

Nurturing Children's Innate Musicality: The Impact of Music Self-Concept and Parent Education on Musical Parenting Practices with Young Children.

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ABSTRACT OF THE DISSERTATION

Nurturing Children's Innate Musicality: The Impact of Music Self-Concept and Parent Education on Musical Parenting Practices with Young Children.

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The purpose of this mixed-methods experimental study is twofold. First, the researcher examined the relationship between parents' musical self-concept and intentional music-making with their young children (four years of age and under.) An intentional music-making episode (*IMME*) is defined as a consciously parent-initiated activity or extension of an activity, either spontaneous or planned beforehand, in which both parent and child are musically engaged. Second, the research considers the impact of active and passive parent education methods on frequency of *IMME*.

In order to assess musical self-concept, a modified version of Asmus' *Motivation for Music* test was administered to subjects before treatment. Subjects were randomly distributed into one of two groups. The Active Group comprised those receiving weekly electronic newsletters about music-making with young children and who were also enrolled in a 10-week parent/child music class. The Passive Group only received the weekly e-newsletters about music-making with young children. All subjects took a researcher-constructed survey pre- and post-treatment to assess for any change in *IMME*.

Analysis indicated that variability in *IMME* attributable to *MSC* was low ($R^2 = .0030$), and that there was no significant difference in *IMME* of subjects who completed Active and Passive treatments. That is, no connection was identified linking

subjects' *MSC* and the amount of musical engagement with their children, lending evidence to the idea that music is a fundamental human drive and intrinsic to the parent/child relationship.

A Repeated Measures ANCOVA revealed a positive relationship between both Active and Passive treatment conditions and *IMME*, as the entire sample demonstrated statistically significant improvement from pre- to posttest *IMME* scores ($p < .001$).

Limited qualitative data revealed that Active Group parents finished the treatment with more confidence in their own ability to be musical with their child, as well as a strong commitment to continued intentional music-making with their children in the future.

Taken together, these findings support the idea that music specialists can play a valuable role in educating parents about music-making with their young children, thereby strengthening the crucial early musical development of future students.

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soli Deo gloria

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CHAPTER ONE

Introduction

Neuroscientific research over the past three decades has demonstrated that human beings possess the innate ability to be musical (Hodges, 2006; Levitin, 2009; Trainor, 2005). Babies, in utero and very soon after birth, display a propensity to respond to musical stimuli (Dowling, 1999; Kisilevsky, 2009). The cross-cultural act of parents making music with their newborn baby is one that is intuitive for both parties (Trehub et al., 1997; Trevarthen & Malloch, 2002). Although a few studies suggest that there may be a decline in musical interactions between parents and their very young children (Baker & Mackinlay, 2006; de Vries, 2007), much research in this area maintains that these musical exchanges are taking place on a fairly frequent basis (Custodero, 2002; Trehub, 1999).

If musical ability is present in all humans and parents are consistently making music with their infant children, then why does the literature point to the idea that many children lack basic musical competence upon entering elementary school (Atterbury & Silcox, 1993; Davidison, Faulkner & McPherson, 2009)? This competence, reflected in a child's ability to sing in tune and move competently to the beat in music (Guilmartin, 1999), is a necessary foundation for the formal music instruction that will take place in later elementary years. What factors might account for this discrepancy?

In considering this problem, one avenue of interest for early childhood music practitioners may be found in examining musical interactions between parents and their young children. It may also be enlightening to look at parents' motivation for and self-concept in music, since both of these factors greatly influence how people view their

potential for success in any area (Covington & Omelich, 1985; McPherson, 2009; Schunk, 1983).

Too many adults are quick to assert their lack of musical “talent” (Frederickson, 2000; Hennessy, 2000; Richards & Durrant, 2003). It is not unusual for musicians to encounter people who share their tales of perceived musical failure or, worse, humiliation from their youth (Cuddy, Balkwill, Peretz, & Holden, 1983; Peretz & Zatorre, 2005; Whidden, 2008). How did they come to label themselves this way? Moreover, when they eventually become parents, do their beliefs impact the frequency of musical interactions with their children (Levinowitz, 1993)? Can these attitudes be changed in an attempt to foster more musical engagement between parents and their very young children?

Because there is conflicting research concerning the amount of musical interactions occurring at home, the first problem of this study concerns the amount of musical parenting with young children, as well as the potential impact of a parent’s musical self-concept, or perceptions of and beliefs about his or her own musical abilities, on these interactions. Musical parenting addresses children’s needs through the use of music, including any and all musical engagement that takes place between a caregiver and young child during direct interaction with each other (Custodero & Johnson-Green, 2008). The second problem of this study is determining what reasonable measures might be employed to encourage greater musical interactions in the home environment.

Considering the influence of the home environment on a young child’s music development in the years before formal schooling begins, it is surprising to find only a modest number of studies that specifically look at musical parenting practices (Sanders, 2000; Young, 2005). The present study seeks to add to this body of literature through the

investigation of these practices in conjunction with parental music self-concept (*MSC*). The researcher will look at the frequency of intentional music-making episodes (*IMME*) between non-professional musician parents and their young children. An *IMME* is a consciously parent-initiated activity or extension of an activity, either spontaneous or planned beforehand, in which both parent and child are musically engaged. This research will involve parent participation in one of two types of music education programs for parents of very young children, with the ultimate goal of encouraging parents to sing and move more with their children.

Statement of Purpose

The purpose of the present study was twofold. First, the researcher examined the relationship between parents' *MSC* and intentional music-making with their very young children (under four years of age.) The second purpose of the research was to consider the impact of active and passive parent education programs on the frequency of intentional music-making episodes between a parent and child.

Research Questions

Since the first problem of the study concerned the relationship between a parent's *MSC* and frequency of *IMMEs* with their young children, the first research question was:

1. Does *MSC* impact frequency of *IMME*?

The second problem of the research concerned how music educators might best reach parents in an effort to educate them and encourage more music-making in the home throughout the crucial early years of music development. Therefore, in an effort to look at the impact of parent education on musical parenting, the second research question was:

2. What are the significant effects of a passive versus active approach of parent education on *IMME*, considering onset *MSC*?

Hypotheses

Before treatment began, the researcher assumed that no significant differences would be found. Therefore, the following null hypotheses were designed in order to directly relate to both research questions:

H₀#1. The pretest *MSC* and *IMME* scores for both Active and Passive Group subjects will be independent.

H₀#2. There will be no significant difference between the Active and Passive treatment groups in the increase in intentional music-making episodes as a result of the 10-week treatment period.

Limitations

The scope of this study was intended to be as broad as possible. However, there were constraints that may serve to make it difficult to generalize the findings of the present study to the general population. One such constraint was the fact that the study was limited to this one particular population, relatively small in size, containing only 56 subjects. One must also take into consideration the lack of educational, racial, and socio-economical diversity in the study subjects, which is not reflective of the larger population.

Lastly, there was not a dedicated control group for the study. This decision was based on the idea that one would not expect anything to change without an outside influence, as well as the fact that the pretest scores served as a type of control. Another factor against a traditional control group was that, in a subject pool that was already not

very large, adding a control group would make the subgroups too small to find significant differences. These challenges make it difficult to draw either descriptive or inferential conclusions for the broader population, which must be taken into account when assaying the findings.

Definition of Terms

1. Musical Aptitude: The inherent potential to achieve in music. This potential is normally distributed in the population and unfolds developmentally.
2. Musical Parenting: The use of music to provide for the expressed and implicit needs of children, including any and all musical engagement taking place between a caregiver and young child during direct interaction with each other.
3. Basic Musical Competence (BMC): The ability to sing in tune and move competently to the beat in music.
4. Musical Self-Concept (MSC): A person's beliefs about and perception of their musical abilities, including factors they believe influence these abilities.
5. Intentional Music-Making Episode(s) (IMME): A consciously parent-initiated activity, either spontaneous or planned beforehand, in which both parent and child are musically engaged.
6. Infant-Directed (ID) Speech/Singing: Sounds directed toward infants by their caregivers. This speech is a cross-cultural phenomenon used to convey emotion and is characterized by a unique simplicity of contour, usually in one direction and often quite repetitive in nature with significant differences in pitch, rhythm and tempo, elongation of vowels compared to normal adult speaking parameters.

7. Parent Education Program: An organized program run by any organization or individual attempting to increase a parent's knowledge or understanding in a specific area of their child's physical, emotional, social, or academic life.

CHAPTER 2

Related Literature

Who possesses true musical potential? Can only a gifted elite experience music in a meaningful way with the largest percentage of the population relegated to musical mediocrity? To their chagrin, music educators have encountered those who boldly proclaim themselves to be “unmusical” or “non-singers” (Whidden, 2009). However, there is a growing body of research, particularly in the neuroscientific realm, that contradicts the view that music is reserved only for the talented few (Trainor, 2005). Before embarking on the current investigation, the researcher will contextualize the need for the study by examining the body of literature that has thus far contributed to a deeper understanding of how music is possessed by a child initially, processed by the brain as the child grows, and developed through a balance of nature and nurture working together in musical development.

The Brain and Musicality

Plainly stated, “musicality is a natural ability of the brain” (Koelsch & Siebel, 2005, p. 578). Research reveals that the most basic musical elements are acquired through normal levels of exposure to music as humans grow, as a result of the interaction between genetics and environment (Hannon & Trainor, 2007). Both musically trained and untrained people show the ability to acquire musical skills (Koelsch, et al., 2003; Hamamoto, Botelho, & Munger, 2010; Maess, Koelsch, Gunter, & Friederici 2001; Norton et al., 2005). Regardless of the musical environment, most people eventually achieve the ability to sing, at least at a basic level (Peretz & Zatorre, 2005).

Hodges (2002, p. 51) states, that “growing a brain is a dynamic, interactive process that is driven by genetics and shaped by experiences in living.” He outlines three key elements in brain development. Myelination is the development of the fatty coating which forms on the axons, assisting in faster and more effective inter-neuronal communication. Second is brain plasticity, the dynamic physical effect of learning on brain structure over time. Lastly, he describes “pruning,” which occurs when experiences determine which synaptic connections are retained, based on frequency and strength of firing. Hodges says, “Neural pruning illustrates the interplay between nature and nurture. Genetic instructions richly endow a youngster’s brain with numerous possibilities. Actual experiences sculpt the brain toward its eventual adult make up” (p. 55).

The pruning defined above makes neuronal communication more effective and efficient. Almost half of the synapses in babies are pruned by adulthood (Hirsh-Pasek & Golinkoff, 2003). Repeated activities cause the brain to focus on the neural pathways necessary to accomplish whatever skill is being attempted (Healy, 2004). Consistent synaptic firing creates stronger connections, which ultimately remain, while the less frequency used connections are excised. The communication systems formed as a result of this synaptic firing become automatic and expert with repetition. Experiences very early in life affect the circuitry of what will eventually become the adult brain (Hirsh-Pasek & Golinkoff, 2004). Healey (2004) states, “The human brain has the potential to adapt itself to multiple needs; it develops skill and efficiency by clearing away (‘pruning’) the dead wood and strengthening those connections needed by that particular child in that particular context” (p. 19).

Brain studies have demonstrated that both brain hemispheres possess networks of neurons involved in musical processing (Altenmuller, 2003). Research also shows that music activates both hemispheres, with pitch processing mostly occurring in the right side of the brain (Jentschke, Koelsch, Sallat, & Friederici, 2008; Peretz & Zatorre, 2005). A 2003 study found differences, by gender, in some aspects of music processing for five- to nine-year-old children. Although this research focused on these gender differences, it also provided evidence of the interaction of music between both brain hemispheres, as the boys exhibited a left-hemisphere preference, while girls' processing was more bilateral in nature (Maess, Koelsch, Gunter, & Friederici, 2001). These different studies highlight brain activity that is unique to musical interactions (Trainor, 2005).

New brain imaging technology points to specific differences existing in the brain between language and music processing (Lappe, Herholz, Trainor, & Pantev, 2008; Levitin & Tirovolas, 2009). This research suggests that there are specific systems in the brain that are reserved for and activated only by music (Fujioka, Ross, Kakigi, Pantev & Trainor, 2006; Peretz, 2001; Peretz & Coltheart, 2001). For example, Peretz and Zatorre (2005) assert that "singing, memory and sight-reading are all musical activities that are functionally and neuroanatomically dissociable from analogous activities that involve speech" (p.106). Schmidhorst (2004) postulates that music processing in the brain is modular, even though there is crossover with language centers in the brain. Music processing in the brain, therefore, while sharing many similarities to language, can simultaneously be considered unique (Besson & Schon, 2003). In a study of working memory, Berz (1995) arrives at a similar conclusion where language and music seem to be processed in both similar and dissimilar ways.

Children's brains will create and solidify neural connections when they receive musical encouragement and input from their caregivers, who should provide music in the home and support for music when children get to school (Smithrim, 1994; Tafuri, 2009). Environmental stimuli presented and available to infants and toddlers activate neuronal connections, leading to stronger networks that will be foundational for later, more formal music learning. Edwin Gordon (1993), states that the ages between 0-18 months are a crucial time in which informal exposure to music has the most impact on neural pathways.

It is likely that the proliferation of these and other neuroscientific discoveries, along with readily-available prenatal education have helped many parents become somewhat familiar with the idea that the human fetus hears and responds to sound and music in utero (DeCasper & Fifer, 1980; Dowling, 1999; Storr, 1992). They may, however, be less familiar with how music is processed in the brain of their growing child before and after birth. Do newborns process and remember musical sounds in their environment? What can babies do musically, or are they simply passive listeners, hearing sound in their environment without responding?

Music Processing in Infancy

The physiology of hearing begins in early pregnancy and develops gradually throughout pregnancy until birth. Somewhere around the twenty-fourth week of gestation, the human fetus begins to hear and respond to sound (Hodges, 2006; Kisilevsky et al., 2009; Papousek, 1996), as well as to the emotional state of the mother (Parncutt, 2006). Neurobiologist Lise Eliot (1999) discusses the importance of the fetus's ability to hear and interact with sound stimuli thusly:

If any type of prenatal stimulation is going to make a difference to a baby's mental development, it is auditory input. Because hearing begins so early, and because sounds penetrate the womb so well, they are probably the best tool for stimulating a fetus' rapidly developing nervous system. (p.239)

Several early studies point to the idea that infants are "pre-equipped" to respond to musical stimuli (Baruch & Drake, 1977; de l'Etoile, 2006; Hargreaves, Miell, & MacDonald, 2002; Trehub, 2003). One study indicates that newborns who had been exposed to a repeated piece of music starting at 32 weeks gestation had a high response rate to that same music six weeks after birth, as compared to a control group who did not hear repeated music in utero (Wilkin, 1995). Not only does this imply a fetus's ability to hear music in utero, but that there exists the potential for the fetus to retain melodic information, in at least short-term memory (Hargreaves et al., 2002).

Newborn and very young babies respond positively to both the timbre and emotion of their mother's voice (de l'Etoile, 2006) and very soon after birth show a marked preference for their mother's voice over that of any other female (DeCasper, 1980; Kisilevsky et al., 2009). As they grow, response to melodic contour in maternal speech can be heard in their vocalizations during these communications (Balog, 2010). Not only do infants possess the ability to discriminate between high and low pitches, but they also prefer higher-pitched singing (Trainor & Zacharias, 1998).

Parent/Infant Music Interaction

Research also demonstrates the potential power of music in the nursery, existing in both emotional and physical domains (Custodero, Britto, & Brooks-Gunn, 2003; Fernald, 1989; Parncutt, 2006). Music is an avenue by which a caregiver bonds emotionally with an infant, helping the baby move toward secure attachment in later months (Forrester, 2010; Trehub, 1997b; Trevarthen, 1999). Some research asserts that

music is a basic human intelligence that is separate from other intelligences (Feierabend, 1990), and the first of the intelligences to form (Gardner, 1983; Ilari, 2005). It is therefore important to understand the function of music in the lives of the youngest human beings not only as a subject worthy of study in and of itself, but also as a means by which adults communicate with infants.

Infant-directed (ID) speech, which is also known as “motherese” is speech that is directed toward infants by their mother (Cooper, Abraham, Berman, & Staska, 1997; Grieser & Kuhl, 1988; Trehub, 2001). This speech is a cross-cultural phenomenon used to convey emotion and is characterized by a unique simplicity of contour, usually in one direction and often quite repetitive in nature (Trainor, 2002; Trainor, Austin, & Desjardins, 2000). There are significant differences in pitch, rhythm and tempo, elongation of vowels, when compared to normal adult speaking parameters, and infants pick up on the unique melodic contour and prefer ID-speech to the pattern of normal adult speech (Trehub, Bull, & Thorpe, 1984; Trehub, Hill, & Kamenetsky, 1997).

This emotion-laden mode of communication has been the focus of much research (Bell & Ainsworth, 1972; Bretherton, 2010; Lebedeva & Kuhl, 2010; Murray & Trevarthen, 1986; Papousek, 1996; Trehub, 2010b). Nakata and Trehub (2004) assert that “for infants who have no access to conventional means of communicating, maternal speech transmits affective information through prosodic and paralinguistic channels” (p.461). These musical interactions often further cement the mother/child attachment bond (Bretherton, 2010; Custodero, Britto & Xin, 2002; de l’Etoile, 2006; Mackinlay, 2009).

