to sing dominant at the end of a song without any type of physical cue or movement initiated by me. I found that a child might sing or attempt just a single dominant pitch at the end of a song, or put his or her hands up and sing or attempt repeated pitches in a rhythm as I typically did.

> I flick the dominant then tonic tone bar and Taylor sticks up her hands and wiggles her fingers and attempts dominant in the same rhythm as before, in a speaking voice, then stops abruptly and puts her hands down, saying "Oh" (*No Text Class*, Week 10 video transcript, 12/6).

Sometimes children sang a pitch at the end of a chant, which, by nature has no

tonal content. I observed this a couple of times in both classes. One child would sing a "bum," and others would quickly follow suit, singing or shouting their own "bum." This is most likely a result of the children becoming familiar with the dominant-tonic exchange that we do at the end of songs, and not discriminating between that and chants.

I observed dominant anticipation a number of times throughout the study, though the children were rarely in a singing voice or on an accurate dominant pitch. As the weeks went by, the children anticipated dominant on their own more frequently, perhaps because they were getting used to the procedure and remembering what we always do at the end of a song. I gradually observed more attempts on an in tune dominant pitch, though the rhythm was never the same as mine and was typically jumbled. I did not observe any differences in this behavior between the two classes. This is not surprising, as the tonic-dominant exchange procedure was the same for both classes.

Dependent Behaviors: Rhythmic

Simultaneous Chanting

Simultaneous chanting is essentially the same behavior as simultaneous singing, but with rhythm patterns and chants instead of tonal patterns and songs. There were parallels between the simultaneous singing and simultaneous chanting behaviors I observed in each class.

As with simultaneous singing, the children chanted along either continuously or intermittently. In terms of accuracy, I heard accurate fragments or patterns, the whole chant similar, or completely different. For the chanting that was completely different, it could have been in the same meter but different rhythms, or more of a rhythmic babble, lacking a steady meter or pulse. In the case of the *Text Class*, I also commented on the

children's use of the text.

While I observed children attempting to chant along with me during rhythm pattern instruction, it was not as common as with tonal pattern instruction. Simultaneous chanting of rhythm patterns only occurred about five times over the 10 weeks in both classes combined. A couple of times these attempts were the same or similar to what I was chanting, though they were not completely steady.

> I try a four-beat pattern while marching in place, and the children continue walking around the circle. Tessa attempts to chant the pattern along with me in a silly loud voice, somewhat similar to what I chanted but not in a steady meter (*Text Class*, Week 10 video transcript, 12/7).

When Taylor attempted to chant a pattern with me, she often started after the first couple of beats in a 4-beat pattern, simultaneously imitating, then immediately echoing the pattern once I finished, often accurately.

In both classes I observed instances of children chanting macrobeats or microbeats while I performed a chant, either on a neutral syllable or with a word or sound. With this behavior, while the child's chanting was completely different, it fit in with what I was doing since it was a steady beat.

> During one repetition, Taylor was saying "ah ah ah ah" repeatedly to the macrobeat (*No Text Class*, Week 10 field notes, 12/6).
>
> I start chanting and Charity joins in with a repeated "choo choo" to the macrobeat while pulling the horn with her right hand (*Text Class*, Week 6 video transcript, 11/9).

I observed just one example of a child chanting microbeats. In the *No Text Class*,

Stephanie was speaking "gobble" before I began chanting, it being close to Thanksgiving.

> I suggested we move our elbows, flapping them like chickens or turkeys. Stephanie started saying "gobble gobble," and once I started chanting she chanted "go-bble" as two microbeats throughout the repetition, sometimes pausing, but then coming right back in on the beat again (*No Text Class*, Week 8 field notes, 11/22).

There was some play with vocal sounds associated with this simultaneous chanting behavior. For instance, if I chanted in a deep loud voice or a high squeaky voice, those children chanting along would often imitate me. In a few cases, particularly in the *No Text Class*, a child would initiate one of these voices. One week, the children were particularly interested in playing with sounds during *Noble Duke of York*. Some children were using a high voice with various syllables, including "ba," "bee" and "chee."

As with simultaneous singing, I noticed differences in the continuity and frequency of simultaneous chanting during activities between the *Text* and *No Text Classes*. The chanting in the *No Text Class* was for the most part continuous. As soon as I began chanting on "ba," the children would join in with me. On a few occasions I heard some parts of a child's chanting line up with the chant, but otherwise, as with their simultaneous singing, it seemed that the children in the *No Text Class* had little regard for what I was chanting. From the time I began chanting, some would appear to be in their own little world of "ba-ba-ing," though they would typically stop chanting when I did. There were a couple of children who were more rhythmic overall, chanting in the same meter with a steady beat (Ella, Taylor), while others seemed to be rhythmically babbling the majority of the time.

> I started chanting *Noble Duke of York*, and almost every child chanted along on "ba" from the beginning. Most of the times they were chanting their own things, but I did hear some accurate fragments from Taylor and Ella. Taylor was also chanting a dotted rhythm figure, repeated a few times (*No Text Class*, Week 9 field notes, 11/29).

The chanting in the *Text Class* typically was more intermittent with the exception of Renee. During a few classes she performed both *Popcorn* and *Clackety Clack* fairly continuously and accurately, with most of the text. The other children who attempted to chant would mumble, fading in and out, similar to what I observed with simultaneous singing. I could hear the occasional word, but otherwise they were very soft and not clearly articulating themselves.

> I began chanting *Noble Duke of York*, which we have not done in a number of weeks, and Melissa and John attempted to chant along. John was very soft and came in and out during the chant, though I could not hear what he was doing. Melissa was a bit louder, but also mumbled. I could hear her say a few of the words here and there, especially at the end of rhythm patterns, but otherwise she mumbled, not really on the words. I could hear some accurate patterns, though (*Text Class*, Week 7 field notes, 11/16).

There were a couple of times when a child chose to chant on a repeated syllable from the chant instead of all the words. During *Popcorn* a couple of times, Renee chanted on "pop" rather than the words. In future weeks, as she became more familiar with the words, this exclusive use of "pop" diminished. Similarly, Charity often chanted on this "choo" during *Clackety Clack*. Aside from these examples, I did not observe children in

class simultaneously chanting on neutral syllables.

Simultaneous chanting was a more common behavior than simultaneous singing among the children in the *No Text Class*. The chanting was more continuous, and the children typically began immediately, as soon as I started chanting on "ba." Perhaps the children were more comfortable chanting because it is closely linked to speaking and language, which they engage in more frequently than singing.

I observed many of the same trends between the two classes in terms of simultaneous chanting as I did with simultaneous singing. Overall, there was much more simultaneous chanting in the *No Text Class* than in the *Text Class*. There were a couple of class periods in the *Text Class* during which there was absolutely no simultaneous chanting by any child. When there was, usually only one or maybe two children would be chanting. In the *No Text Class* on the other hand, practically every child chanted along throughout the weeks, with the majority of the children chanting every week. The children's chanting was also louder and more continuous in the *No Text Class*. The children in the *Text Class* seemed preoccupied with the text, often resulting in a softer, more intermittent chanting. As with the simultaneous singing, I observed a similar type of mumbling among the children in the *Text Class*, though since the chants were performed with a speaking voice quality, the mumbling had no impact in terms of singing voice as it did with the simultaneous singing.

Perhaps the continuity and frequency of simultaneous chanting in the *No Text Class* can be attributed to the fact that there were no words to learn. The children seemed content to chant their own material rather than attempting to align their chanting with mine. I think the neutral syllable provided an opportunity for the children to experiment

with music freely, while in the *Text Class*, the words were a type of barrier to this experimentation.

Continuation of Simultaneous Chanting

Continuation of simultaneous chanting, like its singing counterpart, involves a child continuing his or her simultaneous chanting attempts after I have completed the chant. This continuation could include a short fragment or rhythm pattern, a rhythmic babble or improvisation, or actually beginning the chant again. This was not a common behavior, but there were certain children who frequently continued chanting after I stopped in the *No Text Class*. In fact, in the first week of the study I noted that several children in the *No Text Class* continued chanting after I stopped.