Rock, Trainor, and Addison (1999) suggest that ID singing is an even more powerful way than ID speaking for communicating with infants, at least on an emotional level. While ID speech may help the mother to describe things in the environment, ID singing enhances the emotional ties that exist between mother and child by addressing the more affective realm (Forrester, 2010; Nakata & Trehub, 2004). Although babies are not yet able to decode word meanings, they can sense the emotions behind the delivery of music. Even to the musically untrained ear, the expressive nature of caregiver performances is distinctive (Trehub, Hill, & Kamenetsky, 1997).

Care giving for very young children is an activity rich in these infant-directed singing opportunities, which can take place during feeding, diapering, bathing, traveling, or simply preparing for bed. These opportunities for interaction between parent and child are meaningful as well as enjoyable. Singing to and with infants is a shared experience that might well contribute to the emotional well-being of both parent and child not only as they build an attachment to each other, but as the parent helps the child learn to navigate the world of rituals and routines (Addessi, 2009; Custodero, 2006; Fiese et al., 2002).

The Process of Musical Development in Early Childhood

Infants not only bond with their parents through music, they also possess the capacity to attend to music in the surrounding environment (Dowling, 1999; Trainor, Wu, & Tsang, 2004). Infants perceive consonance as more pleasing than dissonance (Zentner & Kagan, 1998), and they also respond positively to both the timbre and emotion of their mother's voice (de l'Etoile, 2006; Trainor, 1996). Recent research asserts that infants store melodies using a relative, and not an absolute, pitch code framework (Plantinga &

Trainor, 2005). Often, preference is intrinsically tied to familiarity and can therefore lend insight to what infants do remember (Fagan et al., 1997; Palmer, Jungers, & Jusczyk, 2001; Rose, Gottfried, Melly-Carminar, & Bridger, 1982; Rovee-Collier, 1993; Volkova, Trehub, & Schellenberg, 2006).

These studies have advanced a picture of the infant as capable of processing musical information in many ways that are not fundamentally different from adults (Trehub, 2002). For infants, prior music experience is not always needed to encode musical elements, nor is it needed to demonstrate infant preference for musical elements (Ilari & Polka 2006; Saffran, Loman, & Robertson, 2000). These findings support the role of genetics in musical ability.

Early Musical Development and the Home Environment

While researchers reveal this important information about the genetic component of human musicality, they also continue to confirm the impact of the environment on the musical development of the very young child. While the nature-versus-nurture debate rages on in many areas of child development, a number of music researchers contend that both are almost equally impactful on music growth (Brand, 1986; Chuang, 2000; Denac, 2008; Evans, Bickel, & Pendarivs, 2000; Hallam 2006b; Persellin, 2006). Music potential is not, as many believe, a fixed trait, but rather something that unfolds developmentally (Andress, 1986; DeLieve & Sloboda, 1996; Frederickson, 2000; Hallam, 2006a).

Edwin Gordon describes the potential that all humans have for achievement in music as “aptitude” (2003). As a result of his research, he maintains that music aptitude is developmental and remains in flux until around age nine, implying that its growth is sensitive to instruction or lack thereof (2003). During these critical years, a child’s

genetically-endowed potential for music can, in effect, be “grown” by a highly-engaging music environment. Additionally, aptitude is normally distributed in the general population so that everyone possesses some ability to be musical (Walters, 1991). This fact can be used to refute the claim of many who call themselves “tone-deaf” or “unmusical,” or it can explain how missing the critical window in childhood perhaps precipitated their lack of musical growth as they got older (Cuddy et al., 2005; Pfordresher & Brown, 2007; Richards & Durrant, 2003).

Gordon (1993) further posits that little or no musical exposure before 18 months of age may relegate music to a place of insignificance in the brain of the child. In these early years, guidance toward musical development should be informal and should come from a child’s primary caregivers (Hallam, 2006a; Kelley & Sutton-Smith, 1987; Kirkpatrick, 1962; McPherson, 2009) in the form of singing, moving, chanting, and playing musically with and for the infant (Gordon, 2003; Levinowitz, 1985). These activities are akin to language acquisition, in which infants are initially exposed to great amounts of natural language or, in the case of music acquisition, musical experiences. Exposure to and interaction with music helps to build a kind of “vocabulary” that prepares them for the next stages of the musical process (Davidson & Borthwick, 2002; Bluestine, 2000).

Providing a good musical environment for a young child has little to do with buying the right CD’s or DVD’s or watching television programs with music (deVries, 2007; Lury, 2002), nor are “educational” or elaborate toys necessary to speed development (Gopnik, Meltzoff, & Kuhl, 1999; Zambo, 2008). Rather, active experiences in natural settings guided by loving caregivers will go much farther toward achieving this

goal (Thompson, 2004), since the young brain responds more readily to authentic interactions with sensory input (Healey, 2004). The earlier and more frequently parents take advantage of musical opportunities, the better the musical development of the child (Gruhn, 2002). Parents can provide these opportunities by simply making music with their children on a regular basis and demonstrating that they value music (Brand, 1986; Howe & Sloboda, 1991; McPherson, 2009; Moore, Burland, & Davidson, 2003; North & Hargreaves, 2008; Papousek, 1994; Sichivitsa, 2007; Trehub, 2006).

As infants grow, they move into and through language babble; there is a similar progression in their musical development (McMullen & Saffran, 2004). In the same way infants need the intuitive guidance of caregivers to successfully navigate language babble, they also need guidance from parents during the music babble period of their late infancy and early toddler years (Davidson & Borthwick, 2002; Gordon, 1993). Parents can and do help in this process by the straightforward act of singing and moving to music with their infants (Levinowitz, 1993). Live music-making such as singing, moving, chanting and playing with primary caregivers is the best vehicle for optimal music development in very young children (Honig, 1995; Ilari, 2002; Levinowitz & Guilmartin, 1994; Moog, 1976; Moorhead & Pond, 1978; Trehub, 2002).

Basic Music Competence in Early Childhood

Kenneth Guilmartin (1999) describes something he calls “basic music competence,” in which a child is able to sing in tune and move competently to the beat in music. Most children who have been surrounded by caregivers who frequently engage in music with them should easily acquire this competence (Smithrim, 1994). Once basic

music competence has been developed, children will be ready to begin more formal music instruction with confidence and competence as they enter school.

What, then, do early elementary music teachers actually encounter when their pre-school and kindergarten students enter the music classroom for the first time? Are these children already in possession of this basic music competence that should have prepared them for weekly general music classes? The answer, unfortunately, seems to lean more towards “no” than to “yes” (Atterbury & Silcox, 1993). More often than not, young students are unable to consistently use their singing voice or move comfortably to a steady beat when they enter school (Davidson, Faulkner, & McPherson, 2009; Guilmarin, 1999). This requires work on the part of the music teacher, who must now create a rich musical environment to provide remediation. When this happens, teachers spend time helping children achieve basic music competence and often choose to delay more formal instruction in music until students are able to sing in tune and move to the beat.

Musical Parenting Practices in Early Childhood

In seeking answers to what might account for the lack of basic music competence in young children, a logical starting place is the every day musical practices of parents and their very young children. Early development in all areas is contingent on effective parenting practices (Glascoe & Leew, 2009), and the same is true for music (Tafari, 2009). This concept of “musical parenting,” as described by Custodero and Johnson-Green (2008, p. 16), is “the use of music to provide for the expressed and implicit needs of children.” This includes any and all musical engagement that takes place between a caregiver and young child during direct interaction with each other. This field of inquiry

has begun to build a picture of music-making in the home (Barrett, 2009; Custodero, 2006; Custodero & Johnson-Green, 2003; de Vries, 2009).

There is some evidence from these researchers that points to a potential decline in music-making in the family unit (Baker & Mackinlay, 2006; de Vries, 2007 & 2008; McPherson, 2002; Papousek & Papousek, 1982), especially as the infant grows into later toddlerhood (Custodero et al., 2003). This finding might be due, at least in part, to the proliferation of technology and its impact on how our culture experiences music (Hargreaves, 2002; North, Hargreaves, & Hargreaves, 2004; McPherson, 2002; Papousek, 1996).

Television shows, DVD's, iTunes, infant musical toys, and audio recordings of children's music are ubiquitous, easily accessible, and vie for a parent's attention (Hargreaves & North, 1999; Huston & Wright, 1998). Parents may feel a sense of confidence in the use of these technologies in creating a musical home environment, especially when media messages imply that they are potentially beneficial for a young child's intelligence (de Vries, 2009). As a result, it seems that the focus has shifted somewhat from actually making music within the family unit (Custodero & Johnson-Green, 2003), to more passive experiences with musical "products," in the United States and across the globe (Ilari, Moura, & Bourscheidt, 2011; Lum, 2008; North & Hargreaves, 2004; Rana & North, 2007; Young, 2009). It seems that our culture sometimes encourages a more passive involvement in music. In his paper for the 2002 International Society for Music Education (ISME) World Conference Proceedings, McPherson made the assertion that "...individuals are increasingly becoming consumers of music rather than active participants" (p.56).

How, if at all, do parents impact their child's success in music? In 2000, Davidson, Howe, Moore, and Sloboda asked this question through a large-scale study. These researchers looked at a group of 257 young musicians along with their parents. All of the children were music students who played some type of instrument, but with varying levels of achievement. Five groups of high school students with differing levels of musical competence were interviewed. At least one parent of each student was also interviewed for the study in order to gain insight concerning how parental involvement did or did not influence musical success for the students.

Questions focused on the level of parental involvement in lesson attendance, practice initiation, practice supervision, parental involvement in music, and any changes in amount or nature of parental involvement over the course of time in which the student was involved in music lessons. One important finding of this research centered on the fact that children who were considered to be successful on their instrument had very high levels of support from their parents throughout their early years, no matter if the parent themselves was musically inclined.

Another equally important, but more surprising result of this research had to do with other factors that contributed to these students' success in music instrument lessons. One quote reveals this fact thusly, "...most parents were found to have broad interests in music rather than performance expertise as such" (p. 409). What this research reveals is that, while parental involvement and support was crucial to the success of these particular students, parents did not have to be musicians themselves in order to influence their child's success. The students with the highest level of music achievement in this study were not those whose parents were excellent musicians, but rather parents who

demonstrated support and encouragement for their children in spite of any musical deficiencies they themselves possessed.

In the aforementioned 2002 Proceedings of the ISME World Conference, Gary McPherson presented his work with Australian school children, their parents, and their music teachers. McPherson interviewed these subjects during the first three years of the child's instrumental lessons. This work revealed the importance of parents creating a strong musical environment for their child, and also the impact of parental value of music on a child's eventual music success. Many of the students who stopped taking lessons during the research had parents who were not supportive of their efforts. McPherson ends the writing by discussing the importance of a strong relationship of communication between parents, children, and music teachers. Of special interest to the current research is the idea of music teachers working toward building a better sense of partnership with parents in order to bolster their child's musical experience.

In another, more recent qualitative study looking at parental involvement in instrumental lessons, Wai-Chung Ho (2009) looked at families in Hong Kong in an attempt to gain insight into the music experiences and perceptions of young children outside of school, and especially in the home. The driving question of the research was what relationship existed between parental support of music and a child's musical participation. Nineteen families with children in grades three through eleven who either never took an instrument, formerly took lessons but had since quit, and those who were still involved in instrumental lessons were interviewed by the study author. Questions about musical habits and interest from the interviews with the children ranged from those pertaining to the child's perceived support for musical activities, to attendance in

community musical activities such as karaoke and concerts. Parents fielded questions about the value they did or did not place on music in their child's life and how much music figured into their day-to-day lives at home.

One important finding cited by the author concerns the importance and efficacy of parental involvement in their young child's musical development:

Though every child is unique and develops his or her own musical interests and tastes, it is important to consider the influence of key social factors such as parent support for both formal and informal music learning, which later can empower young people to feel involved in their musical development.... From early childhood parents could have positive musical interactions with their children, and could also easily incorporate music into their daily life. (p. 88)

Many of the students who were playing instruments credited parental support as crucial to their success. The author of this study postulates that a child's musical success may be highly correlated to the amount of parental encouragement and support. One of the most interesting findings was that a parent's value for music impacts his or her child's attitude toward learning music in the future. The seemingly negative finding was that many of the parents in this study had doubts about their children's musical abilities. Even though they believed music education had value, many of the parents eventually worked to steer their children away from music and towards academic subjects as their children grew older.

Some parents wonder about the efficacy of using technology to create a musical environment for their young children. In a study of preschoolers in Australia, Peter de Vries (2007) found that technology has a potentially negative impact on musical interactions in the home. He surveyed 63 parents of preschoolers to assess home musical activities. He then met with focus groups of respondents to glean more information about their ideas of musical parenting. The results indicate little live music-making and a heavy

use of CD's and DVD's by parents, who felt that these were a reliable mode of music education, and better than anything they themselves could provide. Parents pointed to a lack of time and ability to do more musically with their children, as well as to their assumption that the technology must be legitimate, since it was created by professional musicians, many of whom had their own television shows (p. 19).

While the few studies that suggest a possible decline in home music-making are noteworthy, the majority of research points to frequent and consistent musical engagement between parents and infants (Addessi, 2009; Forrester 2009; Custodero, 2002). These researchers demonstrate the ways in which music is used by caregivers to establish routines to order a family's day (Custodero, 2006; Fiese et al., 2002) and strengthen the parent/infant relationship (Bergeson & Trehub, 1999; Forrester, 2009; Kubicek, 2002; Winnicott, 1987). The research provides confirmation that parents, especially mothers, sing to their infants on an almost daily basis (Dissanayake, 2004; Nakata & Trehub, 1997; Trehub, 2010).

A seminal study regarding the frequency and nature of musical parenting comes from the large-scale work of Custodero, Britto, and Xin (2002). This research, which surveyed 2,250 parents of infants aged four to six months, offers important insight into the frequency with which parents engage musically with their infants. Answers from the 20-minute long telephone interviews with parents revealed "approximately two-thirds of...parents interviewed stated that they sing and play music for their babies every day (69% reported singing daily); 64.5% reported playing music daily" (p. 42). Interestingly, while a majority of parents agreed that it was natural for parents to sing to their baby, responses to the question of whether or not they themselves were musical varied (p. 44).

Music Self-Concept in Adults

This finding leads to a discussion of what this author labels as “musical self-concept” (*MSC*), something that potentially influences musical parenting choices. According to Hattie, “self-concept relates to one’s appraisals of his or her competence in a given area while self-esteem deals with how important success in that area is to the individual” (1992, p. 71). Various theories of achievement motivation have attempted to explain how motivation and behavior are influenced by self-concept in various realms, since these factors directly influence success or failure in these realms (Covington, 1984; Eccles, Wigfield, Harold, & Blumenfeld, 1993).

There is an existing body of research in music education focused on *MSC*, providing insight into people’s beliefs about their musical abilities and factors they believe influence these abilities (Hallam, 2010; Legette, 1998; Ommundsen, Haugen, & Lund, 2005; Reynolds, 1995; Vispoel, 1995). Research on *MSC* can be difficult to interpret, though, as people have varied conceptions of what it means to be musical; some attach it to active performance skills and others to mere appreciation (Hallam & Prince, 2003; Pitts, 2002; Roberts, 1991). Nevertheless, investigating *MSC* is important because it imparts insight into how musical action is guided by beliefs about self-efficacy (Brookover & Thomas, 1964; McPherson, 2009; Ritchie & Williamon, 2010).

North and Hargreaves (2008) contend that many people will not attempt musical participation if they possess the belief that they cannot succeed and are not encouraged by those around them. If children perceive that they lack musical ability, and teachers, peers,

and/or family members are not supportive of their music-making attempts, it is highly likely that they will not pursue musical activities in the future.

These beliefs [self-efficacy when looking at musical motivation] focus on the individual's degree of belief in both their ability and their capacity to achieve certain goals. These beliefs about the likelihood of success of course influence the choices people make; the amount of effort they put into a task and the amount of perseverance they demonstrate in the face of adversity; and their reactions to the outcome. (North & Hargreaves, 2008, p. 57)

So, what percentage of parents view themselves as unmusical or non-singers?

More importantly, what are the ramifications of these views of musical incompetence on musical parenting? Can knowledge about parents' motivation and self-concept in music assist music educators in reversing their views? At this point, it is worthwhile to consider how these parents, born with at least some propensity to be musical, eventually came to consider themselves as musically inept.

One critical factor may be the cultural framing of the concept of musical talent, often considered something reserved for only a select group within the population (Hennessy, 2000; Richards & Durrant, 2003; Shehan-Campbell, 1998). Exploiting this idea is the media's promotion of pop music "super-stars," which leads to a performer-centric view of music, leaving the vast majority of the population left to serve merely as passive observers (Hargreaves, Miell, & MacDonald, 2002; Shuter-Dyson, 1999). The world of technology does indeed provide access to more and varied music to the masses than ever before. However in so doing, music at times becomes more of a consumer product than an activity in which people can engage on a regular basis (Cassidy & Geringer, 1999; North & Hargreaves, 2004).