One child who frequently continued her simultaneous chanting after I stopped was Taylor in the *No Text Class*. She would often create her own chant, in the meter and with clear patterns.

> Taylor was chanting especially loud, and at the end of "my chant," she just kept going, improvising an 8-macrobeat rhythmic phrase. I echoed what she chanted, but it didn't seem to matter to her because she just chanted right on top of that with something similar (*No Text Class*, Week 2 field notes, 10/11).

Children also chanted repeated macrobeats, often after a movement chant. One time Taylor chanted "boom boom boom boom" to the macrobeat. Sarah did a similar thing in a deep voice after we marched around the carpet as a "big train," chanting four macrobeats and stomping her feet along, on two separate occasions.

The continuation of simultaneous chanting behavior was almost exclusive to the *No Text Class*. I only observed one instance of it in the *Text Class*, while it was a weekly

occurrence in the *No Text Class*. Again, this is probably due to the fact that the children in the *No Text Class* simultaneously chanted more often and continuously to begin with. In general, I only performed two chants per class, so there were less opportunities for simultaneous chanting and thus continuation of the behavior overall.

Rhythm Pattern Response

This child behavior includes any response to the rhythm patterns that I chanted, typically on "ba," during pattern instruction. I chanted patterns consisting primarily of macrobeats and microbeats, either 2-beats or 4-beats in length. In general, the children did attempt to imitate my patterns, the desired behavior for this activity. During the coding process, I divided their responses into a number of categories based on the accuracy of imitation: accurate echo, inaccurate echo (could be close, in meter/not in meter), different pattern (could be same amount of beats or not, in the same meter or not), single "ba," "ba babble" or other sound/syllable, and vocal sound (this could be an isolated sound or in conjunction with chanting).

If a child was not accurate in echoing a pattern, he or she might chant the first half correctly then chant something different, or perhaps speed up the tempo for part of the pattern. It was difficult to tell if a "different" pattern response was intentional. Sometimes it seemed to be, especially when the children gave little regard or attention to what I was doing, and simply made up their own patterns. This happened a few times in the both classes. In a couple of cases I had a "rhythmic conversation" with one child, exchanging unique patterns back and forth.

In the *No Text Class*, Taylor would often begin by giving her own patterns, and then other children would respond with other patterns, sometimes imitating each other, or

chanting on their own, either in the meter or lacking a steady beat or meter. The children truly appeared to feed off one another's behaviors and chanting, at times giving me patterns that I would echo back, or in some instances not interacting with me at all.

> Ella gives me a pattern (two macrobeats), slapping one hand on the floor afterwards. Annabelle and David imitate her movement and pattern. The children continue giving me different patterns with movement (Taylor "walks" her fingers on the floor while chanting a two-beat pattern, for example), which I echo, along with some of their fellow classmates (*No Text Class*, Week 3 video transcript, 10/18).

While I observed this behavior in the *Text Class* as well, the children would get very loud and excited, shouting single "bas," or "pops" with the *Popcorn* chant, often requiring me to return to the chant again to keep the volume down.

> I give a rhythm pattern on "pop," and Renee echoes it accurately. After that, a few other children either should out "pop" or some other short pattern. There are a few seconds of interjections around the circle, with each child "popping" over the next. While some patterns are in the meter and have a sense of pulse, a few are more of a babble on "pop" (*Text Class*, Week 3 video transcript, 10/19).

As with other activities, the children in the *No Text Class* especially enjoyed chanting in deep or high-pitched voices. Sometimes I presented patterns this way, while other times they would respond to my pattern with one of these voices without my model. Ethan often responded to patterns in a very high voice, encouraging the other children to do the same once I echoed his voice. Other times, a child would respond to a pattern with "choo" (like in *Clackety Clack*), syllables such as "mi," "dee," "bee," or some other type

of silly voice. I found that using different syllables the children initiated or deep/high voices encouraged some of them to chant and continue making up their own patterns in these voices.

> I chant a pattern in a deep voice, and Chrissy and Taylor echo it in a deep voice. Ethan comes in with his own chanting in the high voice, still lacking a meter or steady rhythm. I imitate his sound and rhythm, though it is not steady, then Chrissy imitates it back to me in a similar voice on "be be be" (*No Text Class*, Week 10 video transcript, 12/6).

Between the two classes, the *No Text Class* was more responsive to patterns and more accurate in their echoes. I also heard more accurate responses to longer, 4-beat patterns in the *No Text Class*, while I rarely had the opportunity to present these longer patterns in the *Text Class*. While the *Text Class* did respond accurately at times, there were also a lot of isolated "ba," "pop" or repeated "ba" that lacked rhythmic pulse and meter. In addition, I experienced more interaction with individual children in the *No Text Class*, with children offering their own rhythm patterns to me, and imitating each other as well. Since these children had more chanting experience through frequent, continuous simultaneous chanting, perhaps they felt more comfortable creating their own patterns. Also, since I typically chanted on "ba," and they often simultaneously chanted on this same neutral syllable, echoing my patterns on "ba," might have had a certain familiarity for these children.

Movement

Dependent rhythmic movement involves some type of beat movement that a child imitates. This could be an imitation of my or another child's movement, or a response to

my verbal suggestion for a movement. Most commonly, the child would perform a rhythmic movement along with me in the context of a song or chant. Sometimes I suggested these movements verbally or through demonstration, but I frequently asked specific children for suggestions. The rhythmic movements included moving a body part to the beat or tapping a prop, such as egg shakers or rhythm sticks.

> I suggest we hit the sticks on the floor first, and begin singing. Some children tap both sticks down together like I am, but none are to the macrobeat. Others alternate the sticks quickly like they are drumsticks. When I am done singing the song, they continue tapping (*Text Class*, Week 3 video transcript, 10/19).

There were instances in both classes during which a child was moving to the steady beat, though they were not consistent within the same activity or even a single song or chant repetition. There were a couple of instances in both classes during which a child moved to the microbeat, even though I was moving to the macrobeat. I did not notice a difference between the two classes, however. There were some children who moved to a steady beat some of the time in both classes, but even more children whom I never observed moving to the steady beat.

While children in both classes often chose to do a different movement or toy play during activities, I found that the children in the *No Text Class* were more responsive to my movements and almost all the children moved along with me. The children in the *Text Class* seemed more fascinated by the toys and were content to play with them on their own throughout the activity, perhaps choosing different movements to do along with the song or chant. I do not know that I would attribute it to the text condition, though the lack of text could have caused the children in the *No Text Class* to be more attentive since

they were not accustomed to music without text.

Dependent Behaviors: Expressive Movement

Dependent expressive movement involves a child imitating continuous flow movement or engaging in creative movement during *Scarf Dance* or *Move & Freeze*. Flow movement was included in each lesson, either through body movements: upper body/arms or feet for example, or in conjunction with a toy such as a scarf or beanbag. Sometimes I modeled this flow movement while singing, moving my upper body and arms around in a free-flowing motion within space, particularly during the *Hello* and *Goodbye Song*. While I did not specifically ask the children to move as I was, there were certain children who imitated this movement as soon as I began it, while others chose to watch instead.

> During the *Hello Song*, Annabelle, Ella, Taylor, Chrissy, Ethan and David move with flow like I am, either with their whole upper body, upper body and arms, or just arms (*No Text Class*, Week 6 video transcript, 11/9).

The children also experienced flow movement through the "painting" and "making soup" activities. These activities often encouraged the children to engage in flow movement along with me since it had a purpose: either painting the floor, ceiling or body parts, or stirring our big pot of soup.

Toys also encouraged flow movement imitation. When we used beanbags, for example, I would take suggestions of where to put the beanbag, then invite the children to place their beanbag in that location, such as on their head, for example. I would place the beanbag on my head and move my upper body around with flow as I sang the song. Some

children were content to sit there with the beanbag balancing on their head, while others flowed in a very small space, possibly to keep the beanbag from falling, and still others moved around in a larger space.

During tonal and rhythm patterns, I typically would flow, either with my arms/body or a toy, and then tap the ground or drop the toy at the end of the pattern. The children enjoyed this, and often would do the same type of movement "back to me" when they echoed a pattern.

> I sing another pattern and Stephanie echoes it. I sing another and wave my beanbag towards her, hitting it on the ground on the last pitch, go back and forth a few times and she echoes my pattern with the same movement (*No Text Class*, Week 10 video transcript, 12/6).

This movement or toy play might have encouraged some of the children to echo the pattern, perhaps making them feel less exposed. There were also times when a child imitated my movement only, without any vocalization.

As with beat movement, I found that the children in the *No Text Class* were more receptive to my expressive movements. There were times when I began singing and flowing without saying a word, and the majority of them gladly joined in with the movement. In the *Text Class*, on the other hand, even when I suggested a movement, there were still a number of children who chose to watch or do something different instead. This was an acceptable behavior, given the informal nature of the learning environment, and I never insisted that a child to do exactly as I was doing unless he or she posed a behavior problem.

I also observed expressive, creative movement during the *Scarf Dance* and *Move*

& Freeze activities, one of which was included in each class. This is considered a dependent behavior, since I initiated and encouraged the movement as part of a class activity. I played the recorded music and invited the children to dance to the music however they would like, as I danced along as a model. In *Scarf Dance*, each child had a scarf that they could move as they danced, and with *Move & Freeze*, I would pause the recording at various points throughout the activity, and they had to "freeze" right where they were.

I observed a lot of expressive/creative movement and dancing during *Move & Freeze* and *Scarf Dance* in both classes. Yet, there were always children who chose to stand and watch or simply walk around the circle, and still others who would play with their scarves during *Scarf Dance* instead of moving and dancing. I observed flow movement with the scarves, as well as locomotor movement, such as dancing around the carpet, or stationary movement, such as twirling or taking small steps in one spot.

> The children all moved around the carpet slowly, swirling their scarf around to the music. Taylor, Chrissy and Ella were doing "ballet," lifting one leg up and gracefully swishing their scarf (*No Text Class*, Week 8 field notes, 11/22).
>
> Tessa, who preferred to stay out of the commotion of the carpet, stood towards the edge and did her own dance, holding one foot up like a flamingo and moving her arms from side to side until she felt like she was going to lose her balance, steadying herself, and then repeating (*Text Class*, Week 1 field notes, 10/5).

I never noticed children actually moving to the beat, but there were times when their movements reflected the style and tempo of the music.

There was lots of expressive movement during *Move & Freeze.* I chose some

> Latin jazz as the music recording. It was upbeat and the children enjoyed it, and really "let loose," especially Taylor. Ethan and Jacob were doing a "fast running in place," dance, and I joined them for a brief time, which they were excited to see (*No Text Class*, Week 3 field notes, 10/18).
>
> In the part of the song with the flutes doing repeated shorter note values, Tessa takes little baby steps towards me and says "I'm a baby, wa wa wa," in a light whiny voice, then continues with these little steps and moves around and around in a circle, gradually closing it in until she is just turning around in one spot (*Text Class*, Week 10 video transcript, 12/7).

In general, the children in the *No Text Class* were more apt to begin dancing as soon as I turned the music on and always seemed very excited during this activity. In the *Text Class*, on the other hand, it sometimes took some encouragement and a little time for them to really get into dancing, and, even then, there were often children who chose to watch instead. This is most likely another reflection of the differences in personality between the classes overall. While there were a number of outgoing children in both classes, there were more quiet, reserved children in the *Text Class*.

Dependent Behaviors: Verbal/Vocal

Vocal Sounds

When a child imitated a vocal sound of another child or me, I coded it as a dependent vocal sound behavior. As with independent vocal sounds, children imitated these sounds at the start or end of class, in silences, during dominant-tonic exchanges, during pattern instruction, and during songs or chants. The children frequently imitated each other's sounds during dominant-tonic exchanges or silences in particular. It seemed

that, once one child made some sort of sound, others were sure to follow.

> While I am putting the CD in, Melissa hums and moves her finger up and down over her lips, creating a "brrrrr" sound. Renee imitates her; moving close and doing the same thing back to her. Evan and John see what they are doing from the other side of the carpet and try it out for themselves (*Text Class*, Week 3 video transcript, 10/19).

Sometimes I took a child's sound and combined it with singing dominant-tonic, which would usually encourage other children to experiment with the sound or sing.

> I sing the dominant pitch with "brumm," and a few other children join in with this sound. I hear one close tonic by Abby after I sing dominant, but the rest or different pitches or not in a singing voice (*Text Class*, Week 6 video transcript, 11/9).

It seemed that the children were just as eager to imitate my sound effects as they were other children's. For example, I often used various sound effects when we added items to our soup, causing the children to join in.

> The children make the "shaking" sound, ch ch ch with me while we shake the macaroni in, and some make the "glub glub glub" sound while we pour some broth in (*Text Class*, Week 6 video transcript, 11/9).

One vocal sound that I made with the intention of eliciting an imitation was a vocal slide, or sliding the voice from high to low in a head voice. I often did this with the scarves, throwing up my scarf and performing a vocal slide as the scarf fell to the ground. In the *Text Class* I found that just a few children would imitate me, while in the *No Text Class*, practically every child would imitate me, often continuing more slides on their

own.

The children also enjoyed imitating vocal manipulations, such as high, squeaky voices or deep booming voices. Sometimes a child initiated these voices in a silence or during a chant and another child would imitate it. I also used high or low-pitched voices at times while chanting, and the children subsequently used similar voices if they were chanting along.

> I say, "Let's do a little train," and walk with tiny steps, chanting in a high pitched, soft voice. The children imitate my movement, and those that attempt to chant along use a similar voice (*No Text Class*, Week 6 video transcript, 11/9).

These voices often carried over beyond the actual chant. For example, I might chant rhythm patterns in the same voice. The children who echoed me typically responded with the same type of voice. In other cases, a child might take the voice and continue with his or her own rhythmic chanting or babble.

The child/teacher interactions I observed through frequent vocal sound imitation can be further explored through the *Interactive Response Chain*, a model developed by Hornbach (2005). The *Interactive Response Chain* describes the cycle of initiations and responses in an early childhood music classroom. It is created and perpetuated through teacher improvisations with a child. The teacher provides an initiative, which a child responds to. This child response then becomes a new initiative for the teacher, and the chain continues. While this concept pertains primarily to improvisatory musical conversations between child and teacher, I observed a similar process through vocal sound imitations between child-teacher, teacher-child and child-child. A child would typically initiate the chain, providing a vocal sound, which I would subsequently imitate

on the dominant and/or tonic pitches, placing it in a musical context. This then caused other children to join in with this sound, some singing, others simply playing with the sound.

> I went to dominant again, this time on "ya"...Jacob responded again, this time with a very high pitched dominantish "mi." I sang his "mi" on dominant, then went down to tonic. The rest of the children imitated this sound (not on a pitch) and babbled with "mi" or "meow" for a few seconds, some turning to their neighbor to speak to them on "mi" (*No Text Class*, Week 3 video transcript, 1/18).

I did not, however, observe children then providing a different sound as a new child initiative, as suggested by the *Interactive Response Chain*. In the case of vocal sounds, I found that the children typically continued making the particular sound until I moved on with the activity.

Overall, children frequently imitated the vocal sound effects and manipulations of their classmates and me. I tried to establish an environment in which the children were free to experiment with their voices, taking cues from each other and me as the teacher and model, believing that the more they use their voice in a playful way, the more likely they are to do the same with aspects of music. I observed this type of behavior with many of the children. I did not notice any striking differences between the two classes, though since the *No Text Class* was more vocal and participatory to begin with, more of the children imitated my vocal sounds or the sounds of other children in the class.

Syllables

Along with vocal sounds, the children also imitated different syllables initiated by their classmates or me. This syllable imitation most frequently occurred during dominant-

tonic exchanges, but I also observed it during pattern instruction, in silences, and during activities. After I sang the dominant pitch on my usual syllables, "bum ba da dum bum," a child might respond with a different syllable, perhaps repeating it a few times. If I heard it, I would echo the syllable on dominant-tonic, which typically caused other children to attempt that syllable as well, sometimes on a pitch, other times simply playing with the sound of the syllable.