Many adults' negative childhood experiences with music also perpetuate the myth of talent being reserved for an elite few (Mack, 1983). Adults with low *MSC* may clearly

recall a moment of humiliation when their attempts at music-making were shut down by those in their lives who they considered to be musical experts (Whidden, 2009). Even some adults who took part in music lessons, choir, or dance classes, and perhaps even enjoyed these experiences in their youth, ultimately feel unmusical because they failed to be successful according to the cultural standard for musical achievement (Guilmartin, 1999). Without the encouragement of their music instructors and family, children who begin to doubt their ability will begin to develop low musical self-concept, even if they are still achieving in music (Monks, 2003).

In her research that of the plight of adult non-singers, Susan Knight (2000) discusses the repercussions of negative comments made to these adults during the course of their early musical experiences. One of the most disheartening components of her research involves stories of how each subject, at least once in childhood, was told to “be quiet” musically. Since these comments were often made by those they considered “real” musicians, the label was accepted without question, even if the child possessed a desire to sing and be musical. Knight’s research outlines the four common factors shared by these adults: (1) In their minds, they’ve never had the ability to sing, (2) this belief arose in childhood, (3) they often boldly declare this as fact in public, and (4) they might wish to sing but believe that the label is irrevocable.

These beliefs acquired early on largely fuel future choices for participation or withdrawal from different activities in childhood (Austin, Renwick, & McPherson, 2006). Davidson, Faulkner, and McPherson (2009) urge music educators to seek answers as to why so many children are not able to gain musical mastery. How often do children with negative musical experiences become adults with low *MSC*? Research regarding regular

classroom teachers charged with teaching music in their classrooms proves to be enlightening. The findings certainly point to a strong feeling of musical ineptitude on the part of a majority of these teachers. This low *MSC* is strong enough to cause hesitation about the task (Biasutti, 2010; de l'Etoile, 2001; de Vries, 2006; Lee Nardo, Custodero, Persellin, & Fox, 2006; McCullough, 2006; Seddon & Biasutti, 2008).

Do adults with low *MSC* bring this thinking to the table when they become parents? If people's past experiences bear on their parenting in the present (Borthwick & Davidson, 2002), the answer must be yes. In the above-referenced study by Knight (2000), self-labeling "non-singers" were hesitant to sing for their children. Levinowitz found that parents who felt musically inadequate shied away from making music at home with their children (1993). It is the expressed hope of many parents with low *MSC* that "real musicians" would teach their children how to be musical (Guilmartin, 1999), or that playing recorded music or music videos will be enough to create a musical environment until the children start formal music instruction in school (de Vries, 2007).

As discussed earlier, making music with infants is a global phenomenon that is intuitive for parents (Trehub et al., 1997; Trevarthen & Malloch, 2002). Musical engagement between parent and baby not only fits easily within the parameters of infant musical predisposition, but also establishes family routines and strengthens the parent/child bond (Addessi, 2009; Bornstein, 2002; Nakata & Trehub, 2004; Zur & Johnson-Green, 2008). Musical parenting of infants develops secure maternal attachment in the child, which has been proven to factor in the future psychological well-being of the child (de Gratzer, 1999; Trevarthen, 1999). Moreover, these interactions serve as a baby's first steps in their music education.

The musical development of these growing children requires input from the environment over time (Hallam, 2006b; Persellin, 2006). While providing electronic media to help a child create music is acceptable (Baker & Mackinlay, 2006; Yim, 2007), parents themselves are the crucial component in early music development as they share and model a variety of live music-making experiences with and for their young child (Honig, 1995; Ilari 2005; Romanek, 1974; Trehub, 2002). Furthermore, parents need to know that children will flourish musically if they believe that music is valued and encouraged by their caregivers (Berger, 2003; Bloom, 1985; Draves, 2008; Howe & Sloboda, 1991; Sandvoss, 1969; Scott-Kassner, 1994; Sichvista, 2007; Thames 1979; Yun & Schader, 2002). Educational opportunities may be the best avenue for disseminating this information to parents who may presently glean most of their knowledge concerning children's music from popular parenting magazines (Sims & Udtaisuk, 2008; Zdzinski, 1996). While these parents may value music, they are likely unaware of the most basic facts concerning the ways in which children develop musically (de Vries, 2009).

The research looking at how parents' conception of their musical ability impacts their children's musical development is almost non-existent. One family case study seems to stand alone to at least partially represent this area. In 2002, Jane Davidson and Sophia Borthwick undertook a detailed case study of a family of 4 in England. The family consisted of a mother, father, and their 2 young sons, ages 6 and 9 at the outset of the 19-month long study. Both parents were professional musicians and both sons took violin lessons from their mother. The family was interviewed every two months in one-on-one interviews with the study's authors. While the researchers were interested in many

aspects of a family of this nature such as sibling interactions and birth order, of particular interest to this researcher was their investigation into the impact of the parents on the children's development.

They found many interesting insights into the nature of how family dynamics impacted the boys' musical and social development. The broadest finding was that "...parental expectation combined with the parental 'support' over musical involvement determines the nature of a child's musical progress" (p. 133). In this case the mother's strong, positive view of herself musically especially influenced her first son, whom she considered to be very much like herself. This causes reflection as to how parents with a negative view of their own musicality might influence their children musically.

Parent Education Programs

A parent education program has been defined as any "organized programs that any group, organization, district, or school coordinates to increase parental knowledge in a particular area" (Ramirez, 2004, p. 133). There have been studies that have worked toward actively educating adults about children's potential for learning and interacting with the environment, such as the work of Wendland-Carro, Piccinini, and Millar (1999). In this study, researchers sought to find out whether an early intervention with mother-infant dyads classified as "normal" would enhance the quality of first-time mothers' interaction with their newborns. The writers stated that "even a brief intervention can directly influence the quality of mother-infant behavior" (p. 714).

There are certainly many studies that have investigated the relationship between parental involvement and students' success in school (Fagan, 1994; Fan & Chen, 2001, Ho, 2000; Jeynes, 2007; Katyal & Evers 2007; Knollman & Wild, 2007; Pang &

Watkins, 2000), but very few of these types of interventions have been attempted for music (Mackenzie & Clift, 2008; Ruddock & Leong, 2005). Programs have been developed to improve early childhood teachers' attitudes about engaging in more musical activities in spite of reservations about their own abilities (de l'Etoile, 2006; Hennessy, 2000). Actual music training and information about musical development altered the attitudes of reticent classroom teachers charged with leading music class for preschoolers (de l'Etoile, 2001). Knight (2000) suggests that education regarding the developmental nature of singing can help shift negative perceptions in those who label as non-singers.

A study from de Gratzter (1999) centered on an interactive weekly music class for young children and their parents. These hour-long classes were designed so that "without neglecting either the music task or the children and the group as a whole, efforts are focused on the adult, the fundamental cog in this complex machinery" (p. 51). Ms. de Gratzter was successful in liberating parents from their musical inhibitions so that they would be able to interact freely with their children in various music activities. Her findings demonstrated the parents' willingness to learn about their own musicality, as well as interact more in a musical way with their young children.

A lullaby education program was created for new mothers (Baker & Mackinlay, 2006). This program taught these mothers about the emotional, physical, and developmental benefits of singing lullabies to their babies. Mothers were instructed about the best uses of lullabies, and also learned new songs to broaden their rather narrow repertoires. When they started the program, the researchers were surprised to find that a small subset of the subjects claimed to have never sung with their babies (p. 157). At the

end of the program, however, they found a resultant upswing in all subjects' singing to their infants.

Justification for the Current Study

There is a paucity of research specifically concerned with the role of parents in the musical development of their children (McPherson, 2009). This scarcity is especially true for studies looking at children between one and four years of age, as much of the research in early music development focuses on either infants or older children (Gordon, 2003; Young, 2002 & 2005; Zdzinski, 1992). One promising avenue of investigation seems to be parent education programs, which can actively engage parents in the process of their child's educational experience, thereby helping their child be more successful in their academic pursuits (Ramirez, 2004).

Looking at relationships in the early environment and their impact on music development is a subject that is worthy of investigation (Evans, Bickel, & Pendarvis, 2000; McPherson, 2002). Studies of musical parenting of young children could open a window of understanding for parents and music educators, helping to bolster the success of individual students, as well as encouraging more music-making in the culture as a whole. Once they attain insight into the nature and importance of the home musical environment, teachers can better serve their students (Asmus, 1985; Whiteman, 2005), and parents can reclaim their rightful place as the primary force in their child's musical education (Draves, 2008; Scott-Kassner, 1994).

CHAPTER 3

Method

Subjects

Upon receiving official approval from the Rutgers University Institutional Review Board to proceed with the study (see Appendix A for IRB Approval Letter for Exempt Status), the researcher began the process of subject recruitment. She recruited subjects by distributing an IRB-approved flyer in the Mount Laurel Township School District (see Appendix B for Subject Recruitment Flyer) and surrounding area. When an adult responded, the researcher utilized the Participant Research Invitation Script (see Appendix C) to speak with the adult over the phone or directed the parent via e-mail to MusicalFamily.org, the IRB-approved, researcher-created, secure and confidential website designed specifically for this study. Once parents looked at the subject requirements on the website, they were able to read the Research Participation Script to determine their eligibility to participate in the study. The researcher accepted parents as subjects for the study once it became clear that they met the criteria for inclusion.

Sixty adult parents (ages 18-45) of at least one child 4 years of age or younger who were not professional musicians served as subjects for the study. The decision to include children ages 0-4 years was a result of there being relatively few studies specifically looking at parent music-making practices with children in this age range, as much of the research in early music development focuses on either very young infants or elementary, middle, or high school children (Gordon, 2003; Young, 2002 & 2005; Zdzinski, 1992).

Parents who were enrolled in a parent/child music class at the time of the treatment period were not eligible to participate. Those parents who did not have access to the Internet were also not able to participate, since much of the communication involved in the study was electronic. It was assumed that all subjects and their young children would be healthy during the course of the study in order to participate.

Subjects ($N = 60$) were distributed via systematic random sampling into one of two treatment groups. The sample size for each group ($n = 30$) was large enough to create a sampling distribution where the mean tends to approximate the normal distribution (Trochim, 2006). The researcher was not studying gender, race, or economic status, but sought diversity in the sample whenever possible.

Once adults consented to participate (See Appendix D for the Participant Consent Form), the researcher utilized simple randomization to place subjects ($N = 60$) into one of two treatment groups through the use of a computer-generated random numbers. In order to protect against selection bias, the researcher used a computer-generated list of numbers to randomly assign all subjects to one of two treatment groups (Best & Kahn, 2003).

To ensure that any changes observed after treatment could be attributed to the treatment itself, and not to causes outside of the parameters of the study, the researcher chose a multiple group experimental design to help avoid single group threats to validity (Trochim, 2006). An important benefit of the comparison group (Passive Group) was that it would serve to thwart the possibility of an interaction effect as a result of the pretesting (Best & Kahn, 2003). Simple randomized selection of subjects into the two treatment groups also helped the researcher maintain internal validity for the study.

Subjects were then randomly assigned to either the Passive Group (*PG*) or Active Group (*AG*). The first group (Passive) comprised those who received weekly electronic newsletters about music-making with young children and the second group (Active) were those who were enrolled in a 10-week parent/child music class created specifically for this study, in addition to receiving the weekly electronic newsletters throughout treatment. A list of the requirements for inclusion in the study is outlined in Table 1.

Table 1

Selection Criteria for Research Subjects

Adult parent/non-professional musician must have:
had at least one child 4 years of age or younger.
never have received a music degree in college.
not been enrolled in a parent/child music class during the research treatment period.
had access to the internet.
been healthy.
been a proficient English-speaker.

To be selected, potential subjects had to meet the criteria described above in Table 1. The researcher excluded adults who did not have a child 4 years of age or younger, who had completed a college music degree, were enrolled in a parent/child music class during the treatment period, who did not have Internet access, or who withdrew consent to participate in the research procedures. No aspect of the research project caused discomfort or physical danger to the subjects. No long-range risks to the subjects were anticipated, nor were they experienced. Participation was voluntary and subjects could withdraw at any time, without penalty. The number of subjects in each treatment group is displayed in Table 2.

Table 2

Subject Distribution

Treatment Condition	<i>N</i>
Active (Class & Electronic Newsletters)	30
Passive (Electronic Newsletters Only)	30
Total	60

Setting

The researcher was able to gain site access (See Appendix E for the Site Access Permission Letter) to the Music Room at Fleetwood Elementary School in the Mount Laurel Township School District, New Jersey, for the *AG* parent/child music class, which met once weekly over 10 weeks. Fleetwood is the school in which the researcher works as a Music Specialist. A New Jersey Certified public school music specialist conducted the *AG* class under the advisement of and in consultation with the researcher. While the researcher was on site and available for any questions or concerns of the subjects during these class meetings, she did not conduct any actual instruction for the *AG* class.

The curriculum utilized for the Active class was developmentally-appropriate and based on best practices in early childhood music education (Guilmartin, 1995). This curriculum comprised pitch exploration activities, songs and chants in a rich variety of tonalities and meters, instrument play, call and response songs, movement and play with props and toys, songs without words, and multiple opportunities for guided expressive and freeform movement. Parents at all times were encouraged to do what the children were being asked to do musically, even if their own child was not participating in the class at any given moment. This was done in an attempt both to encourage the parent to move through any personal inhibition about being musical as well as to model active

participation to their child. If the instructor saw adults who were not participating, she worked to gently encourage them to get involved.

Class size was limited to no more than 15 parents and their young children. In light of this, two Active Group classes were run each week to accommodate the entire subject group. Classes were held on the same evening each week for between 30-40 minutes at a time and were identical in design. Childcare at the study site was provided for older children without charge to the parents.

Parents were free to bring any children they had who were four years of age or younger, in addition to the child the parent designated as the Primary Child (*PC*). Additionally, spouses, grandparents, siblings, and other family members were allowed to attend the classes in an effort to promote more music making from all of the *PC*'s caregivers if possible. Any adult present in the class was expected to engage in the musical activities being led by the teacher. Parents were made aware that the *PC* was the child of record for the study throughout the treatment period. While subjects were encouraged to make music with all of their children throughout the week, any questions asked or suggestions given by the researcher for music-making at home pertained specifically to the *PC* and the subject alone.

The researcher designed Parent Education Points (PEPs) to be disbursed to all subjects each week during the treatment period. These PEPs were designed to give information concerning early childhood music development and music-making with young children. These points briefly covered research topics in early childhood music and also offered ideas for ways that parents could easily engage musically at home with their children.

Parent Education Points were designed with the non-professional musician in mind. The goal was to communicate important information concerning foundational aspects of music in early childhood to parents in a way that was not off-putting or intimidating, but would rather challenge their thinking, give them basic information about how children develop musically and begin to dispel any preconceived notions of music development, ability, and engagement that the parents might have had before the onset of treatment. These points ranged from brief overviews of neuroscientific research findings for music and young children, to the importance of live musical interactions between children and their caregivers, to how to use technology with their young children.

While the full content of each week's PEPs are provided in Appendix F (Weekly Parent Education Points), Table 3 gives an overview of the two main points featured for each week of the treatment period: *Something to Ponder* and *Something to Do*.

Table 3
Overview of Weekly Parent Education Points (PEPs)

Week Number	<i>Something to Ponder This Week</i>	<i>Something to Do This Week</i>
1	All humans are inherently musical.	Look for musical behaviors from the <i>PC</i> .
2	Music is a natural ability of the brain.	Consider your home musical environment. Be more intentional when choosing what kind of music to play for the <i>PC</i> .
3	Music development is very similar to language development.	Try to move past inhibition to sing more often in order to bolster the music environment for your child.
4	Infants and toddlers have the capacity to remember and respond to music.	Identify musical behaviors of the <i>PC</i> that you would have formerly considered random.
5	The propensity of caregivers to alter speech/song for young children is well-documented, cross-cultural, and an important part of the bonding process.	Review or learn a lullaby to sing every day for the <i>PC</i> . Try to create a fun song for a daily routine to do together.
6	While playing recordings of music is good, live musical interaction with a primary caregiver is best for a child's musical development.	Attempt to add a variety of music-making with the <i>PC</i> such as dancing or playing an instrument together.
7	Parents who demonstrate high value for music will greatly impact a child's musical progress, even if those parents possess only limited music ability.	Remember that a parent does not need an excellent voice or professional training to impact a child's musical growth.
8	A young child's home musical environment is crucial in their musical development.	Easy ideas (by age) for creating a rich home musical environment for children.
9	Learn to navigate technology and music successfully.	Choose quality music recordings/TV shows/DVDs. Make technology use as interactive as possible by singing or dancing along and talking about it afterwards.
10	Supplement what you have been doing musically at home with musical experiences out in the community.	Look for concerts that you can attend with your child. Continue to build on all you've learned in the study, keep singing with your child into their elementary years and beyond.

Note. Primary Child (*PC*)

These PEPs were sent to the Passive and Active Groups in an e-mail each week on Monday mornings during the 10-week treatment. The only requirement for participation in the *PG* was that subjects in that group read each of these weekly e-newsletters within a day of when they were sent, while *AG* subjects were required both to read these PEP's and attend the weekly class. Subjects were not obligated to do anything suggested therein, but were consistently encouraged to try what they could within reason.

While subjects were also encouraged to respond to the researcher as they so desired after reading any given PEP, they were not required to keep records or keep a journal at any point in the study. The teacher of the *AG* music class worked to incorporate the same PEPs that both treatment groups were receiving electronically for that week during the course of her instruction. Parent Education Points were also made available to both the Active and Passive Groups on the study website for the entire treatment period and for the next year.

The purpose of the *AG* and *PG* treatment conditions was to determine if differences could be found in frequency of *IMME* after the 10-week treatment. Of special interest were any found differences in frequency of *IMME* based on the covariate of subjects' onset *MSC*. Posttest data were collected at the end of the treatment period from all subjects via the study website and were then calculated by the researcher.

Data Collection

In order to assess for musical self-concept before treatment began, all subjects were directed to log onto the study website to take a modified version of Edward Asmus' *Magnitude of Motivation for Music (MoM)* test (see Appendix G for the *Magnitude of Motivation Test for Parental MSC*) before the 10-week treatment period. Dr. Asmus

developed this test as a part of his *Measures of Motivation in Music*, which is a suite of tests looking at factors that motivate students to achieve in music (Asmus, 1986 & 1989). His *Magnitude of Motivation* is a part of that larger suite, and was specifically designed to measure how motivated students are to achieve musically. For the purposes of this study, the same questions that Dr. Asmus gave to school students in his studies were used, but were modified slightly in order that the questions could be directed toward adults who have already completed their high school education.

Additionally, all subjects took a researcher-constructed *IMME* survey from the research website pre- and post-treatment to assess for any change (See Appendix H for the *IMME* Survey). The survey is modeled on both the PUMIS (Custodero, Britto & Xin, 2002) and the HOME Survey (Brand, 1985; Etopio, 2009). The PUMIS was used in the Custodero study as the basis for the 20-minute long phone interview given to 2,250 parents of infants aged four- to six-months and offers important insight into the frequency with which parents engage musically with their infants. The HOME Survey, developed by Brand, had similar aims to the one used in the Custodero study, as it looked at parent interaction with young children in addition to parent attitudes towards music.

Both PUMIS and HOME surveys ask questions concerning the ways in which parents purchase, listen to, and play music for themselves as well as for their children. They also contain questions about direct musical interactions between parents and their children. However, the majority of items on both surveys do not address intentionality in musical interaction with children. These questions, therefore, were modified for the purposes of the present study in an attempt to find out how intentional parents were in their musical interactions with their young children.

Using the *Magnitude of Motivation (MoM)* test for musical self-concept and the researcher-created *IMME* Survey for frequency of intentional music-making at home before treatment on all subjects assisted in determining if the two groups appeared similar on the key measures of *MSC* and *IMME* at the outset of the study. While the choice of a strict control group in which subjects would not participate in a parent/child music class nor receive PEPs was considered, the idea was eventually rejected as unnecessary. The assumption was that a control group of this nature would most likely not show any measurable pre- to posttest change in the amount of home musical interaction, and might potentially add to the difficulty in procuring a larger number of subjects for the other two treatment groups. Additionally, since both Passive and Active treatment groups received the weekly emails, the Passive Group served as a type of control group for the study.

While it was challenging to completely avoid compensatory rivalry on the part of the Passive Group (Trochim, 2006), who may have experienced resentment over not being able to participate in the parent/child music class, the researcher initially offered any interested Passive Group subjects a free, day-long musical parenting workshop after the treatment period was completed. There was no charge for subjects to participate in any aspect of the study, and no financial compensation will be offered to any subject. No members of the Passive Group demonstrated interest in the aforementioned parent workshop at the conclusion of the treatment period.

Data Analysis

Once all subjects logged onto the study website before the onset of the treatment period and took both the *Measures for Motivation* survey for music self-concept and the *IMME* Survey, the researcher began the process of scoring each survey. For the *Measures*

of *Motivation* survey, Likert-type responses were based on a scale of *strongly agree*, *agree*, *neither agree nor disagree*, *disagree*, *strongly disagree*. The associated values for the scale were 5, 4, 3, 2, and 1, each indicating a single step up the frequency continuum. The researcher added up these responses to get *MSC* for each subject and then ran both the Cronbach's Alpha and Guttman Split-Half Coefficient to ensure reliability, which are measures of the interrelatedness among the test items used when the responses of a measure are spread out on a continuum (Ott & Longnecker, 1993; Ritchie & Williamon, 2010; Trochim, 2006).

Sections A (Use of Technology/Recordings in the Home) and C (Demographics) of the *IMME* survey did not provide direct insight into the amount of *IMME* that was taking place in subject households, but provided additional insights as needed for the primary research questions and may also help inform any future research. Section B of the researcher-designed survey drove each subject's *IMME* score for the study. Section B responses were on a frequency scale of *never*, *once/twice per month*, *once a week*, *about 3 times per week*, *Daily* with associated values 1, 2, 3, 4, and 5, again, each indicating a single step up the frequency continuum. The researcher calculated the *IMME* score for each subject based on the responses to the 20 questions in Section B.

In order to determine if the effect of the 10-week treatment period on Intentional Music-Making Episodes was moderated by Musical Self-Concept, the researcher utilized a repeated measures analysis of covariance (*RM-ANCOVA*). A *RM-ANCOVA* is a combination of both line regression and analysis of variance sometimes used when a continuous variable is included in the statistical model in order to look at whether or not the variable is related in a linear way to the outcome (Ott & Longnecker, 1993; Snedecor

& Cochran, 1967). The *RM-ANCOVA* in this case was used to compare *IMME* pre- and post-treatment with the continuous variable of onset *MSC* as the covariate. The .05 level of significance was used in the study.

Descriptive Statistics Concerning Home Music Use

As part of the pre- and post-treatment *IMME* survey, parents filled out a section of questions that were concerned with music in their everyday lives. These questions, based largely in part on those used by Custodero, et al (2002) in the large-scale PUMIS survey, ranged from those concerning the number of CD's or downloaded albums owned by parents, to the parent's preferred music genre, to their reasons for choosing to play different types of music for their children. For charts of pre- and post-treatment demographic results for all subjects, see Appendix I, *IMME* Section A Results.

Qualitative Data

Limited qualitative means were employed by the researcher in the present study in an attempt to gain insight into the thinking of the subjects as they experienced and then after they finished the treatment period. This type of mixed-methods research is valuable because it sheds light on the subjects whose opinions and perspective might normally be considered to be of little importance to research of a strictly quantitative nature (Creswell, 2009). Subjects were able to comment on the weekly PEPs via the study website during the treatment, and were also invited to comment when taking the post-treatment *IMME* survey.

CHAPTER 4

Results

Research questions

Since the first problem of the study concerns the relationship between a parent's *MSC* and frequency of *IMME* with their young children, the first research question is:

1. Does *MSC* impact frequency of *IMME*?

The second problem of the research concerns how music educators might best reach parents in an effort to educate them and encourage more music-making in the home throughout the crucial early years of music development. Therefore, in an effort to look at the impact of parent education on musical parenting, the second research question is:

2. What are the significant effects of a passive versus active approach of parent education on *IMME*, considering onset *MSC*?

The .05 level of significance was used in the study.

Descriptive statistics

The demographic information is presented in Table 4. A total of 60 parents of at least one child who was under four years of age met the criteria for inclusion and were randomly placed into one of two treatment groups. Parents who majored in music in college, or who only had children five years of age or older, did not qualify to participate. During the course of the treatment, four subjects (two from the Active and two from the Passive Groups) dropped out of the study for various reasons. Therefore, *MSC* and *IMME* data on these four subjects was discarded and the sample size was reduced. The final pooled sample for the treatment was ($N = 56$) and included Active ($n = 28$) and Passive ($n = 28$) Groups.

The researcher-designed *IMME* survey included demographic questions about the study participants themselves, as well as questions about each subject's designated Primary Child (*PC*) for the study. This *PC* was one of the subject's children who was no older than 4 years of age. Demographics were very similar across both Active (*AG*) and Passive (*PG*) treatment groups, with the exception of average income, with \$88,750 as the mean for the *AG* and \$70,714 serving as the mean income for the *PG*.

The total sample included three males and 53 females. Of all subjects, 54 (96%) were married, one parent was listed as living with her partner (2%), and one was single. The majority (91%) of the entire pool of subjects was white, with only three Hispanic subjects; one Asian subject; and one Indian subject. The pooled mean age for all subjects was 35.3 years. Two of all subjects (4%) did not continue schooling after high school graduation, whereas six subjects (11%) attended some college, but did not graduate. Of the total pool of subjects, 27 graduated with a four-year college degree (48%) and 18 (32%) did post-graduate work. The mean income for the entire subject group was \$79,732. Descriptive data by treatment group are listed below in Table 4

Table 4

Parent Participant Demographics

Demographic Variable	Active	Passive
Gender - Women	93% (26)	96% (27)
Marital Status - Married	96% (27)	96% (27)
Race - White	93% (26)	89% (25)
College Graduates (Graduate, Post-Graduate)	82% (23)	79% (22)
Average Age	35.2	35.4
Average Salary	88,750	70,714

The ages (in months) of the total pool of *PC* ranged from one month to 55 months, with a mean age of 26.8 months. With the exception of one subject in the *PG*, who was the adoptive mother, all subjects were the biological parent of the *PC*.

For 13 (23%) members of the total subject pool, the *PC* was their only child. Twenty-five (45%) of the total subjects had one child in addition to the *PC*. Eleven subjects (20%) had two children in addition to the *PC*, six (10%) had three additional children, and only one (2%) had four children in addition to the *PC*. For the total pool of subjects, 18 (32%) labeled their firstborn child as the *PC* for the study. Descriptive data pertaining to the families and *PC* by treatment group is listed below in Table 5.

Table 5

Family and Primary Child (PC) Demographics (n=28)

Demographic Variable	Active		Passive	
<i>PC</i> Average Age (months)	31.2		22.4	
Biological Parent	100%	(28)	96%	(27)
Total Children (incl. <i>PC</i>)				
1	25%	(7)	21%	(6)
2	36%	(10)	54%	(15)
3 or more	39%	(11)	25%	(7)
<i>PC</i> is Firstborn Child	36%	(10)	29%	(8)

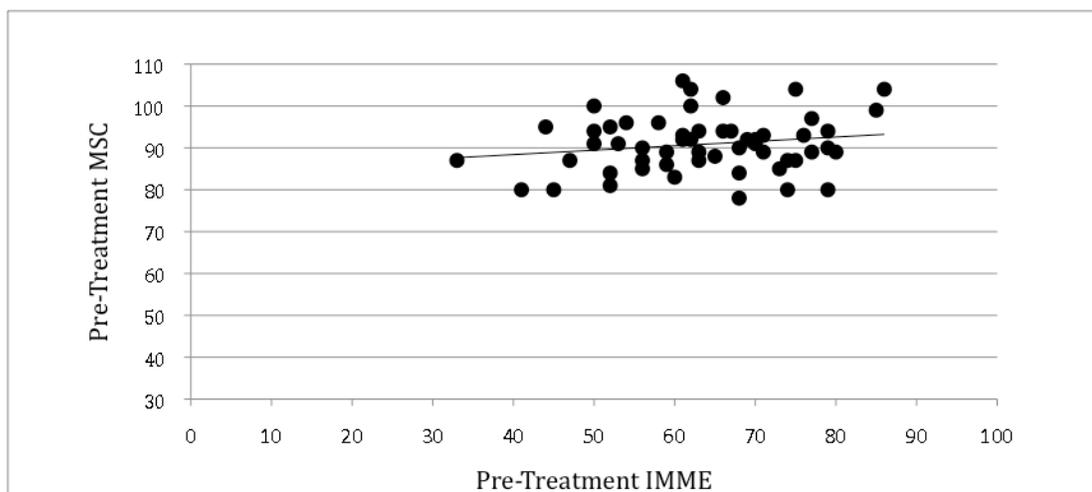
Research Question One

The first research question was: Does *MSC* impact frequency of *IMME*? In order to assess for *MSC* before treatment, subjects took the *Magnitude of Motivation (MoM)* test. For this 23-item pre-treatment measure, Cronbach’s alpha was .819 with Guttman Split-Half Coefficient at .795.

The null hypothesis for research question one was that *MSC* and *IMME* scores would be independent. To test this hypothesis, the researcher utilized the Pearson Correlation Coefficient based on the *MSC* and *IMME* pre-treatment scores from all subjects, resulting in a weak positive correlation ($r = .1817$). For graphs displaying the results of all correlations, see Appendix J, Correlation Detail. A scatterplot of the pre-treatment scores for *MSC* and *IMME* is presented in Figure 1.

Figure 1

Correlation of IMME and MSC Pre-treatment Scores for Active and Passive Groups Combined



Note: $R^2 = 0.0333$.

The Pearson Correlation Coefficient between onset *MSC* and *IMME* scores was calculated for the Active and Passive parent groups separately. For the *PG* this coefficient was $r = 0.277$ ($t = 1.47, p > 0.05$), which was not significant. The correlation was likewise not significant for the *AG*, $r = -0.012$ ($t = 0.06, p > 0.05$). Furthermore, despite the difference in signs, there was no significant difference between these two correlation coefficients ($t = 1.05, p > 0.05$), so that for both groups there was little relationship between onset *MSC* and the subsequent *IMME* scores.

Research Question Two

The null hypothesis in this case was that there would be no significant difference between the two treatment groups in the increase in intentional music-making episodes as a result of the 10-week treatment period. For the 21-question Section B portion of the

researcher-designed *IMME* survey, which drove subjects' *IMME* score, Cronbach's alpha was .802 with Guttman Split-Half Coefficient at .754. Summary scores for *MSC* and for pre- and post-treatment *IMME* of both the *AG* and *PG* are listed in Table 6.

Table 6

Summary of Total Pre-treatment MSC Scores and IMME Scores for Pretest and Posttest

	Active		Passive	
	Mean	Std. Deviation	Mean	Std. Deviation
<i>MSC</i>	89.1	5.7	92.6	7.0
<i>IMME</i>				
Pretest	61.3	11.9	65.7	10.7
Posttest	69.6	10.7	72.9	9.2

A repeated measures analysis of variance (*RM-ANCOVA*) was utilized with treatment group serving as a factor, subjects' pre-and post-treatment *IMME* scores as the repeated measures, and *MSC* as the covariate. The results for the *RM-ANCOVA* are displayed below in Table 7 (Within-Subjects Contrasts), Table 8, (Between-Subjects Effects), and Table 9 (Pairwise Comparisons for Group and *IMME* Repeated Measures).

The *RM-ANCOVA* revealed that there were no significant differences between the treatment groups, *AG* and *PG*, $F(1,53) = 1.276, p = 0.264$ (Table 8), with a mean difference of 3.117, $p < 0.264$ (Table 9). Significant differences were found, however, between the pre- and post-treatment *IMME* scores of both the *AG* and the *PG*, with mean difference of 7.768, $p < 0.001$ (Table 9). The *RM-ANCOVA* also revealed that there was no significant interaction of *IMME* with the covariate *MSC*, $F(1,53) = 0.256, p = 0.615$, nor with the group factor, $F(53, 1) = 0.113, p = 0.738$ (Table 7). Raw data for both the *IMME* and *MSC* measures can be found in Appendix K, Raw Scores for *IMME* and *MSC* Surveys for all Subjects.

Table 7

Tests of Within-Subjects Contrasts (including Interaction Terms)

Source	Type III Sum of Squares	df	Mean Square	F	Significance
<i>IMME</i>	32.181	1	32.181	1.027	.315
<i>IMME * MSC</i>	8.021	1	8.021	.256	.615
<i>IMME * Group</i>	3.548	1	3.548	.113	.738
Error(<i>IMME</i>)	1660.462	53	31.329		

*p < .05.

Table 8

Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Significance
Intercept	1318.872	1	1318.872	6.664	.013*
<i>MSC</i>	171.756	1	171.756	.868	.356
<i>Group</i>	252.547	1	252.547	1.276	.264
Error	10489.654	53	197.918		

*p < .05.