> Jacob then does one of his squeaky "mi's" I stick up my hands and sing dominant on "mi" while several children imitate me (*No Text Class*, Week 3 video transcript, 10/18).

I found that, if I chanted a rhythm pattern on "ba," a child might choose to echo the pattern on a different syllable. From that point, another child might use the same syllable, or I might give the child another pattern on their syllable of choice, causing other children to imitate it as well.

> Ally was still pretending to be a baby, saying "da da" then "daddy" in response to one of the patterns. A few seconds later, Renee, who was behind her said "da da" in a high voice (*Text Class*, Week 6 video transcript, 11/9).
>
> John responded to a pattern with his own on "dee," so I echoed his pattern on "dee," then gave a new one. This caused a number of children to chant using this syllable as well (*Text Class*, Week 8 field notes, 11/21).

As with the vocal sounds, children were eager to imitate each other's syllables. It was rare that a child introduced his or her own syllable and no one else played with it afterwards. I feel that sometimes a child using a different syllable encouraged others to join in, sometimes attempting dominant or chanting a pattern, which perhaps is

something that they would not have otherwise done. While at times it seemed that a child was speaking the syllable for the sake of playing with the sound, the different syllables also served musical purposes through rhythmic chanting or singing. The syllables had a connection to music making and experimenting with these young children, and their readiness to imitate each other and myself contributed to this.

Response to Song or Chant Text

Verbally responding to the words from a song or chant was coded as a dependent behavior, since the child was drawing on the material presented in music class. This behavior manifested itself in the *Text Class* in one of two ways. In some cases, a child would speak one word or short phrase from the song or chant, perhaps during the activity or in a silence. Other times, a child would make a verbal comment related to the song text.

With the chant *Popcorn*, children would speak "pop," throughout the chant or let out a loud, big "Popppppp" at the end. Once one child spoke "pop," others would soon follow. During the song *Bubblegum*, there was also a "pop" in the text, and the children would anticipate this "pop" by yelling it before I got to it, while I was still singing. Once a child yelled pop, sometimes accompanied by clapping his hands and going down to the ground like we do at that point in the song, others would join in. These two examples occurred during multiple weeks.

Ally spoke words from the songs on a few occasions, either uttering a short phrase or word and laughing, or continuously speaking the complete song text.

> I finish singing the *Sam Sam* and Ally laughs, saying to Renee, "wagon wheel," one of the words from the song (*Text Class* Week 6, video transcript, 11/9).

She did a similar thing another week with the text of *Canoe Song*.

> After I sing "flashing with silver" the second time, Ally turns to Derrick and says "flashing," then laughs (*Text Class* Week 10, video transcript, 12/7).

Ally spoke the words of a song more continuously one week with *Monkey Monkey*, while I sang.

> On one repetition, Ally spoke the words along with me, without a strict rhythmic pulse, but getting every word (*Text Class* Week 8, field notes, 11/21).

It did not appear as if she was attempting to sing or even rhythmically chant along, but rather that she was speaking in a normal fashion.

Tessa did a sort of word play with the last word of *Pickles and Pie*, "fly" in the final week of the study. While she was in a speaking voice the majority of the time, she did attempt to echo me in a singing voice once on her chosen word.

> Tessa joins me on "fly" in a speaking voice, also shaking her eggs. I sing tonic then she sticks her eggs up again, shakes them and says "flyyyy," in a speaking voice. I sing "flyyy" on dominant and she echoes me, this time in a singing voice, on the subdominant pitch. I sing "fly" on dominant, this time shorter in length, and she sticks up her eggs again and says "fly," then puts them down for a second, and then sticks them up and says "fly" even shorter. She sticks up her hands again and says, "Fly bird," then puts them down, saying "Fly dog." She sits there a couple of seconds, then sticks up her eggs and shakes them, saying "Fly bird, fly bird" (*Text Class*, Week 10 video transcript, 12/7).

In a few instances, I observed a child making a comment or verbalizing something that related to the text of a song. One week at the end of *Swinging*,

> Tessa remarked to Ally, "I have wings, I have wings," lifting up her arms. This caused Ally to put up her arms and shout, "Monkey arms, monkey arms," which continued while I went into the *Goodbye Song* (*Text Class* Week 7, field notes, 11/16).

This verbal exchange was related to the text of the *Swinging*, "I think I have wings, I think I have wings," as well as to the text of the previous song, *Monkey Monkey*. I also observed children verbalizing based on the text of the song, *Pickles and Pie.* The text of this song is: "Me oh my pickles and pie, I see an elephant in the sky. Me oh my, pickles and pie, how did an elephant learn to fly?"

> At the end, Charlie asked, "How about Harold in the sky?" I sang the song again, and he said, "No *Harold* in the sky!" (*Text Class*, Week 9 field notes, 11/30).

I guessed that Harold must be a cartoon character and later found out that "Harold the Helicopter" is a character on Charlie's favorite television program, *Thomas the Tank Engine*. Renee also commented on the text of this song after I sang it another week.

> Renee immediately says, "That's like Dumbo," and I agree, "It is like Dumbo." She continues, "Yeah cause I got the movie of that, and I like it." I sing the part about the "elephant in the sky" again and Renee says, "A elephant ca- some elephants have...wings" (*Text Class*, Week 10 video transcript, 12/7).

Although I observed several examples of children in the *Text Class* responding to words from a song or chant, it was not as frequent of a behavior as I had anticipated.

Summary

Given the qualitative nature of this study, I cannot actually compare the two classes as if they were equals, but rather acknowledge perceived trends and offer possible

explanations. I did notice differences in class dynamics and child personalities between the *Text Class* and the *No Text Class*, as described in the previous chapter and alluded to in the preceding discussions. Based on my experiences with these two classes, I found that the children in the *No Text Class* were generally more engaged and anxious to participate during music class, while the children in the *Text Class* were easily distracted, and at times more interested in talking with their neighbor, playing with the toys, or looking at the other enticing items in the classroom. I also observed that the children in the *No Text Class* were more vocal, responding to my patterns and cues more frequently, playing with their voices, and simultaneously singing and chanting. In contrast, there were children in the *Text Class* who rarely responded to the music the whole class period. Perhaps if there were more instances of complete silence, absent of verbalization, I would have observed more spontaneous singing or chanting and further music interaction in the *Text Class*.

I attribute some of my findings to these differences between the personalities of the two classes. The children in the *No Text Class* experimented with the highness and lowness of their voices quite frequently, while the *Text Class* did not. This ties back to the fact that the *No Text Class* was more vocal, and there was often one child who initiated these voices, causing others to do the same. In addition, when I used these types of voices in conjunction with chanting, they were likely to imitate me, since they simultaneous chanted and responded to rhythm patterns more frequently to begin with. While there were outgoing, eager children in the *Text Class* as well, there were also many more quiet, reserved children. Perhaps some of these more quiet children in the *Text Class* were intimidated by the large group, or by some of their louder classmates, so they

were not as willing to respond during the music class.

As for the *No Text Class* children's engagement in activities, this was reflected specifically in their excitement and eagerness to participate in movement. This included imitating rhythmic movement and expressive movement with their body or toys, as well as dancing and moving expressively during the activities involving recorded music. While I did perceive these differences in the two classes, it is important to note that I did not have any experience with these particular children prior to the study. It is possible that the text condition played some sort of role in the resulting attentiveness and participation between the two classes during music instruction. The music experienced by the *No Text Class* was very different from what they knew as "music." In their world, music included words that were often enticing, interesting or silly, or told some sort of story. The songs and chants that I presented in class were just the opposite: devoid of words. Perhaps they were more interested in this music because it was different, and by the same token, the children in the *Text Class* were not as interested because it was closer to what they were accustomed to.

Furthermore, there were differences between my initial perceptions of the *Text Class* and what I observed during the 10 weeks of the actual study. For the preliminary observation, I taught all classes without text, as a way to gauge the involvement and behaviors of the children and choose my participants. While my field notes for those preliminary observations were not very detailed, I did note that the children were very vocal during dominant-tonic exchanges as well as a chant.