Table 9

Pairwise Comparisons for Group and IMME Repeated Measures

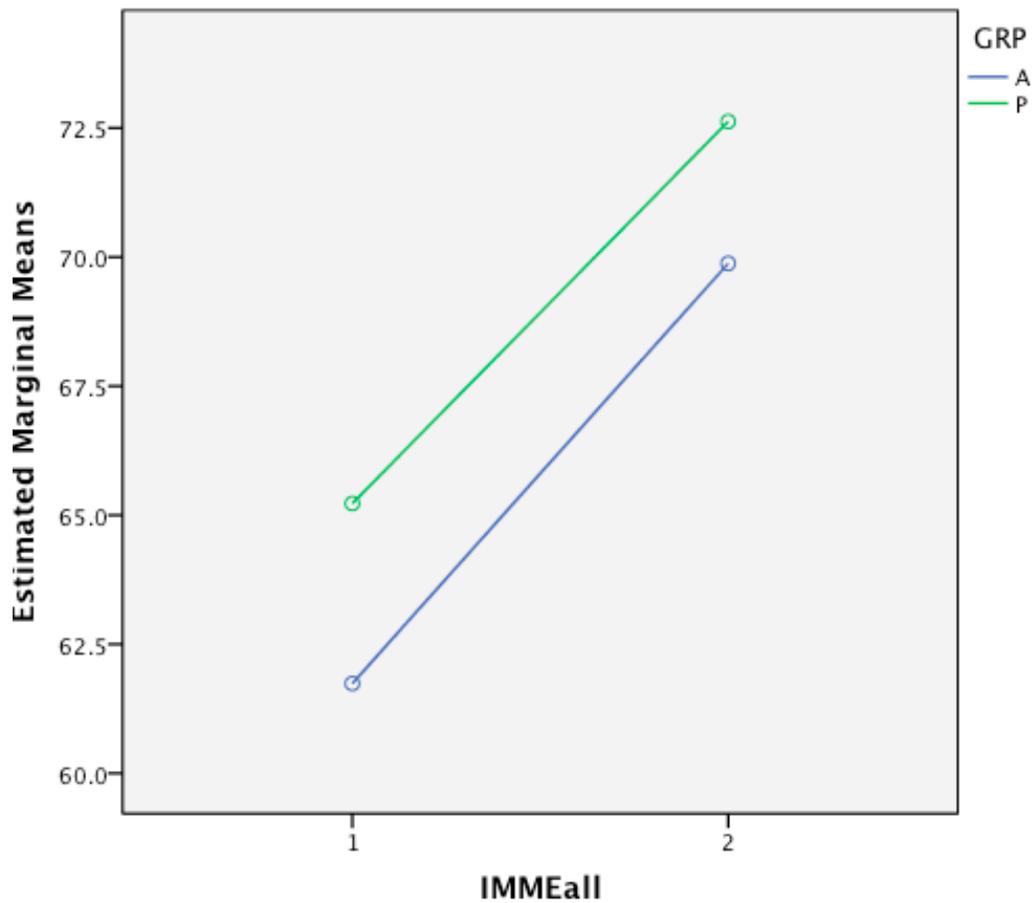
(I)	(J)	Mean Difference (I-J)	Standard Error	Significanc e	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
<i>PG</i>	<i>AG</i>	3.117	2.759	.264	-2.417	8.651
IMME Pre	Post	7.768	1.058	.000**	5.646	9.890

**p < .01.

The results of the *RM-ANCOVA* are graphically displayed in a plot profile below in Figure 2.

Figure 2

Pre/Post IMME Scores by Treatment Group



Covariates appearing in the model are evaluated at the following values: $MSC = 90.86$

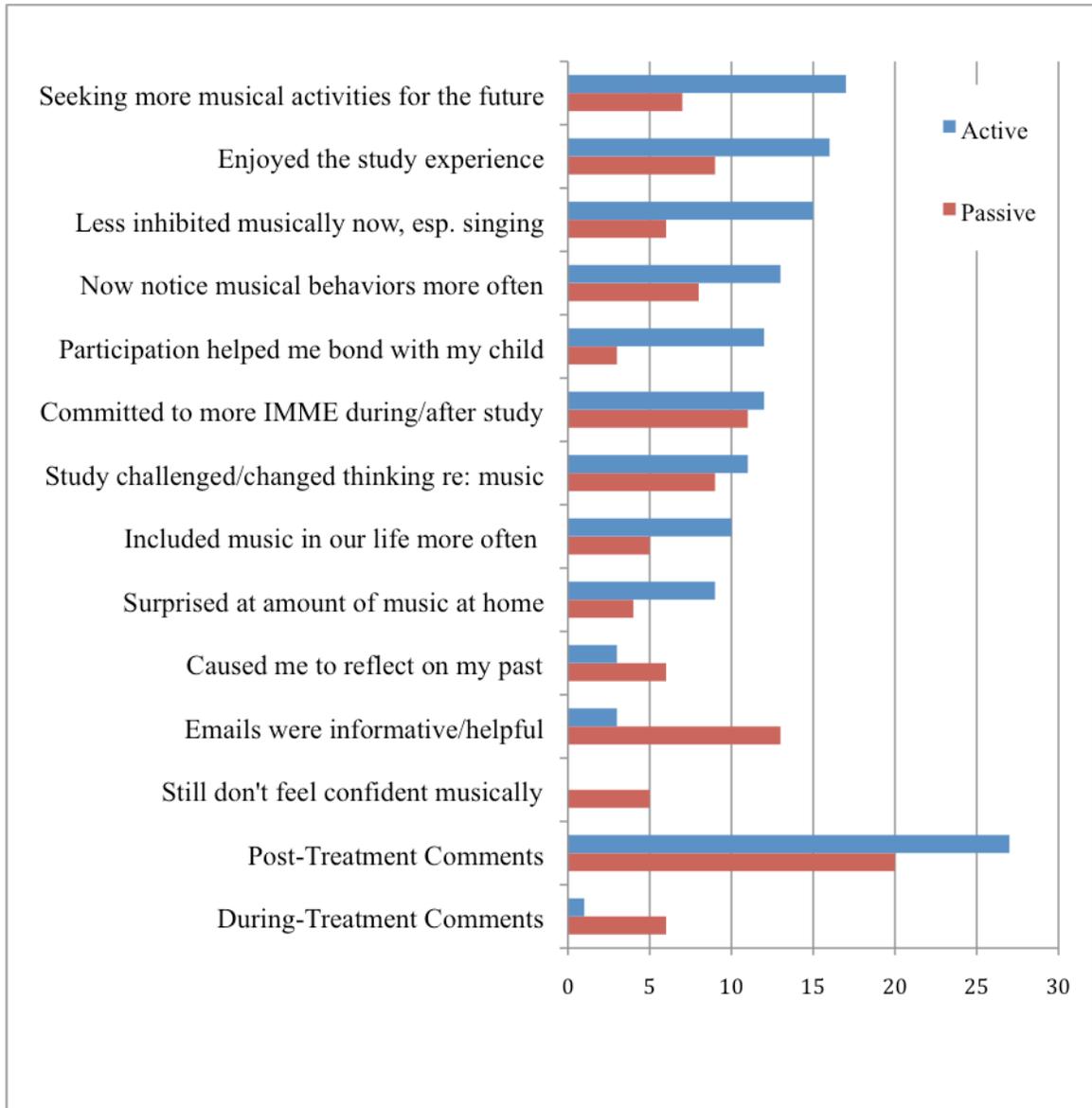
Qualitative data

The qualitative data in this mixed-methods study consists solely of comments voluntarily offered in writing by the subjects both during the study on the research website, and after the treatment period as part of their final surveys. Subjects were encouraged to be honest and were also informed that their comments might be utilized in their fullest form in this document and any possible future publications. All subjects' comments are listed in Appendix L.

The researcher utilized inductive data analysis methods when looking into these qualitative data (Creswell, 2009). Comments were organized by treatment group and then read over multiple times to find statements that were frequently repeated by subjects. Following this, categories of topics were created to reflect what the subjects were most often saying and then coded or labeled by the researcher. These codes were then written in next to the comments, and the number of comments for each category was counted and summed for both treatment groups. Figure 3 below outlines the codes that emerged from subjects' comments.

Figure 3

Number of comments made by subjects during and after treatment, by category



Lastly of note was the question in the post-treatment *IMME* survey asking subjects from both treatment groups to indicate how many of the 10 weekly e-newsletters they were able to read over the duration of the study. Information on the subjects' responses to that question, by treatment group, along with the number of parent/child music classes attended by *AG* participants, are displayed in Table 10

Table 10

*Summary of Voluntary Participation, by Treatment Group
Class Attendance and Number of E-Newsletters Read*

Number	Classes Attended		E-Newsletters Read			
	Active		Active		Passive	
	Responses	Percent	Responses	Percent	Responses	Percent
10	8	28.6%	9	32.1%	19	67.9%
9	7	25.0%	2	7.1%	2	7.1%
8	10	35.7%	7	25.0%	4	14.3%
7	3	10.7%	2	7.1%	1	3.6%
6	0	0.0%	2	7.1%	1	3.6%
5	0	0.0%	2	7.1%	1	3.6%
4	0	0.0%	0	0.0%	0	0.0%
3	0	0.0%	1	3.6%	0	0.0%
2	0	0.0%	2	7.1%	0	0.0%
1	0	0.0%	0	0.0%	0	0.0%
0	0	0.0%	1	3.6%	0	0.0%

CHAPTER 5

Discussion

The present mixed-methods experimental study was designed to investigate the effects of the musical self-concept (*MSC*) of parents, together with either an active or passive approach to education, on the amount of intentional music-making episodes (*IMME*) initiated by parents with their very young children. To that end, subjects who agreed to take part in this study were randomly placed into either an active or passive ten-week music education program designed for non-professional musicians.

Research Questions

The researcher sought to quantify intentional musical interactions between parents and their children, taking into account subjects' onset *MSC* score. The research questions were specifically designed to examine the relationship of subjects' *MSC* to amount of *IMME*, as well as to investigate the effects of either an active or a passive approach to parent music education on *IMME*. Qualitative data relating to the treatment experiences of participants both during and after the treatment period were also examined in an effort to consider the effects of the two educational programs offered to subjects on the frequency of *IMME*. The two questions driving the research are: (1) Does *MSC* impact frequency of *IMME*? (2) Are there significant differences between a passive or active approach of parent education on *IMME*, considering onset *MSC*?

Initial results of the study were consistent with previous research in revealing that, on the whole, these subjects were making music at home with their young children on an everyday, or close to everyday basis (Addessi, 2009; Forrester 2009). The researcher did not find a correlation between a parent's *MSC* score and *IMME*, but did discover a

statistically significant positive relationship between both Active and Passive treatment conditions and *IMME* posttest score, with the entire sample showing statistically significant improvement from pretest to posttest *IMME* scores ($p < .001$).

Subjects ($N = 56$) were non-professional musician parents of at least one child four years of age or younger. Upon agreement to participate, these subjects were randomly assigned to either the Passive Group ($n = 28$) or Active Group ($n = 28$) before the onset of treatment. The Passive Group (*PG*) comprised those who received weekly electronic newsletters about music-making with young children, and the Active Group (*AG*) were those who were enrolled in a ten-week active parent/child music class and who received the same weekly electronic newsletters that were sent to the *PG* for the duration of the treatment period. All subjects were tested before treatment for onset *MSC* score, and before and after treatment for frequency of *IMME* in the home.

Relationship of *MSC* to *IMME*. In order to assess for *MSC* before treatment began, all subjects took a modified version of Edward Asmus' *Magnitude of Motivation for Music* test. When the researcher looked at regression lines of both the *AG* and *PG* for correlation between the two groups' scores, the assumption was that both the *AG* and *PG* had the same relationship (i.e., similar slopes) with the covariate, *MSC*.

The results indicated that variability in *IMME* attributable to *MSC* was low and that there was no significant difference in the *IMME* of those subjects who completed Active and Passive treatments. Based on these results, the researcher failed to reject the null hypothesis for this research question that, in the present study, no correlation was found between *MSC* and *IMME* scores. That is, in the case of these specific parents, no

connection was identified that linked subjects' self-perception of their own musicality and the amount of musical engagement they had with their young children.

This result seems slightly surprising at first, as one might expect that parents with a low *MSC* score might feel inhibited in their attempts to engage in live music-making with their young children. It is worth considering the factors that may have served to obscure other potential findings. One consideration is the demographic makeup of the subject pool. Subjects in this study were predominantly white, affluent, and well-educated. According to the Census Bureau (2012), in the entire population, approximately 45% of this age group of Caucasian women has a college education, whereas 80% of the subjects in the present study had this type of education.

Perhaps these subjects generally strive to provide every possible advantage to their young children, even in areas in which they might not feel particularly competent. While they may not be confident about their own musicality, parents may nevertheless value music and therefore want their children to enjoy it. To this end, they might be willing to sing and dance with their children in order to enliven their experiences. Parents may choose to engage musically simply because it is such a playful mode of interaction, or perhaps because they have heard media claims that music is not only fun, but that it may also potentially make their child smarter.

It seems most likely, though, that the act of engaging musically with one's young child is both natural and comfortable for both parties, at least during the first 18 months of a child's life. Singing to one's child is an activity that has consistently been observed across cultures (Brethereton, 2010; Trainor, Austin, & Desjardins, 2000), and the

emotional act of singing and making music with very young children has been well-documented in the research (Lebedeva & Kuhl, 2010; Papousek, 1996; Trehub, 2010b).

These findings revealing that all subjects in the study engaged musically at a similar level with their child regardless of *MSC* provides more evidence of music as a fundamental human drive, something intrinsic to the parent/child relationship (Rock, Trainor, & Addison, 1999). A parent's desire and/or instinct to be musical with his or her young child simply may transcend *MSC*, no matter the level of that self-concept. Music educators should note that, whatever the musical inclination or disinclination of their students' parents, some amount of musical engagement most likely took place in their students' early childhood. These teachers should actively seek out opportunities to talk with parents, hopefully encouraging even more music-making at home. The question then becomes one of how to maximize these home musical interactions, which is addressed in the second research question.

The influence of two different parent education approaches on *IMME*. The researcher was looking for differences in pre- and posttest *IMME* scores for the *AG* and *PG* subjects. Results of the *RM-ANCOVA* revealed a statistically significant increase in total range of *IMME* for both *AG* and *PG* over the course of the treatment period ($p < .001$). This pretest-to-posttest comparison revealed that both groups demonstrated statistically significant improvements in *IMME* scores, quite possibly reflecting the results of treatment for both groups. Because of this, the null hypothesis that there would be no change in *IMME* was rejected by the researcher. There was not a statistically significant difference between the *AG* and *PG*; that is, no interaction between the two

groups was found. Although there were substantial gains in the mean scores for both groups, neither treatment method showed a better effect than the other.

Since it seemed reasonable to assume that the more engaging nature of the parent/child music class, coupled with the weekly educational emails, would have caused parents in the *AG* to engage in significantly more *IMME* than the *PG* by the study's end, this finding was also surprising. However, a difference between treatment groups was not found in this study. In spite of the fact that the two groups were demographically very similar, there were a few interesting differences between them that may have played a part in the pre- to posttest similarities between them.

In the Active Group there was a higher percentage of families in which there were three or more children (including the Primary Child, or *PC*) than was seen in the Passive Group (39% and 25%, respectively.) Perhaps when families have more than two children, parents are not able to engage in as much one-on-one time, thereby making it more difficult to intentionally make music with their children as they might have otherwise done. The simple fact that there are more children than adults in the family may preclude this type of time expenditure. It is possible that parents in the *AG* did not have as much time as the *PG* to invest in more *IMME* for these reasons.

Another interesting difference to consider is the existence of an almost one-year differential in the ages of the *PC* for the treatment groups, with the average age for the *PC* in the Active being higher at 31.2 months verses 22.4 months in the Passive. This nine-month differential in the earliest years of life can make a large difference developmentally, as children either entering or just in their second year begin to rapidly

progress in the acquisition of verbal abilities in particular (Eliot, 1999; McMullen & Saffran, 2004).

During the language explosion that takes place in this stage, children are developmentally ready to tackle more difficult words and parents are often highly motivated to read books to and with their child. They also spend an increasing amount of time encouraging them to approximate the primary language through avenues such as word repetition and the teaching of new words (McMurray, 2007). This more concentrated focus on language acquisition does not mean that music is no longer valued by the parents, but rather may mark a potential shift in time on task.

When infants are not yet able to reciprocate communication from caregivers with words of their own, music provides a mode of communication that has the power to convey emotional meaning. As children begin to enter the world of verbal communication, though, the proportion of time spent interacting musically might necessarily be reduced. In this study, *AG* parents generally had older *PCs* who may have been busy with language acquisition, thereby reducing time available for *IMME*. Their *PG* counterparts, however, had younger *PCs* on the whole. The *PG* parents may have utilized music to interact with their child more frequently because many of their *PCs* were still in the more pre-verbal phase and responsive to the special communication that music provides (Nakata & Trehub, 2004).

Next, another consideration of the large percentage of total subjects possessing advanced degrees is in order. As a result of prior academic experience, these parents may be more accustomed to the presentation of information through lecture/discussion/reading and be adept at synthesizing and applying this information on a consistent basis—skills

necessary for academic success at the college level. Parents in this study were largely highly educated, and it is possible that one of the effects of this was that they would not only read the e-newsletters, but process the information and synthesize it into action more readily than they would have had they had less education.

It has been established in the research that parental education level is closely tied to a child's academic success because well-educated parents are highly committed to ensuring this success (Bradley & Corwyn, 2002; Burusic, Babarovic, & Markovic, 2010). Davis-Kean (2005) goes so far as to say that "the amount of schooling that parents receive influences how they structure their home environment as well as how they interact with their children in promoting academic achievement" (p. 302). Perhaps differences between the *AG* and *PG* groups might have been found had there been a more even distribution of educational levels in the subject pool.

Moreover, these highly-educated participants may have been influenced by the very knowledge that they were participating in the research. Parents in both the *PG* and *AG* were aware that the focus of the study was music-making with young children. It could be that they were highly conscious that the researcher was looking for changes in these behaviors. Those with advanced degrees may have been cognizant of the aims of educational research because of their own academic experiences at the post-graduate level. It is conceivable that the findings may have been different had subjects not specifically known that they were being studied for changes in musical interactions.

Lastly, these results suggest the need to investigate the specific questions utilized in the *IMME* survey. Perhaps differences between the treatment groups were masked because of a lack of variation within the list of activities addressed in the measure. For

example, the survey focused on items that might be considered more natural for caregivers, such as singing to or dancing with their child, but it did not list many questions about activities that required more parental commitment such as Suzuki music lessons, dance class, or concert attendance. However, the study was not necessarily concerned with differentiating between or ranking *IMME*, but rather its concern was the assessment of frequency. For the purposes of this research, all *IMME* were considered to be valuable.

Correspondingly, it may have been advantageous in the present study to ensure that there were questions on the *IMME* survey that dovetailed with specific types of activities that took place in the parent/child class itself. While efforts were made to ensure that multiple and developmentally-appropriate ways of musical engagement were included in the class, not every activity that parents experienced in the class was represented in the survey questions. It is possible that the *IMME* survey questions were too general overall, possibly leading to the finding of no statistical significance between the *AG* and *PG* responses. Perhaps this was one reason why the survey data did not reflect a statistically significant difference between the treatment groups.

Qualitative data

Subjects in both *AG* and *PG* voluntarily shared written thoughts concerning their participation in the study both during and after the treatment period. These comments revealed information not immediately evident from the raw survey data. The 54 participants who commented (27 from the Active and 27 from the Passive Groups) shared a wealth of information that was eventually broken down into shorter statements that were coded by the researcher and placed into one of 12 overarching categories.

In their statements, subjects overwhelmingly spoke of their enjoyment of the research process. Subjects from both treatment groups discussed their commitment to be more intentional in music-making with their child during the treatment period. Many subjects also commented that their thinking about music and children was either challenged or changed as a result of participation in the research. While all comments can be found in Appendix L, a few will be highlighted in this chapter to demonstrate some of the central themes that emerged.

During the fifth week of the study, an *AG* participant logged the following comment on the research website: “I just had to come on and say how much more aware I am of music. Not only do I find myself playing more music, and more types of music, but my son is singing all the time.”

In the third week of the study, one *PG* participant logged this comment:

I have found that I use music probably more than I thought on a day-to-day basis.... I often have music going in the background. It’s always on in the car as well. I do sing to my children and last night, thinking about this study, intentionally sang to my daughter before I put her to bed.

Another informative comment came from the first week of the study from a female member of the *AG*:

I can definitely relate to...past bad feelings from teachers or others who made negative comments about my singing and voice. I am, admittedly, very shy about singing in public. I feel as though this is all around us in our society, whereas some cultures embrace everyone being musical so much more than we do.

Statements ranged from feelings of initial insecurity concerning musical competence to those reflecting a feeling of empowerment as a result of the study. One member of the *PG* wrote the following: “While participation in the passive group was

quite informative and, yes, helpful, I also found it increased my jealousy of those who have the skill sets necessary to teach music to their own children.”

Much more often than not, though, subjects shared many positive feelings, as is the case with following *AG* subject quote: “It helped me understand better that I am musical even though I previously thought I wasn’t and that I have a lot of power to open the world of music to my 14-month-old son.” One *PG* parent stated that, during the ten weeks, she found herself making “...intentional decisions about varying the types of music we listened to and danced to.” Continuing in that vein, another *PG* participant discussed how participation “...increased my awareness of the importance of music in children’s development as well as the potential for us all to nurture musicianship. I plan to be more deliberate in incorporating music into my children’s everyday lives.”

Lastly, many of the comments revealed that participants who had previously felt inhibited making music with their young child began to have a change of heart. One such subject said that she now felt “...much more at ease and willing to sing to my son.” One mother from the *AG* described it thusly:

I was surprised at how comfortable I was with “making music” in the class, especially in front of others! I also saw such a great benefit to the children by how instinctually they were engaging in the class. As my infant son grows I plan on getting involved in other music classes and exposing him to as many different types of music live, and recorded as I can. Thank you for opening my eyes to this primary, yet essential skill!

While all the subject comments were revealing, what is most interesting for the purposes of this study were the ways in which *AG* statements differed from those of the *PG*. More subjects in the *PG* than in the *AG* mentioned that they found the e-newsletters both informative and helpful. Five of these *PG* subjects also indicated that they still felt that they were not able to do much with their child musically. It is interesting to note that

only *PG* subjects, who were not involved in the parent/child music class, and not their *AG* counterparts, made these types of statements.

Comments from members of the *AG* demonstrated their feelings of having participated in a highly-engaging experience and that many of them left it more confident musically than when they began. They spoke more often than their *PG* counterparts of a newly-found ability to recognize and observe musical behaviors of their children. They also specifically addressed their perception that participation in the class helped forge a special bond with their child that they had not anticipated before the onset of the study.

More *AG* subjects spoke of a commitment to intentional music-making with their children in the home during the treatment and into the future. Many voiced the desire to find a class similar to the treatment class because both parent and child enjoyed the experience so much and wanted to continue the experience. Several comments (15 from the *AG* vs. 6 from the *PG*) had to do with feeling more confident in making music, especially in singing, with their child than they had felt before the study. Since treatment ended, the researcher has received requests from former *AG* parents for help finding classes that would be similar to the research class.

These comments suggest that gains were made for these *AG* subjects not only in areas that will help their child's musical development, but also in their own ability to make music with their child. It is possible that the *IMME* survey utilized in the present study did not offer enough opportunities for *AG* participants to demonstrate these types of gains made as a result of the treatment. Based on these findings, one wonders if *AG* subjects will be more active in their future *IMMEs*, than those subjects from the *PG*.

These qualitative findings should encourage early childhood music educators who lead parent/child classes, as these results provide evidence for positive outcomes of their work. This research implies that subjects who were initially reticent or inhibited to be musical with their children left the classes more confident in their musical abilities and eager to continue participation in music-making with their child into the future.

Future Research

This study contributes to the field of inquiry that has begun to build a clearer picture of musical parenting and everyday musical interactions in the home of the young child (Barrett, 2009; Custodero, 2006; de Vries, 2009). The results of this study suggest other avenues of investigation that might be taken in an effort to broaden this important area of music education research.

It would be interesting to replicate this research with the addition of follow-up posttests with subjects six months and again one year after the completion of treatment. Not only might this reveal whether or not any findings of a significant change in amount of *IMME* were sustained. Results in this type of replication might be more conclusive if, as discussed earlier, an *IMME* survey delivering a more accurate reflection of the variety of ways in which parents changed as a result of Active or Passive treatment were utilized in the research.

Another suggestion for follow-up to the present study would be an investigation of those factors antecedent to pretest scores in order to determine potential effects of musical background and experience on *IMME*. For a study of this nature, subjects would need to complete a more detailed survey than that utilized for the present study. Information could be gathered regarding specific questions of personal music experience

in youth and adulthood, the place of music in the parent's childhood, musical activities of other children, and parent/child music classes taken previous to the study.

While the present study failed to find a significant difference between Active and Passive approaches to parent education, further research is warranted to confirm whether or not that is the case in the broader population. To this end, it is suggested that the study be replicated with a larger, more diverse and purposefully gained sample. That is, one that is more reflective of the actual population, encompassing a larger section of minority, low-income, and lower education groups. It may also be beneficial to aim for a more even distribution of research subjects with less than and more than two children in their families, and to limit the age of the *PC* to zero-two years, before language acquisition becomes a focus in the home.

Summary

This study discussed the benefits of educating parents about making music with their young children at home. The act of live music engagement with young children, whether it takes the form of singing, dancing, or musical play, goes far in advancing the home music environment, thereby better preparing young children for their entrance into formal music education in their school years. In a day and age in which parents may rely heavily on electronic media for providing musical experiences for their children, music educators should endeavor to find ways to return the focus towards more live music-making within the family unit (Custodero & Johnson-Green, 2003).

While there has been research asserting that parents are making music on a consistent basis with their young children (Addessi, 2009; Custodero, 2002), there also exists evidence pointing to a potential decline in music-making in the family unit (Baker

& Mackinlay, 2006; de Vries, 2008). This is especially the case as the infant grows into later toddlerhood during language acquisition (Custodero et al., 2003). Since the home music environment of very young children is pivotal in optimizing musical development, research akin to the present study investigating the amount, frequency, and types of musical parenting practices is a worthwhile avenue of investigation.

Results reveal the power that exists in educating parents about the benefits of live, intentional music-making at home with their young child. Elementary general music specialists, as well as teachers of parent/child music classes outside of the regular school day can benefit from these findings. The present results indicate that both the Active and Passive methods of educating parents about music and the young child significantly increased the amount of music-making in the home for these subjects.

Music specialists could employ methods similar to those used in the present study to reach out to parents in their community. Perhaps this could take the form of interactive music classes led by specialists for parents and their young children, a workshop day for parents to present information and teach key skills, information available on program websites directed specifically to parents, or even a series of informational electronic or paper newsletters sent to parents.

These findings advance the idea that it is possible to increase the amount of music-making in the home through a simple parent education program. Doing so may not only serve to strengthen the bonds of parent/child attachment, but may also give rise to more community music-making. Lastly, and potentially most important, helping parents make more music together with their young children will help those children become more competent, confident, and comfortable music-makers as they enter school, as well

as for the rest of their lives. Designing parent education to these ends is certainly an attainable goal for the elementary school music teacher.

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APPENDIX A

IRB Approval Letter for Exempt Status

APPENDIX B

Subject Recruitment Flyer

A Study of Musical Parenting Practices with Young Children

Be part of important early childhood music research!

- *Are you a parent between 18 and 45 years of age?*
- *Do you have at least one child between 0-4 years old?*
- *Have you wanted to create a more musical home for your child, but often felt like you weren't very musical yourself?*

If you answered YES to these questions, you may be eligible to participate in an exciting new research study about music-making with young children. This research is being conducted by an elementary music teacher from our Mt. Laurel Township Schools!

The purpose of this study is to examine music interactions between parents and their young children. Benefits include a free parent workshop on early childhood music development and at least one free interactive parent/child music class, led by an expert early childhood music practitioner, for all participants.

This research is being undertaken as part of doctoral work at Rutgers University. There is no cost to participate. Adult parents (18 - 45 years) who do not hold a college music degree and who have at least one child 4 years old or younger are eligible.



The study is being conducted at 235 Fleetwood Ave. Mt. Laurel, NJ.
This research is not sponsored by the Mt. Laurel Township Schools
Please call Melissa Strong, Music Specialist at Fleetwood School,
at (856) 655-6459 for more information.

APPENDIX C

Participant Research Invitation Script

Musical Parenting Research Invitation Script

“Hello, my name is Missy Strong and I am a doctoral candidate at Rutgers University, New Brunswick, as well as the Music Specialist at Fleetwood Elementary here in the Mt. Laurel Schools, and I am undertaking research that will be used in my dissertation.

I am studying musical interactions between non-musician parents and their children age 4 years and younger. Are you age 18-45? Do you have a college degree in music? Do you have at least one child who is 4 years old or younger? If chosen to participate, would you be willing to receive weekly emails about making music with your young child at home? If necessary, would you be available Monday nights to participate in a parent/child music class for 10 weeks starting in late September? There is no cost to participate.

This study will take place Sept 2011-Dec 2011; your participation will be limited to less than 1 hour each week. Your child is not the subject of the research. You will not be video- or audio-taped at any point. I would like to invite you to participate in this project.

Your participation would be completely confidential, and all efforts will be made to keep your scores and answers from the survey in the strictest confidentiality. I will not link your name to anything you say in the text of my dissertation or any other publications. There are no other expected risks of participation.

At the conclusion of the study I will offer a free parent workshop for all interested participants where I will talk about childhood music development (babysitting will be offered free of charge) with a question and answer time, along with a brief sample music class for you to take with your child. The workshop and class will give you lots of great ideas for how you can make more music at home, even if you don't feel comfortable.

Participation is voluntary. If you decide not to participate, there will be no penalty or loss of benefits to which you are otherwise entitled. You can, of course, decline to participate, as well as to stop participating at any time, without any penalty.

If you have any additional questions concerning this research or your participation in it, please feel free to contact me, my dissertation adviser or our university research office.

Will you agree to participate? If so, could you please give me an email address where I can reach you easily, so that I can send you the measure of music self-concept and the survey about musical interactions at home. If you could complete that as soon as possible, that would be great. Once I have collected these surveys from 60 eligible adults, I will let you know into which study group you have been randomly assigned. I will also send you a consent form that you can return to me at your convenience. Do you have any questions at this point?

I have presented the details of this project and this script to the Rutgers University Institutional Review Board. Thank you very much for your time. Please feel free to contact me with any questions you have.”

APPENDIX D

Participant Consent Form

Consent Form

Nurturing children's innate musicality: The impact of music self-concept and parent education on musical parenting practices with young children.

Melissa C. Strong
Mason Gross School of the Arts
(732) 932-1955

You are invited to participate in a research study that is being conducted by Melissa C. Strong, a doctoral student in the Music Education Department at Rutgers University and Dr. William Berz, a professor at Rutgers University. The purpose of this research is to look at parents' musical self-concept as well as their intentional music-making practices with young children in an effort to help early childhood music educators better serve their students and families.

Approximately 60 subjects between the ages of 18 and 45 years old will participate in the study, and each individual's participation will be less than one hour a week over 10 weeks.

The study procedures require each participant to fill out a questionnaire before and after the 10 week treatment period, take a brief music self-concept measure (multiple choice) before and after and participate in one of two groups, one participating in a 10 week parent/child music class (30 minutes each week) or a another that will receive information about music-making with young children each week via email for 10 weeks.

There will be no monetary compensation for participants, however, at the conclusion of the study, all participants will be able to receive a free one-day parent education workshop about making music with very young children that will conclude with one session of a parent/child music class to demonstrate concepts covered in the workshop.

This research is confidential. Confidential means that the research records will include some information about you, such as your age and ethnicity. I will keep this information confidential by limiting individual's access to the research data and keeping it in a secure location. Scores on the test of musical self-concept and/or the Intentional Music-Making Survey will not be provided to the participants for this study unless specifically requested by the participant themselves, for their scores and/or answers only.

The researcher and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept for at least three years and then destroyed by the researcher at the end of the three years.

_____ Participant's Initials

While there are no direct benefits to participating in this research, you may feel self-satisfaction in the knowledge that you are potentially contributing to the enrichment of parents of young children and music educators. There are no anticipated risks for you as a participant in this study. While there are no guaranteed benefits for society, it is possible parents will have more information about music-making with their children and that music educators will use results to make improvements to music education programs.

Participation in this study is voluntary. You may choose not to participate, and you may withdraw at any time during the study procedures without any penalty. In addition, you may choose not to answer any questions with which you are not comfortable.

If you have any questions about the study or study procedures, you may contact myself at (856) 933-1925 or by email at strongfamily6@gmail.com.

If you have any questions about your rights as a research subject, you may contact the IRB Administrator at Rutgers University at:

Rutgers University, the State University of New Jersey
Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs
3 Rutgers Plaza
New Brunswick, NJ 08901-8559
Tel: 732-932-0150 ext. 2104
Email: humansubjects@orsp.rutgers.edu

You will be given a copy of this consent form for your records.

Sign below if you agree to participate in this research study:

Subject (Print) _____

Subject Signature _____ Date _____

Principal Investigator Signature _____ Date _____

APPENDIX E

Site Access Permission Letter



FLEETWOOD ELEMENTARY SCHOOL
231 Fleetwood Ave• Mount Laurel, NJ 08054
Phone - 856-235-3004 • Fax - 856-222-9756
Michael Profico, Principal

www.mtlaurelschools.org

Rutgers University Institutional Review Board
Office Of Research & Sponsored Programs
3 Rutgers Plaza
New Brunswick NJ 08901

Please note that Melissa Strong, Rutgers University Graduate Student and employee of the Mount Laurel School Township School District, has been granted permission of the Mount Laurel administration to conduct research at Fleetwood Elementary School for her study, "Nurturing children's innate musicality: The impact of music self-concept and parent education on musical parenting practices with young children"

Mrs. Strong will contact parents to recruit them by advertising through use of a district- and IRB-approved study flyer. Ms. Strong's on-site research activities will begin in September 2011 and be finished by December, 2011.

Mrs. Strong has agreed that subjects will not enter any of our building or restrooms or interfere with the flow of pedestrians or vehicles during regular school hours. Mrs. Strong has also agreed to provide to my office a copy of the Rutgers University IRB-approved, consent document before she recruits participants and will also provide a copy of any aggregate results.

If there are any questions, please contact my office.

Signed,

Mr. Michael Profico, Principal

APPENDIX F

Weekly Parent Education Points

What's Happening in the Study: Week 1

Something to ponder this week:

In college I recall a professor asking the class to draw a picture of an early school memory. I sat paralyzed, and watched everyone around me eagerly start sketching. The problem for me was the feeling (acquired in childhood) that I was a terrible artist. I felt embarrassed anytime I was asked to draw. Thankfully, stick figures & a sense of humor saved the day!

Maybe you have had a similar experience with music. It is possible that somewhere along the line, you started to believe that you just were not very musical. Maybe you don't feel as bad about your musical abilities as I did about my art skills, but you wish you had done more when you were younger so that you'd be better today. At the very least, you probably know someone who feels this way.