This class was very vocal from the beginning. I sang dominant-tonic before the *Hello Song*, and by the end of the song the majority of them were attempting to

sing "bum" on tonic after I would sing dominant. In fact, they continued singing it even when we moved on to a different song/activity, without being prompted with the "dominant-tonic routine."

The first chant I did today was *The Noble Duke of York* on "ba." They really responded to this, immediately babbling on "ba" while I chanted. They also responded to rhythm pattern instruction as a group and individually (*Text Class* Preliminary Observations field notes, 9/26).

While I still observed participation in dominant-tonic exchanges with this class, their simultaneous chanting was not as continuous or frequent once I added the text.

There are other findings that, while they do not directly relate to the issue of Text versus No Text, are meaningful nevertheless. I found the children's use of vocal sounds and syllables, both independently and as imitation particularly interesting. These behaviors may serve two distinct purposes. First, vocal sounds enable children to manipulate their voice in various ways so that they will eventually have the control and ability to use their singing voices consistently. The second purpose relates specifically to vocal sound and syllable play. In an informal music-learning environment, teachers should strive to elicit responses from the children so that they can discover each child's developmental level. By playing with syllables and vocal sounds, the teacher can encourage children to be vocally active and creative in the music-learning environment, which may result in more music responses in the future.

Another finding that I consider meaningful is the infrequency of responses to song or chant text among the children in the *Text Class*. Going into this study, I had a few ideas in my mind about what types of behaviors I might observe that would be unique to

the *Text Class* in particular. One of those ideas was that the children would play with the text of the songs and chants, either by repeating or manipulating the words or speaking about the words or topics. Aside from the few examples illustrated above, this behavior was practically nonexistent. This could again be due in part to the personalities of the children in the class.

There are a few findings involving the children's treatment of text and music behaviors that I would attribute to the Text/No Text condition. This includes elements of rhythm pattern responses, spontaneous independent singing, and simultaneous singing and chanting.

I found that the children in the *No Text Class* responded to rhythm patterns more frequently and accurately. While I would partially attribute their willingness to echo rhythm patterns to the general participatory nature of the children in the class, the text condition might also have played a role. Since these children were accustomed to simultaneously chanting on "ba," it was not much different for them to echo me on "ba" during rhythm pattern instruction, creating a sense of familiarity.

In terms of spontaneous independent singing, there were some meaningful findings related to the treatment of text among the children in the *Text Class*. While one would assume that when the children in the *Text Class* chose to sing class songs, they would include the words just as I did in my model, this was not always the case. In some examples, a child attempted a familiar song without words. I could be that the child was more comfortable with aspects of the melody than the text, thus omitting the words. In other cases, a child might begin a song with words before changing to a neutral syllable. In addition, the children in the *Text Class* did attempt to sing class songs more frequently

than their own tonal babble. This could be because the class songs were memorable due to the text, so they were able to more readily recall them in comparison to the children in the *No Text Class*. However, this consequently might have limited their original spontaneous singing attempts since they instead chose to draw from class songs. In the *No Text Class* on the other hand, perhaps they did not attempt to sing class songs as frequently because they were not memorable, instead choosing to sing their own material.

The findings that I feel relate most directly to the Text/No Text issue are those concerning simultaneous singing and chanting. Overall, the simultaneous singing and chanting that I observed in the *No Text Class* was more continuous and frequent in comparison to the *Text Class*. Perhaps since the children did not a model of text to follow, they had more freedom to sing and chant in their own way. While I did hear accurate fragments from some children, there was much more tonal and rhythmic babble among these children. In the *Text Class*, on the other hand, their familiarity with language gave them something to measure their singing and chanting against and latch onto, causing them to focus on "getting the words." As a result, I frequently observed intermittent singing and chanting, and the soft "mumble-singing" and chanting. The "mumble-singing" was often very soft and difficult for me to understand, and typically in a speaking voice rather than a singing voice. Perhaps the neutral syllables encouraged experimentation rather than imitation through simultaneous singing and chanting among the children in the *No Text Class*.

CHAPTER VI

Discussion

Overview of the Study

Purpose and Problem

With the intent of improving early childhood music instruction, the purpose of this research was to investigate the use texted and non-texted songs and chants with preschool children in an early childhood music setting. The specific problem of this study was as follows: What are the differences in musical and nonmusical behaviors and responses between preschool children receiving instruction consisting of texted and non-texted songs and chants?

Methodology

The participants for this study included 26 three- to four-year-old children from two intact classes in a preschool kindergarten readiness program in Lansing, Michigan. The participants were purposefully chosen, and I then designated one class as the *Text Class*, and the other as the *No Text Class*. The *Text Class* received instruction consisting of songs and chants primarily with words, while the *No Text Class* received instruction consisting of songs and chants performed on neutral syllables such as "bum," "la," or "da."

Each class participated in a 30-minute weekly music class taught by myself for a period of 10 weeks. Aside from the use of text or a neutral syllable, the teaching procedures and repertoire were as similar as possible for both groups. Activities included singing and chanting for the children as well as inviting them to move to music with an

emphasis on beat, continuous fluid movement, or creative movement. Small, handheld percussion instruments, such as rhythm sticks and egg shakers, as well as other props, including beanbags and scarves, were used in conjunction with some of the activities. The music environment was informal, but structured. The children and I sat in a circle on the floor, in a carpeted area of the classroom. While I planned the specific activities, I also responded to the children's spontaneous responses through pattern imitation, vocal sound or syllable imitation, and movement suggestions. In each class, the children were encouraged to supply the resting tone through the frequent "dominant-tonic exchange" procedure. The children also echoed tonal and rhythmic patterns as a group and individually on the neutral syllable "bah" during some activities.

As the music teacher as well as the researcher, I assumed a participant-observer role in this study. Although the research question was comparative in nature, I chose a qualitative design, with qualitative data collection, presentation techniques, and analysis. Given the age of the participants and the informal music-learning environment, I felt a naturalistic, qualitative approach would be more appropriate. Field notes and video recordings constituted the data. I recorded field notes at the conclusion of each music class, while the video recording occurred in the 3rd, 6th and 10th weeks of instruction. I later viewed the videos and recorded observations concerning the children's musical as well as nonmusical responses during the class. I took measures to ensure trustworthiness through data triangulation and peer review. The field notes for weeks 3, 6 and 10 were compared to the corresponding video transcripts for data triangulation purposes. In addition, a fellow early childhood music teacher and doctoral student at MSU served as a peer reviewer. She evaluated a data sample and my accompanying codes to verify that

they were logical and consistent.

Throughout the 10-week period, the field notes and video transcripts were analyzed. I assigned codes to each behavior or response as the categories began to emerge. I also indicated specific evaluative phrases (in reference to use of singing voice, accuracy of singing, steady beat movement, etc.) where relevant. The emergent categories referred to content: *Tonal, Rhythmic, Expressive or Verbal/Vocal*, as well as the nature of the behavior, or context: *Independent* or *Dependent.* The most salient behaviors were then described and discussed in detail. Any observed differences between the *Text* and *No Text Classes* were addressed, along with possible explanations for the findings.

Findings

While it is not possible to compare the *Text Class* with the *No Text Class* due to the qualitative nature of this study and the observed fundamental differences between the two classes, I will offer my insight into the Text/No Text issue based on what I observed over the 10 weeks I spent working with these two classes. As for the fundamental differences between the two classes, I found that the children in the *No Text Class* were generally more engaged and anxious to participate in music activities, while the children in the *Text Class* were easily distracted, and at times more interested in talking with their neighbor, playing with the toys, or looking at the other enticing items in the classroom. In addition, the children in the *No Text Class* exhibited vocal and musical behaviors more frequently, responding to my patterns as well as the sung dominant cue, playing with their voices, and simultaneously singing and chanting.