I run into dozens of people who say they are terrible singers, or that they wished that they had stuck with their lessons as a kid. I have heard countless stories of people being told to mouth the words when they were in choir, or someone telling them that they "shouldn't quit their day jobs" to be a singer. Many people believe that making music is something reserved for the talented few, and that the rest of us are just audience members. But this is simply not true.

While there are people who are extremely gifted musically, research tells us that *every human is born with some ability to be musical*. While some possess a higher degree of this innate musicality (or "aptitude"), we all possess at least some degree of musical aptitude. We will learn more about this as the weeks go on, and more importantly, how we can encourage our children to be more musical in a natural way. But remember....everyone is musical, even you!

Something to do this week:

Think back on some of your musical memories from childhood. Was music important in your family? Were you encouraged to play an instrument or sing by your family members or in your early school years? Are you happy with how musical you were as a child, or do you wish it figured more into your early years?

Consider how music might figure into your child's life now and in the future. If you don't think of yourself as being particularly musical, maybe you fear that you don't have much to offer your child in this department, or maybe you feel like you have good things to offer your child musically but you're not sure how to go about it. Either way, in the next ten weeks, you will learn that you can do something to encourage your child's (and maybe your own) innate musicality!

This week, see if you notice your child responding to music at home, in the car, out shopping, or wherever you go. Try to sing a song that you know to your child at least once or twice this week. It could be a song for nap or bedtime, or just for fun while you are playing together.

What's Happening in the Study: Week 2

Something to ponder this week:

Last week I made a huge claim about everyone being musical to some degree. It was fascinating to read how some of you responded. Many of you echoed that feeling of being very “unmusical” and wondered how it could be otherwise when you have been so convinced of it through the years. But there is a plethora of research demonstrating that every human is musical, with brain studies leading the way.

Plainly stated, musicality is a natural ability of the brain. Neuroscientific research has demonstrated that both brain hemispheres possess networks of neurons involved in musical processing, even in early infancy. Music is now seen as activating both brain hemispheres. These findings indicate that music is a unique and inherent capacity for all human beings with its development starting in utero.

Children acquire the most basic musical elements by receiving normal levels of exposure to music as they grow: a result of genetics and environment interacting together. Both musically trained and untrained people show the ability to acquire musical skills. Regardless of the musical environment, most people eventually achieve the ability to sing, at least at a basic level. To some small degree, in the absence of a musical environment, we will acquire some music ability because our brains are hardwired to do so. So, here's something to put those of you who don't feel musical at ease: *your child will manifest some level of musicality, even if they only have a small amount of music in their environment. Even better? If you provide more music experiences for them, they will blossom musically!*

Something to do this week:

Consider what kind of “musical environment” you've already created for your family. Maybe you have more music going on than you thought you did- in your home or as you are on the go in your car. Do you find that you sing or hum more than you thought you did? Or do you play a lot of music from your iPod, CDs or the radio? Maybe you're just

realizing (as I do with sports, I'm sad to say), that you don't do much at all when it comes to music and you hadn't really thought about it a lot before now. This is incredibly easy to remedy without your having to go take accordion or trombone lessons.

This week, be more intentional in what you play when your child is with you. Take a moment to put on some classical, jazz, world or childrens music recordings on as you do chores or as your child is playing. Young children are constantly absorbing what's going on in their world of sound, so it can do wonders to offer up some excellent music for them to take in as you go about your normal day.

And, of course, be adventurous and sing a song or two to your child this week!

What's Happening in the Study: Week 3

Something to ponder this week:

Babies are born into a world rich in sound and language. Even in utero the hearing mechanism is fully developed by the 6th month. During one of my courses I had the experience of hearing an actual in utero recording of a mom and dad talking. (Don't ask, just know it wasn't my recording!) What I heard amazed me. It was like eavesdropping on a conversation between 2 people on the other side of a door. While it was muffled, I could easily make out what was being said, especially by mommy!

Children master their native language first through exposure to words being spoken to and around them, starting in the womb. After a while, they begin to approximate what they have heard first by babbling and then speaking those words. They later learn to read and write, hopefully primed by these early experiences. The more variety and repetition, the more their listening vocabulary expands, thereby giving them a strong and rich foundation not only for verbal interactions with others, but also for future language learning.

Even the precious and joyful act of reading to a child has a huge impact on language development. There is research asserting that the more "lap hours" an adult spends reading books to a young child, the higher that child's potential for success in reading as they enter their early elementary years. While the parallels are not exact, music and language are learned in very similar ways. Both are developmental processes impacted by the interaction of genetics and environment. The more early and varied exposure a young child has to music, the more "vocabulary" they gain for future use in their music development. Plus, and this sounds corny, but music is just plain fun!! It's a part of who we are as humans, how we were made. We are musical people.

The bottom line is this: more music experience in the early years deepens and expands a child's musical foundation. These experiences take place through singing, dancing, chanting, playing instruments or listening to recorded music with or for a young child.

The experiences don't have to be perfect in their presentation, they just have to be presented as often as possible. The more music you provide in the early years, the more you help your child maximize their inherent music potential!

Something to do this week:

Think about how much language exposure your own child has had. They have probably heard spoken, cooed, whispered, shouted (okay, maybe that's just me), chanted and sung words numbering in the thousands. Keep this in mind as you interact with your child, and consider the parallels between how they learn language and how their musical language is developing. What musical experiences have you been providing for them in recent weeks? Have you been trying to go a little outside your comfort zone with your child musically? Are there more musical things you might be able to do with or for your child that you wouldn't have considered before?

If you're still feeling like you are not a good enough musician, try to push that thought to the side and move forward anyway. Your child thinks you are an absolute rock star! Nobody is like Mommy or Daddy to a small child. They don't judge you (at least not yet 😬), they love any act that comes from your love for them. Practice when it's just you and your child alone so you don't feel inhibited. Be silly, say a Mother Goose rhyme you remember from your childhood, or make up a song as you get them dressed or brush their teeth. Go for it!!

What's Happening in the Study: Week 4

Something to Ponder this Week:

Did you know that infants are able to attend to, and even store, musical information in both their short- and long-term memory? They can process music as they receive it from their environment. Infants are able to distinguish differences in two different melodies and they even show a preference for what has conventionally been labeled as a “good” melody! Babies process musical information in ways that are not too fundamentally different from adults, as evidenced in the work of researchers studying infant brain development.

While any process involving understanding brain development is difficult to grasp, a basic principal concerns the synaptic connections that take place to form the neuronal network for music. Babies are creating thousands of synapses for different activities, of which only those made strong through repetition survive. This repetition is a result of sensory stimulation received over and over again from the environment. Just as visual input shapes the wiring of the visual cortex, early stimulation from the ears builds neuronal pathways in the auditory cortex. Bottom line? Children’s brains will create and solidify neural connections when they are receiving musical encouragement and input from their caregivers.

Edwin Gordon, a leading music education expert, states that the ages between 0-18 months are a crucial time in which informal exposure to music has the most impact on these neural pathways for music. He goes on to discuss the music babble stage of music processing that takes place during this time. In music babble, infants respond to pitched musical examples with speech-like imitations. As is the case with language babble, infants need the intuitive guidance of their caregivers to successfully navigate this period. If a baby eventually receives little or no musical exposure or structure before 18 months of age, music may be relegated to a place of insignificance in the brain of the child, especially when they are reaching the new, prelinguistic phase and parents become (rightly) absorbed in hearing them start to talk!

Something to Do This Week:

Are you panicking?! Don't let yourself go there! ***Extensive musical training is not necessary, but rather the simple act of singing throughout the day will serve to build these neural pathways for music.*** This is good news- providing a good musical environment for your newborn has nothing to do with being an awesome musician or buying the right Mozart tapes or even sending them to the best class. It is enough to make sure that you are bonding with your infant, toddler or young child through the basic and natural act of singing to them whenever the opportunity presents itself, and noticing when your child is being musical and encouraging them in the process.

Take a moment this week to see if your child is doing something that, in the past, you might have considered random, but now think might be musical. For example, if you have music on and later you hear your child humming, figure out if what they are humming is their approximation of that song. This happened to me this week, as I talked with my kids about showing *The Sound of Music* to some students at school. I noticed hours later that two of them were humming entire songs from the movie as they played, a result of having simply mentioning it earlier in the day.

What's Happening in the Study: Week 5

Something to ponder this week:

Music is considered one of the fundamental biological drives. We have utilized music throughout history to comfort, excite, lift up, soothe, and even heal. Caregivers all over the world have invested countless hours singing and making music with children. The first interaction with a music-like experience for an infant is found in "baby talk" (referred to in the research literature as infant-directed speech). The literature on this subject tells us that the propensity for adults to alter the way they speak when interacting with babies is a cross-cultural phenomenon.

Infant-directed speech is extremely expressive and is characterized by a unique simplicity of contour, usually in one direction and often repetitive in nature. There are significant differences in pitch, elongation of vowels, rhythm and tempo when compared to normal adult speaking parameters. Research provides evidence of a baby's pronounced preference for baby talk over normal speech. I'm sure we all find ourselves babbling and talking in this way when we're around babies. I know I still do it automatically!

Infant-directed singing is an extension of the caregiver/infant dialogue in which infants receive messages that are intended to alter or reaffirm their mood. Lullabies, in particular, share many similarities to soothing infant-directed speech because of their shared, low, falling contours, narrow pitch range and gentle tone of voice. For prelinguistic infants, who do not yet have the ability to translate word meanings, singing may represent a vehicle by which they can communicate with their parents, at least emotionally. Some research asserts that singing may be an even more powerful way than speaking, at least emotionally, to communicate with infants who are not yet able to decode true word meanings. These interactions often help seal the crucial attachment bond between a parent and their child.

Everyday care giving is an activity rich in infant-directing speaking and singing opportunities. These times might take place during feeding, diapering, bathing, traveling

or simply preparing for bed. These chances for meaningful interaction between child and parent are far more than fun and entertainment. Rather, baby talk and singing to/with infants are shared emotional experiences that might well contribute to the emotional well-being of both parent and child.

Something to do this week:

Try 2 things if you're not already doing them. First, think of a lullaby with which you are familiar and sing it every day to your young child. Even my 6 year old still begs me to sing "Hush Little Baby" every night! Check out this link, which has the texts to many song options, some with music so that you can hear it being sung or played:

<http://www.kididdles.com/lyrics/lullabies.html>

Second, try to start a musical tradition in your home this week by creating a song that is reserved for daily rituals. One temporary option for those of you who don't feel like you're able to compose your own song (yet!) is a "piggy-back" song. In it, you use a well-known tune, but with different words. For example, in our home we sang a "Good Morning" song we made up to the tune of Happy Birthday. Definitely not Mozart, but something quick and accessible that we used every day for the first couple years of their lives.

Think of an everyday ritual that you could sing along with every day, like getting dressed, tying shoes, making the bed, brushing teeth, etc. Then, find a melody of a favorite song and start creating some easy text to put to that tune. Use this song only for that activity. Later, you can branch out and start "composing" entire short songs with and for your child that they can associate with certain rituals. Maybe one day they'll sing the same song to their children!

What's Happening in the Study: Week 6

Something to do this week:

There are many means by which you can “be musical” with your child. You can listen to the radio or recordings, go to concerts or watch/hear it on television. Each of these things is valuable, but *nothing* is more powerful for your child’s musical development in the early years than the live musical model you provide for your child. Early childhood musical development is optimized when primary caregivers, especially mom and dad, engage in live music-making such as singing, moving, chanting and playing with and for their young children on a frequent basis.

Kenneth Guilmartin, another early childhood music expert, describes something he calls “basic music competence,” in which a child is able to sing in tune and move competently to the beat in music. Most children who have been surrounded by caregivers who frequently engage in music with them should easily acquire this. Once basic music competence has been developed, the child will be primed and ready to begin more formal music instruction with confidence and competence as they enter school, akin to reading readiness.

What, then, do early elementary music teachers actually encounter when pre-school and kindergarten students enter the music classroom for the first time? Are these kids already in possession of this basic music competence that should have prepared them for general music classes? The answer, unfortunately, seems to lean more towards “no” than to “yes”. Many students enter school unable to consistently use their singing voice or move comfortably to a steady beat. But you can help your child acquire this basic musical competence, even when you don’t yet feel like you might not possess it yourself!

Early development in all areas is contingent on effective parenting practices (wasn’t that a brilliant assertion on my part?!), and the same is true for music. What the research indicates is that **parents themselves are the crucial component in early music development as they themselves model a variety of live music-making experiences with and for their young child.**

Something to do this week:

Think about the musical models from your own childhood. Reflect again on how music fit into your home as you grew up. Would you describe either or both of your parents as a good musical model? My parents were, although I didn't realize this until much later in life. My mom was/is always humming or singing, and loved to listen to all kinds of music. My dad was/is a Classical music fanatic, and I just remember that the music of Bach was a part of my life from as far back as I can remember. I pretended to be appalled that he loved that music, but secretly I thought he was pretty amazing to listen to, appreciate and understand such complicated stuff! He also loved Bluegrass, but I still haven't come to terms with that one yet...but I digress.

Are you making some live music at home these days? Is there a way you could do a little more without it becoming a burden? Remember, this doesn't mean you're supposed to build an amphitheater so that you can perform concerts for your children (although, please let me know if you do this, because I would love to see it!) I know I'm getting repetitive, but the best thing you can do for your children musically is to engage in all kinds of music making during the course of "everyday life". Sing to them when they need comfort, dance with them to be playful, or just bang on some pots and pans for fun! Your model is an incredibly effective tool in their musical development in addition to being a wonderful way to bond and make memories that you both will have for life.

What's Happening in the Study: Week 7

Something to Ponder This Week:

Okay, you've probably picked up on my subtle messages about making music with your young children at home: do more of it! But for those of you who remain unconvinced that you have any right to sing and/or dance with your children because you haven't yet gotten in touch with your inner Pavarotti, I have some encouraging news. Your child may flourish musically, no matter your musical ability, *if* they believe that music is something you value deeply. Researchers in motivational studies have discovered the impact of parental value on a child's success in different areas of study. When parents demonstrate strong value for a subject, even if they themselves are not necessarily competent in that area, their children can not only become competent, but they may excel in that subject. Isn't this amazing?! It is highly possible that, even if you don't have the best singing voice, or your dancing skills are similar to those of Elaine from Seinfeld, your child may learn to love and succeed musically in large part because they know that you value music. In one study of highly successful young music students, a significantly high percentage of the parents did not label themselves as particularly "musical" and yet their children were extremely accomplished musicians for their age level. The students in the study acknowledged that music was highly valued and encouraged in their homes even if their parents were not very musical. (Boy, I sure hope this is true for math!)

Children will be much more willing to attempt musical participation down the road if they possess the belief that they are encouraged by their primary caregivers to be musical. If a child perceives that they lack ability, *and* family members are not supportive of their music-making attempts, it is very likely that they will not pursue musical activities in the future, even if they were born with a high musical aptitude.

Something to Do This Week:

This might be a good time for me to be clear about some of what I'm hoping for with my work. While it would be awesome if your kids turned out to be professional musicians,

this probably won't happen (although maybe a few of them will!) In my own teaching, my goal is not to create perfect music prodigies. It's neither possible nor expedient for me to do that. However, I want every student to know that they are musical and that they have potential to achieve in music. I do all in my power to grow that potential and put them on the path toward reaching it while they are with me. Each of my students will leave as competent singers, movers, performance critics and life-long supporters of music, whether they are performers, audience members, or (hopefully) both.

I would love for you all to come out of this knowing that you are probably more musical than you originally envisioned, and that your child is inherently musical as well. I want you to gain confidence and maybe even a little boldness in your music-making. And for this week in particular, remember that **whatever your own level of musicality, you can help your child reach their highest musical potential in ways that are fun and can easily fit into your life.**

When you play music for them, sing to them, dance with them, watch a concert together, or create your own instruments to play at home, your child sees and knows that you are musical. It will be natural for them to assume, then, that they are musical as well. They will value what you value, especially in the early years, so keep showing them that music is an important part of who they are as people!

What's Happening in the Study: Week 8

Something to Ponder this Week:

We now know that active music experiences in natural settings guided by loving caregivers will go very far in helping young children to become musical, since their brain responds more readily to authentic interactions with sensory input. The earlier and more frequently parents take advantage of musical opportunities, the better the musical development of their child.

The very first steps of making music together with your family should be playful and natural (or at least should seem that way to your child!) You don't need Baby Einstein or Baby Mozart to teach your kids how to be musical. You simply need to create an environment that encourages both spontaneous and purposeful music making.

What you are trying to do is build a musical "vocabulary" for them, so that when the time comes for more formalized instruction down the road (lessons, classes, choir, orchestra) they will have a strong foundation for success. This foundation is built in the early years, with informal musical guidance taking the form of singing, moving, chanting, and playing musically with and for your young child.

Something to Do this Week:

Here are some basic things that you can do with children at home to encourage musical development:

1. If you have an infant or toddler:

- For the first year, make sure you are doing lots of **cooing and "motherese"** with your baby. Imitate the sounds they make back to them. Hum music to them whenever you think of it, and sing to them as often as you are able. Bounce them on your knees, and recite lots of great rhymes and poems to them.
- Don't forget to take some time to learn at least **10 great children songs**, 3 of them lullabies (Muffin Man, Itsy Bitsy Spider, Farmer in the Dell, Mulberry

Bush, London Bridge, Marry Had a Little Lamb, Rock-a-bye, All the Pretty Little Horses, Twinkle, Yankee Doodle, Old MacDonald, BINGO.)