These perceived differences could be partially due to the personalities of the

children and collective classroom dynamics, or related to the text condition. The only experience I had with these children prior to the start of this study was my preliminary teaching and observation session, at which point I selected the participants. Based on that observation, I indicated that the children in the *Text Class* were responsive to the chant in particular, with a number of children attempting to chant along, and that they responded to the dominant-tonic exchange frequently. Although that first week is my only basis for comparison, it seems that the children in the *Text Class* might have been less responsive due to the addition of text, or that the children in the *No Text Class* were more responsive due to the absence of text. The music children are exposed to in their daily lives, be it at home, on television or in their preschool classroom, typically contains text. Perhaps the absence of text caused the children in the *No Text Class* to be more interested in the music and related activities than the children in the *Text Class*, who were more accustomed to similar, texted music.

The findings specifically related to the research problem involve the children's responses to song or chant text, rhythm pattern responses, spontaneous independent singing and simultaneous singing and chanting.

Response to song or chant text.

I consider the infrequency of child responses to song or chant text in the *Text Class* to be a meaningful finding. Given their age and the dominance of language in their lives, I expected the children to interact with the text more. While there were a number of outgoing children in the class, I only observed a few instances of these children playing with the song and chant text. Perhaps since songs with text were commonplace to the children, they were not inclined to comment on the words. It could also be that they were

not particularly interested in the text of these songs and chants, and were instead more focused on the activity, toys, or interacting with one another. While this finding does not support the use of text or no text, it does indicate that the presence of text did not encourage excessive verbalization in relation to the words associated with the song or chant, which could be seen as a disadvantage to using texted songs and chants with this population.

Rhythm pattern response.

I found that the children in the *No Text Class* were more responsive to my rhythm patterns and were also more accurate in their echoes. When the children in the *Text Class* did respond, there were accurate echoes as well as a number of isolated "ba," "pop" or repeated "ba" that lacked rhythmic pulse and meter. I also had the opportunity to interact with individual children in the *No Text Class*, as they exchanged rhythm patterns with me as well as with each other. I feel that because these children had more chanting experience through frequent, continuous simultaneous chanting, perhaps they felt more comfortable creating their own patterns. In addition, since I typically chanted on "ba," and they often simultaneously chanted on this same neutral syllable, echoing patterns on "ba" was a similar behavior for them. The frequency and accuracy of rhythm pattern responses in the *No Text Class* could in fact be related to the text condition.

Spontaneous independent singing.

There were text condition related differences associated with spontaneous independent singing. First, when the children in the *Text Class* chose to sing class songs spontaneously, they did not always include the text as I presented in my model. On a few occasions, I observed a child singing a class song on a neutral syllable or changing to a

neutral syllable if he was not certain of the words. While this did not happen frequently, it does indicate that perhaps the text did not play as large of a role in their memory for the songs, and it could in fact be separated from the melody.

When the children in the *Text Class* sang spontaneously, they more frequently drew from class songs, attempting these familiar songs rather than singing their own material. Perhaps the class songs were memorable due to the text, so the children chose to sing these familiar songs. The children in the *No Text Class* on the other hand, rarely attempted class songs, perhaps because they were less memorable due to the absence of text. This does not necessarily support the use of text in early childhood music, however, since the objectives involve exposing children to music rather than instructing them to reproduce songs accurately. Furthermore, these spontaneous singing attempts were often short fragments or phrases of the class song, which lacked a stable tonality or pitch accuracy, and were typically not in a singing voice. In addition, this predisposition towards singing class songs among the children in the *Text Class*, may have consequently limited their original spontaneous singing attempts. The children in the *No Text Class* may have sang original music more frequently because the class songs were less accessible. Based on these findings, I would venture to guess that the absence of text in class songs encouraged the individual children in the *No Text Class* to create their own music more frequently.

Simultaneous singing and chanting.

The differences I observed between the two classes in terms of their simultaneous singing and chanting behaviors could be attributed to the text condition. In general, the children in the *No Text Class* simultaneously sang and chanted more frequently and

continuously. They often seemed disinterested in what I was doing, but rather focused their attention on their own singing or chanting, which was typically different. Once I began singing or chanting, there were undoubtedly a number of children who joined in on a neutral syllable. In the *Text Class*, on the other hand, the children were more focused on what I was doing, particularly in terms of text. Their familiarity with language gave them something to measure their singing and chanting against, and they subsequently tended to focus on "getting the words." As a result, I observed more intermittent singing and chanting, and a soft "mumble-singing" and chanting, which came to be a characteristic behavior for a number of children in this class. It seems this practice of "mumble-singing," which was a result of the text condition, limited the amount of time the children spent experimenting with their singing voices. Rather than figuring out the music and manipulating their voices through experimentation, the children were focused on figuring out the text through simultaneous imitation attempts. Perhaps the use of neutral syllables encouraged the children in the *No Text Class* to experiment with music more freely rather than attempting to simultaneously imitate me. They were able to play with the tonal and rhythmic elements of music while at the same time experimenting with their voices. Based on my observations, this seems to be a benefit of early childhood music instruction containing non-texted songs.

Implications for Practice

Based on the results of this study, there exist some implications for early childhood music education practices. In terms of texted or non-texted songs and chants, there is no clear indication that either should be used exclusively. Nevertheless, some findings suggest that there are certain benefits to instruction containing non-texted songs

and chants.

In this study, it seemed as if the neutral syllables encouraged the children to create their own music more frequently through spontaneous independent singing in particular. Perhaps if teachers sing songs with neutral syllables, the children might be more likely to make music in a similar fashion, without a focus on the added element of text or reproducing a specific song. By providing a neutral syllable model for the children, they can then manipulate their voices using varying pitches, rhythms, or a combination of the two to produce unique musical statements.

Chanting with neutral syllables may also contribute to increased rhythm pattern responses. If the children are used to hearing chants on "ba" or even participating in those chants, then rhythm pattern instruction does not seem so far removed from what they are already hearing and doing. In this way it would be advantageous for early childhood teachers to include chants on neutral syllables in their repertoire, particularly when paired with rhythm pattern instruction.

Singing or chanting on a neutral syllable in informal music instruction might also contribute to the children's desire to create music on their own, both simultaneously, and in future, independent contexts. Since the children will not be focused on matching the text, they may be more likely to experiment with the musical qualities of the song or chant as well as their singing voices rather than attempting to reproduce the teacher's song or chant. This comfort with creating music can then transfer to other music behaviors, such as tonal or rhythm pattern responses on neutral syllables.

While I was delighted to hear the children play with music by simultaneously singing and chanting, it occurred to me that they might not be listening to the music as

intently since they were actively engaged in making music at the same time. I never actually invited the children to "sing along with me," but in both classes children did so. This is most likely a result of their past experiences with music. In fact, those days that I arrived during "music time" or the daily procedures, the teachers were typically encouraging the children to sing along with them. For example, the children in the *No Text Class* sang a number of daily songs, including a "weather song" and a "days of the week" song. Perhaps it was strange to the children that I did not ask them to sing along with me, so out of habit, they did so. While I would never suggest that a teacher instruct a child not to sing along, perhaps children should be provided with more opportunities to simply listen to music being sung or chanted to them by an adult. In this way, they might be able to absorb the tonality and meter of the music more readily since they are not simultaneously singing or chanting along.

As a teacher, I came to realize that there are personal and professional benefits to engaging in this type of research. As a participant-observer, I was required to both lead the class and collect data simultaneously. Going into it, I thought it would be nearly impossible to remember what occurred in the class by the time I sat down to record my field notes. In hindsight, this task actually kept me more alert to the behaviors of the children throughout the class, as I made mental notes of their participation, spontaneous behaviors, responses and the quality of their responses. As an inexperienced teacher, I tend to focus on myself and my skills and performance as a teacher: am I singing in tune, what am I going to do next, am I doing the right thing? While I still had these questions in the back of my mind, I was required, for the purposes of this study, to pay more attention to the children and how they were responding during the class. Even for an

experienced teacher, this type of naturalistic research could be beneficial in assessing children's responses and involvement in an early childhood music setting.

Suggestions for Future Research

Given the informal nature of early childhood music, there are things that one simply cannot control for when engaging in qualitative research with this population. The researcher is dependent on the spontaneous or elicited responses of the children during the course of the study. In addition, as I experienced with this study, there might be fundamental differences between the two groups of children being compared.

Based on the results and my experiences throughout this process, I have arrived at a number of suggestions for future research. First, it would be useful to replicate this study with different populations, perhaps over a longer period of time. It would also be beneficial to conduct similar research on the use of texted and non-texted songs and chants in early childhood music. This could include a more in depth look at individual teachers' use of text in a class, and the differences in responses among the same group of children. It would also be interesting to discover if children who are accustomed to music instruction containing non-texted songs respond to the music differently than children accustomed to music instruction containing texted songs, perhaps in two different early childhood music programs.

There are also some unexpected issues that have arisen as a result of this study. First, I wonder if the children's continual simultaneous singing or chanting may have had a negative impact on their music absorption. While I do not think there is a way of studying this question in particular, the simultaneous singing and chanting behavior is something that could be explored further, particularly in how it relates to the children's

music culture at home and school. It would also be interesting to explore the impact that differences in child personalities and class dynamics have on child responses in an informal music environment. As an early childhood music teacher, it is often difficult to assess the musical development of those children who do not offer responses during class time. Perhaps this is a result of the child's shy demeanor, their comfort in the classroom community, or their familiarity with the other children or the teacher. A lack of response does not necessarily indicate a lesser level of musical development or enjoyment of music.

The use of text in an informal, early childhood setting is not a topic that has received much attention. This study has offered a limited amount of information regarding whether texted or non-texted songs and chants are more beneficial for instruction. It would be useful to further our understanding of how young children interact musically with texted and non-texted songs and chants in an informal early childhood music setting so that we can better accommodate their music learning needs through the use of appropriate song and chant material.

APPENDICES

Appendix A

Human Subjects Application Approval

MICHIGAN STATE
UNIVERSITY

Initial IRB Application Approval

September 28, 2005

To: Cynthia TAGGART
209 Music Practice Bldg.

Re: **IRB # 05-756** Category: EXPEDITED 2-6, 2-7
Approval Date: September 27, 2005
Expiration Date: September 26, 2006

Title: A MULTIPLE CASE STUDY INVESTIGATING THE COMPARATIVE EFFECTS OF EARLY CHILDHOOD MUSIC INSTRUCTION CONTAINING SONGS AND CHANTS WITH TEXT AND SONGS AND CHANTS WITHOUT TEXT ON THE RESPONSES OF PRESCHOOL CHILDREN

The University Committee on Research Involving Human Subjects (UCRIHS) has completed their review of your project. I am pleased to advise you that **your project has been approved.**

The committee has found that your research project is appropriate in design, protects the rights and welfare of human subjects, and meets the requirements of MSU's Federal Wide Assurance and the Federal Guidelines (45 CFR 46 and 21 CFR Part 50). The protection of human subjects in research is a partnership between the IRB and the investigators. We look forward to working with you as we both fulfill our responsibilities.

Renewals: UCRIHS approval is valid until the expiration date listed above. If you are continuing your project, you must submit an ***Application for Renewal*** application at least one month before expiration. If the project is completed, please submit an ***Application for Permanent Closure***.

Revisions: UCRIHS must review any changes in the project, prior to initiation of the change. Please submit an ***Application for Revision*** to have your changes reviewed. If changes are made at the time of renewal, please include an ***Application for Revision*** with the renewal application.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects, notify UCRIHS promptly. Forms are available to report these issues.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with UCRIHS.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at UCRIHS@msu.edu. Thank you for your cooperation.

Sincerely,

Peter Vasilenko, Ph.D.
UCRIHS Chair

OFFICE OF
RESEARCH ETHICS AND STANDARDS
University Committee on Research Involving Human Subjects
Michigan State University
202 Olds Hall
East Lansing, MI
48824
517/355-2180
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Web:
www.humanresearch.msu.edu
E-Mail: ucrihs@msu.edu

Appendix B

Parent Letter and Parental Consent Form

Dear Parents,

I am writing to request permission for your child to participate in my research study, "A Multiple Case Study Investigating the Comparative Effects of Early Childhood Music Instruction Containing Texted and Non-Texted Songs and Chants on the Responses of Preschool Children," which is in partial fulfillment of the Master of Music in music education degree at Michigan State University. The purpose of my research is to investigate the use songs with and without text with preschool children in an early childhood music setting. I am interested in the possible differences between the two types of song instruction in terms of the children's musical or verbal responses.

The study will take place over a 10-week period, using two existing classes. The children will participate in a 30-minute music class once per week during their normal school day at Harley Franks. I will keep a weekly journal reflecting the children's behavior and responses during each music class. In addition, I will also video-record the classes on two separate occasions during the 10-week period to further supplement my weekly journal entries. The video data will be destroyed at the conclusion of the study.

One class will receive instruction consisting of songs with words, while the other class will receive instruction consisting of songs without words. Aside from this difference, both classes will participate in the same activities, receive the same quality of instruction, and be provided the same opportunities to use musical materials.

Your child's performance and identity will be kept confidential throughout the entire process, including the final report of results. Your privacy will be protected to the maximum extent allowable by law. Participation in this study is voluntary, participants may withdraw at any time without penalty, and the participants will be at no risk. I hope you will approve your child's participation in this study by signing and returning the attached consent form.

If you have any questions or concerns about this study, feel free to contact me at 517-231-3021 (sulli266@msu.edu), or the responsible project investigator, Cynthia Taggart at 517-432-9678 (taggartc@msu.edu). If you have any questions or concerns regarding your child's rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact Peter Vasilenko, Ph. D., Chair of the University Committee on Research Involving Human Subjects (UCHRIHS) by phone: 517-355-2180, fax: 432-4503, e-mail: uchrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Sincerely,

Kristen Sullivan
Master's Student- Music Education
Michigan State University

Please return this form to school if you consent to your child's participation in my study. I will then make a copy and send it back to you for your records.

I have read the attached letter and hereby consent to my child's participation in your study, "A Multiple Case Study Investigating the Comparative Effects of Early Childhood Music Instruction Containing Texted and Non-Texted Songs and Chants on the Responses of Preschool Children". There are no known risks associated with participation in this study. While my child will not benefit from participation in this study, his or her participation may contribute to a further understanding of how young children interact with music. Information gained in this study may help future music educators and their students. In addition, participation in this study is voluntary, and my child is free to withdraw from the study at any time without penalty, and can refuse to participate in any procedures. I can withdraw my child from this study by contacting the investigator, Kristen Sullivan (517-231-3021, sulli266@msu.edu), or the responsible project investigator, Cynthia Taggart (517-432-9678, taggartc@msu.edu). My child's performance will remain confidential in this study, and my child's name will not appear in any report of results. I give permission for my child to be video-taped for the purposes of this study. When the study is completed, the results will be made available to me upon request. My signature below indicates my consent for my child to participate in this study.

Child's Name: _____

Parent or Legal Guardian's Signature: _____

Date: _____

Appendix C

Sample Lesson Plan

Materials: beanbags, scarves, egg shakers

Recording: *Kronos Quartet Performs Philip Glass*, Track 11

1. *Hello Song*- Major/Triple
Move with flow while singing.

2. *Round and Round*- Dorian/Duple
Pretend to make a big pot of soup, stirring with flow. Reinforce dominant-tonic (D/T) when adding ingredients and tasting. Blow on the soup before trying it.

3. *My Pony Bill*- Minor/Triple
Move beanbags with flow, D/T at the end. **Minor Tonal Patterns**

4. *Bubble Gum*- Multitonal/Multimetric
Sing while pretending to grow like a bubble, then "pop!"

5. *Clackety Clack*-Triple
Make a train and march around to the beat. **Triple Rhythm Patterns**

6. *Scarf Dance*- Track 11

7. *Jeremiah Blow the Fire*- Major/Duple
Move scarves with flow, blow at the end with D/T focus.

8. *Sam Sam the Butcher Man*- Lydian/Duple
Tap eggs to beat, D/T

9. *Swinging*- Mixolydian/Triple
Move with flow or beat, D/T.

10. *Goodbye Song*- Major/Triple
Move with flow while singing.

Appendix D

Repertoire Sources

Bolton, B. M. (1999). *Childsong, book 1*. Bestbael Publications.

Taggart, C. C., Bolton, B. M., Reynolds, A. M., Valerio, W. H. & Gordon, E. E. (2000). *Jump right in: The music curriculum, book 1*. Chicago: G.I.A. Publications, Inc.

Valerio, W. H., Reynolds, A. M., Bolton, B. M., Taggart, C. C., & Gordon, E. E. (1998). *Music play*. Chicago: G.I.A. Publications, Inc.

REFERENCES

Alvarez, B. (1989). Musical thinking and the young child. In E. Boardman (Ed.), *Dimensions of musical thinking* (pp. 57-72). Reston, VA: MENC.

Andress, B. (1980). *Music experiences in early childhood.* New York: Holt, Rinehart and Winston.

Andress, B., Heimann, H., Rinehart, C., & Talbert, E. G. (1973). *Music in early childhood.* Reston, VA: MENC.

Aronoff, F. W. (1969). *Music and young children.* New York: Holt, Rinehart and Winston.

Batcheller, J. M. (1975). *Music in early childhood.* New York: Center for Applied Research in Education.

Bayless, K. M. & Ramsey, M. E. (1987). *Music: A way of life for the young child* (3rd ed.). Columbus, OH: Merrill.

Bedsole, E. A. (1989). A descriptive study of the musical abilities of three- and four-year old children (Doctoral dissertation, University of Illinois at Urbana-Champaign, 1987). *Dissertation Abstracts International, 48,* 1688A.

Christianson, H. (1936). Trends toward music in the first years. In H. Christianson (Ed.), *Music and the young child* (pp. 6-14). Washington, DC: Association for Childhood Education.

Comenius, J. A. (1897). *Comenius' school of infancy: An essay on the education of youth during the first six years* (W. S. Monroe, Ed.). London: Isbister & Company. (Original work published 1633).

Feierabend, J.M. (1990). Music in early childhood. *Design for Arts in Education, 91*(6), 15-20.

Feierabend, J. M., Saunders, C. T., Holahan, J. M., & Getnick, P. E. (1998). Song recognition among preschool-age children: An investigation of words and music. *Journal of Research in Music Education, 46,* 351-359.

Fredrikson, M. (1994). Variants in spontaneous songs and the enculturation process in infants. In H. Lees (Ed.), *Musical connections: Tradition and change. Proceedings of the 21st World Conference of the International Society for Music Education.* (pp. 178-183). Tampa, FL: ISME.

Gault, B. (2000). The effects of pedagogical approach, presence/absence of text, and developmental music aptitude on the song performance accuracy of kindergarten and first-grade students (Doctoral dissertation, University of Hartford, 2000). *Dissertation Abstracts International, 61*, 925.

Gee, C. B. (2002). The use and abuse of arts advocacy and consequences for music education. In R. Colwell & C. Richardson (Eds.), *The new handbook of research on music education teaching and learning* (pp. 941-961). Oxford University Press.

Goetze, M. (1985). Factors affecting accuracy in children's singing (Doctoral dissertation, University of Colorado at Boulder, 1985). *Dissertation Abstracts International, 46*, 2995.

Gordon, E. E. (1997). *Learning sequences in music.* Chicago: G.I.A. Publications, Inc.

Gordon, E. E. (1997a). *A music learning theory for newborn and young children.* Chicago: G.I.A. Publications, Inc.

Gould, A. O. (1968). *Finding and learning to use the singing voice: A manual for teachers.* Washington, DC: United States Office of Education. (Project No. 5-0241)

Gould, A. O. & Savage, E. J. (1972). *Teaching children to sing.* Dubuque, IA: Kendall Hunt Publishing.

Greenburg, M. (1979). *Your children need music.* Englewood Cliffs, NJ: Prentice-Hall.

Holahan, J. M. (1987). Toward a theory of music syntax: Some observations of music babble in young children. In J. C. Peery, I. W. Peery, & T. W. Draper (Eds.), *Music and child development* (pp. 96-106). New York: Springer-Verlag.

Hornbach, C. M. (2005). Ah-eee-ah-eee-yah-eee, bum, and pop, pop, pop: Teacher initiatives, teacher silence, and children's vocal responses in early childhood music classes (Doctoral dissertation, Michigan State University, 2005). *Dissertation Abstracts International, 66*, 3246.

Jacobi-Karna, K. (1996). The effects of the inclusion of text on the singing accuracy of preschool children (Doctoral dissertation, University of Arizona, 1996). *Dissertation Abstracts International, 57*, 4682.

Katz, L. G. & Hoffman, M. E. (1985). Recent research on young children: implications for teaching and development/Implications for music education. In J. Boswell, (Ed.), *The young child and music: Contemporary principles in child development and music education. Proceedings of the Music in Early Childhood Conference* (pp. 83-89). Reston, VA: MENC.

Lange, D. M. (1999). The effect of the use of text in music instruction on the tonal aptitude, tonal accuracy, and tonal understanding of kindergarten students (Doctoral dissertation, Michigan State University, 1999). *Dissertation Abstracts International, 60*, 3623.

Levinowitz, L. M. (1987). An experimental study of the comparative effects of singing songs with words and without words on children in kindergarten and first grade (Doctoral dissertation, Temple University, 1987). *Dissertation Abstracts International, 48*, 863.

Levinowitz, L. M. (1989). An investigation of preschool children's comparative capability to sing songs with and without words. *Bulletin of the Council for Research in Music Education, 100*, 14-19.

McDonald, D. T. (1979). *Music in our lives: The early years*. Washington, DC: National Association for the Education of Young Children.

Morrongiello, B. A. & Roes, C. L. (1990). Children's memory for new songs: Integration or independent storage of words and tunes? *Journal of Experimental Child Psychology, 50*(1), 25-38.

Murphy, J. & Sullivan, G. (1968). *Music in American society: An interpretive report of the Tanglewood symposium.* Washington, DC: MENC.

Nye, V. (1979). *Music for young children* (2nd ed.). Dubuque, IA: Wm. C. Brown.

Reimer, B. (1999). Facing the risks of the Mozart effect. *Arts education policy review, 101(2)*, 3-21.

Rogers, S. L, (1990). Theories of child development and musical ability. In F. R. Wilson & F. L. Roehmann (Eds.), *The biology of music making: Music and child development. Proceedings of the 1987 Denver Conference* (pp. 1-10). St. Louis, MO: MMB Music.

Rudgers, G. B. (1987). Intrinsic versus extrinsic rewards of music education. *The Instrumentalist, 41(9)*, 96.

Serafine, M. L., Crowder, R. G., & Repp, B. H. (1984). Integration of melody and text in memory for songs. *Cognition, 16*, 285-303.

Sims, W. L. (Ed.). (1995). *Strategies for teaching prekindergarten music*. Reston, VA: MENC.

Smale, M. J. (1987). An investigation of pitch accuracy of four- and five-year-old singers (Doctoral dissertation, University of Minnesota, 1987). *Dissertation Abstracts International, 48*, 2013.

Stewart, C. (1997, March). Music's intrinsic value. *Music Educators Journal, 83*, 10.

Swears, L. (1985). *Teaching the elementary school chorus*. West Nyack, NY: Parker Publishing Company.

Taggart, C. (2003). Child-centered play in music: Developmentally appropriate practice. *Early Childhood Connections, 9*(2), 15-23.

Tower, M., Davis, H., & Parker, C. (1989). More than music: Two approaches to teaching. In B. Andress (Ed.), *Promising practices: Prekindergarten music education* (pp. 65-75). Reston, VA: MENC.

Valerio, W. H., Reynolds, A. M., Bolton, B. M., Taggart, C. C., & Gordon, E. E. (1998). *Music play*. Chicago: G.I.A. Publications, Inc.

Veldhuis, H. A. (1985). Spontaneous songs of preschool children [Abstract]. In J. Boswell, (Ed.), *The young child and music: contemporary principles in child development and music education. Proceedings of the Music in Early Childhood Conference* (p. 118). Reston, VA: MENC.

Welch, G. F., Sergeant, D. C. & White, P. J. (1998). The role of linguistic dominance in the acquisition of song. *Research Studies in Music Education, 10*, 67-74.