- Look for times when your child is humming, singing or chanting spontaneously during the day and try to **extend that play time** by joining in with them with your own singing voice. This is a VERY powerful way to encourage them musically, plus it's just really fun!
- Get some **great classical, world or jazz music** that you can play for your children and pick them up and dance with them.
- **Create instruments** out of everyday objects and play them together, with music and without. There are some great resources on the internet showing you how you can easily make your own play instruments, or of course there is the tried and true (and loud) banging of pots and pans!
- If you are able, **take a child/parent class**. These are fantastic resources where you can build your own musical vocabulary to use at home.
- Find a **good Suzuki** instrumental teacher if you want to start your child in lessons some time between 4-6 years old.
- Have your child take **dance lessons** starting around 4 years old.

2. For the Elementary School Child:

- Continue the above, but **add more sophisticated songs** to their repertoire. Look for good music to sing together.
- Start to **listen to their singing voice**, watching for signs of unhealthy voice production (think American Idol for Kids). Their voices should be light, high and angelic. Volume can be the enemy of a tender, growing child's voice, so encourage them to sing with a beautiful voice, not a loud or heavy voice.
- If you attend church or synagogue, encourage them to sing in the worship service and model it yourself!
- **Listen to recordings of excellent music and simply talk** about what you hear together.
- **Take them to concerts** and dialogue about what you saw and heard.

- If they are in school, discuss the things that they are **doing in their music classes**. Ask them to sing songs that they are learning.
- Begin **piano lessons** sometime in or after 1st grade, but make sure they are developmentally ready. It's tough to see parents start their children in lessons too early and then let the kids quit because they have difficulty focusing or enjoying it.
- **Research for an outstanding instrumental teacher** and have them start lessons. Make sure you commit to staying in the lessons for a prescribed period of time to avoid the temptation on their part to quite when it gets tough.

What's Happening in the Study: Week 9

Something to ponder this week:

In the journey to raise a child, the road is fraught with the opinions of others, solicited and unsolicited, concerning the best ways to accomplish the task. Opinions about how music and technology should figure into the lives of these young children are no exception. Television shows, DVD's, iTunes, infant musical toys, and audio recordings of children's music are ubiquitous and vie for attention. Some even imply that their use may increase a child's intelligence.

Concerning television, I won't lecture about how/when parents should let their kids watch; I certainly have availed myself of it when I needed my kids to be quiet and in one place for awhile! As an early childhood music specialist, though, I have to be careful not to think of TV as a long-term babysitter, no matter how tempting it is to do so. It's not that kids can't learn things from TV, but rather that active encounters with people they care about are infinitely more meaningful and important in their development. In light of this, TV viewing that merely consists of children sitting passively won't go far in helping them develop cognitively, so it is crucial to strive for television time that is as engaging and interactive as possible.

Something to do this week:

The development of a child's cognitive abilities thrives with interactive exchanges that take place during creative play, so this week when your child does watch TV shows, engage them during and after the experience. Sing along, answer (or ask) questions, or move with the characters. After the show, talk to them about what they saw, or bring it up again later by singing a song or asking questions. These steps ensure that the concepts they took in will be more meaningful than if they were only passive watchers.

I frequently get questions about my opinion of the efficacy of using "educational" TV shows and DVDs with young children. I think of these offerings as the "donuts" in a child's overall musical development diet: good every once in a while, but not the bulk of

what they should be taking in. This article certainly gives a lot of food for thought on the subject: <http://www.child-psych.org/2010/03/do-baby-einstein-dvds-work-exposing-infants-to-educational-dvds-may-affect-their-language-development.html>

Let me know what you think of what this researcher is asserting!

What's Happening in the Study: Week 10

Something to ponder:

We made it to the final week of the study!!

Something to do this week:

Please take a few minutes to complete the 2 surveys on the website (www.musicalfamily.org). After logging in, click on the yellow “Surveys” button at the top left of the page. These are the same surveys you took at the beginning of the study, with the demographic information removed. Once finished, your official participation in the research will be complete. I know this is an insanely busy time of year, but it would really help me if you could do them by December 23rd. **Even if you weren't able to make it to all the classes, or you couldn't read every single email I sent out, I could still use your data for my research!**

Along these lines, you'll see a box for both Active and Passive subjects to enter the number of weekly emails/blogposts that you were able to read for the entire study. Please be honest when putting this number, and don't feel bad if you were not able to read them all! These emails were required for the Passive subjects. Active subjects were invited each week to read the blog which had the same info as the emails to the Passive group, but it was not a requirement. This information will be helpful as I look at all the data from the study.

I have also added a box on the 2nd survey for you to write about your overall experience. It is not obligatory, but if you are comfortable putting this on the “permanent record” your comments may further help music educators provide support and encouragement to parents! You can talk about yourself, your child or both. I would enjoy reading the comments and I will answer any questions you ask, if I can. Please contact me if you are interested in attending a day-long workshop on music and young children.

Something to do beyond this week:

I hope you will build on what you've learned. Look for ways to supplement your home musical environment with experiences out in your community. In Philadelphia, for example, we have a phenomenal opportunity for young children to hear members of the Philadelphia Orchestra called "Sound All Around" and it is specifically for families with small children. I've been to their performances and have loved it. And trust me, I'm picky about this stuff! They also have other offerings for families. Check out this link to find out more: <http://www.philorch.org/families-kids>. If not Philly, look around your area for musical opportunities for families with young children.

I would encourage all of you to look for a parent/child music class in your area. I heartily recommend any Music Together class that you might find. They have an outstanding, research-based program with a strong emphasis on parents and children engaging together in music, so you know I love it. Here is their website: www.musictogether.com.

Temple University also has a good program for young children:

http://www.temple.edu/boyer/musicprep/programs/inst_childhood.htm

I also recommend this album of music for children from Music Together:

<http://store.musictogether.com/family-favorites-download-info.php>. This is the song collection that we utilized for the Active Group parent/child music class, and it has several excellent songs. They have other fun stuff on the site to check out, too. I know I sound like I'm a salesman, but please know that I believe in their philosophy and instructional approach and therefore I can highly recommend their offerings to parents!

Lastly, I want to take a moment to thank you so very much for joining me on this part of your musical journey. I hope that you have realized that you *do* have it within your grasp to make more music on an everyday basis. I also hope that you have discovered that you are a better musician than you thought, and therefore you've been bolder in music-making yourself and with your child. It has been a pleasure and an honor. I thank you for your time, and I wish you all the very best!

APPENDIX G

Magnitude of Motivation Test for Parental *MSC*

Magnitude of Motivation for Music Test

The items in this survey ask your opinion about various aspects of music and musical activities. Since the purpose is only to determine your attitudes, there are no wrong answers. Each item consists of a statement to which you are to respond with one of the following:

- if you **strongly agree** with the statement
- if you **agree** with the statement
- if you **neither agree nor disagree** with the statement
- if you **disagree** with the statement
- if you **strongly disagree** with the statement

The following are sample questions to help familiarize you with the test:

For instance, if you read the statement, “When I was younger, I liked listening to music on the radio,” and somewhat agreed with the statement, you would choose:

Agree

Or if you read the statement, “When I was in school, I would have chosen music class over gym or art if I could only take one class,” and you cannot recall what you would have done when you were younger, you would choose:

Neither agree no disagree

Or if you read the statement, “I enjoy moving to music more than singing,” and strongly disagree that this is currently true of you, you would choose:

Strongly disagree

When questions on the test refer to when you were in school or when you were younger, they are referring to your elementary and/or middle school years.

	Strongly agree	Agree	Neither Agree nor disagree	Disagree	Strongly disagree
I am a good musician.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music is a very important part of my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, I worked hard to do well in my music classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like myself best when I am making music.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening to music is more important to me than watching television.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, I enjoyed music classes more than other classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In school, I wanted to be involved with music more than other activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would rather play an instrument or sing a song than read a book.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, music class was my favorite class of the day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Going to a musical activity is more important than going to a sport activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I could, I would spend more time listening to music.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found music classes to be more exciting than some other classes I took.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Agree	Neither Agree nor disagree	Disagree	Strongly disagree
I am willing to put more time into making music than my other interests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I can, I will be involved with music all my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, I never felt music class was a waste of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can do without other things, but I have to be able to make music.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think about making music (singing, dancing or playing) frequently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, I found music classes to be very stimulating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was in school, I worked harder on my music than anything else.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music is one of my favorite activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I would have spent more time in music class when I was in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was younger, I wanted to pursue a career in music.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was in school I was an excellent music student.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX H

IMME Survey

Intentional Music-Making Survey

Section A - Use of Music Technology/Recordings

Do you have any of the following musical instruments in your home? (Check all that apply)

- Piano
- Guitar
- Electronic keyboard
- Violin, or other stringed orchestral instrument
- Accordion
- Recorder
- Drums
- Rhythm instruments: small drums, maracas, and tambourine
- Wind Instruments (flute, clarinet, saxophone, oboe, bassoon)
- Brass Instruments (trumpet, trombone, baritone, French horn, tuba)
- Other (please specify)

Do you own a CD/mp3 player or iPod?

- Yes
- No

How many CD's or downloaded albums do you own?

- 1-10
- 10-50
- 50- 100
- 100- 200
- More than 200

What types of CD's or downloaded albums do you own?

- Classical
- Children's Songs
- Lullabies
- Folk
- Gospel
- Hip Hop
- Salsa (Latin)
- Country Western
- Jazz
- Rock and Roll
- World Music
- Other (please specify)

Do you play (using CDs/radio/downloaded albums) any of these types of music for your CHILD? (Check all that apply)

- Classical
- Children's Songs
- Lullabies
- Folk
- Gospel
- Hip Hop
- Salsa (Latin)
- Country Western
- Jazz
- Rock and Roll
- World Music
- Other (please specify)

Which type of music do you play (using CDs/radio/downloaded albums) most often for your CHILD? (Check all that apply)

- Classical
- Children's Songs
- Lullabies
- Folk
- Gospel
- Hip Hop
- Salsa (Latin)
- Country Western
- Jazz
- Rock and Roll
- World Music
- Other (please specify)

Do you play recorded music - (Check all that apply)

- To put your CHILD to sleep?
- To entertain your CHILD while you do something else?
- To dance or play with your CHILD?
- To sing to your CHILD?
- To calm or relax your CHILD?

What is the reason you usually play music for your CHILD?

- To put my CHILD to sleep
- To entertain my CHILD while I do something else
- To dance or play with my CHILD
- To sing to my CHILD
- To calm my CHILD
- To teach my child words.

Section B - Parent and Child Musical Interactions

What types of songs do you sing to your child most frequently? (Check all that apply)

- Lullabies
- Play songs
- Songs that I like to listen to
- Songs I've made up for everyday routines
- Songs I make up in the moment
- Spiritual/Religious songs
- Songs from another country
- I do not sing with my child
- Piggyback songs (familiar song with new words)
- Other (please specify)

Did your MOTHER sing to you?

- Yes
- no
- Can't Recall

Did your FATHER sing to you?

- Yes
- no
- Can't Recall

Does your child have any of the following musical toys to play with at home? (Check all that apply)

- Musical Rattles
- Musical Mobiles (hanging from crib or dressing table)
- Shakers or Bells
- Drum
- Toys that make music when you press them (computer chips)
- Toys that make music when you wind them up

Rate the frequency with which you have done the any of following in the past month:

	Never	Once or twice	Once a week	About 3 times weekly	Every day
1. Played a recording of children's music for your child.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Helped your child learn a new song by singing it to them first.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Provided toy musical instruments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Provided music-making toys.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Intentionally sang with your child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Intentionally sang to your child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Taken your child to a concert.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Attended a concert (without child).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Performed in a music group (you).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Sang a lullaby to your child at bedtime or naptime.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Sang songs for routine activities like tooth-brushing or getting dressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Intentionally played children's music in the car.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Danced at home with your child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Put on recorded music to help your child fall asleep at night.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	Once a week	About 3 times weekly	Every day
15. Sang and/or danced to music that you like within your child's hearing.	<input type="radio"/>				
16. Sang words you normally would speak to create a spontaneous song.	<input type="radio"/>				
17. Joined in musical play in which your child was engaged to extend that play.	<input type="radio"/>				
18. Put on a children's music DVD or TV show for your child to watch.	<input type="radio"/>				
19. Tried to encourage your child to sing by singing to/for them.	<input type="radio"/>				
20. Sang at a public event (for example, church, temple, party, sporting event) where your child could see and hear you.	<input type="radio"/>				

21. Which of the following describes your overall attitude toward music in your young child's life?

- Music is not important
- Music has a little importance, but less than most subjects
- Music is important for my young child
- Music is an essential part of my young child's life

22. How do you feel about your singing voice?

- My singing voice is terrible
- My singing voice is not very good
- My singing voice is average
- My singing voice is good

23. Which of the following describes what you remember about music in your family in your childhood?

- Music was not important in my family growing up
- Music had some importance in my family, but not as much as other things
- Music was important in my family
- Music was an essential part of my family's life

24. Which of the following describes your overall attitude concerning musical potential?

- Only a very few people are musical
- About a quarter of the population is musical
- Many people are musical, but many are not musical
- Everyone is musical

25. Circle the phrase that best describes your ability to notice your child being musical.

- I never notice my child being musical
- I rarely notice my child being musical
- I sometimes notice my child being musical
- I frequently notice my child being musical

Section C – Demographics (all questions asking about “the child” pertain to the Primary Child for the purposes of the study)

Parental Role

- Male/Father/Male Guardian
- Female/Mother/Female Guardian

Are you the child’s biological parent?

- Yes
- No

Is the child your first-born child?

- Yes
- No

What is the age of this child (in months)?

In addition to this child, how many other children do you have?

- 0
- 1
- 2
- 3
- 4
- More than 4

Are you currently:

- Married
- Living with partner
- Single
- Divorced/Separated
- Widowed

What is your age?

- 18-24 years
- 25-29 years
- 30-34 years
- 35-45 years

What is your ethnicity?

- White
- African-American
- Asian
- Indian
- Hispanic
- Other (please specify in the box below):

What is the **last grade** or class that you completed in school (choose one)?

- Did not graduate from high school
- High school graduate or grade 12
- GED Certificate
- Business, technical or vocational school after high school.
- Some college, but no four-year degree
- College graduate, with A.B.A., B.S. or other four-year degree

- Post-graduate or professional schooling after college

Last year, (that is in 2010), what was your total family income from all sources BEFORE taxes?

- Less than \$10,000
- \$10,000 to under \$20,000
- \$20,000 to under \$30,000
- \$30,000 to under \$40,000
- \$40,000 to under \$60,000
- \$60,000 to under \$100,000
- \$100,000 or MORE

For Active and Passive Subjects: Of the 10 weekly emails/blog posts that were sent out each week, roughly how many were you able to read, in total, by the end of the 10 weeks? (Enter the number in the box)



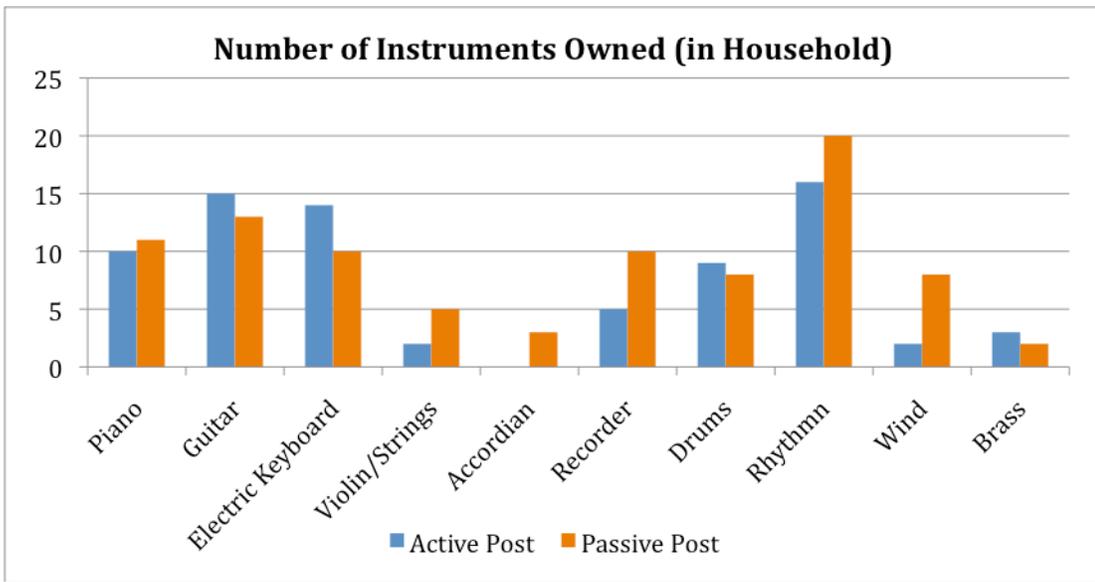
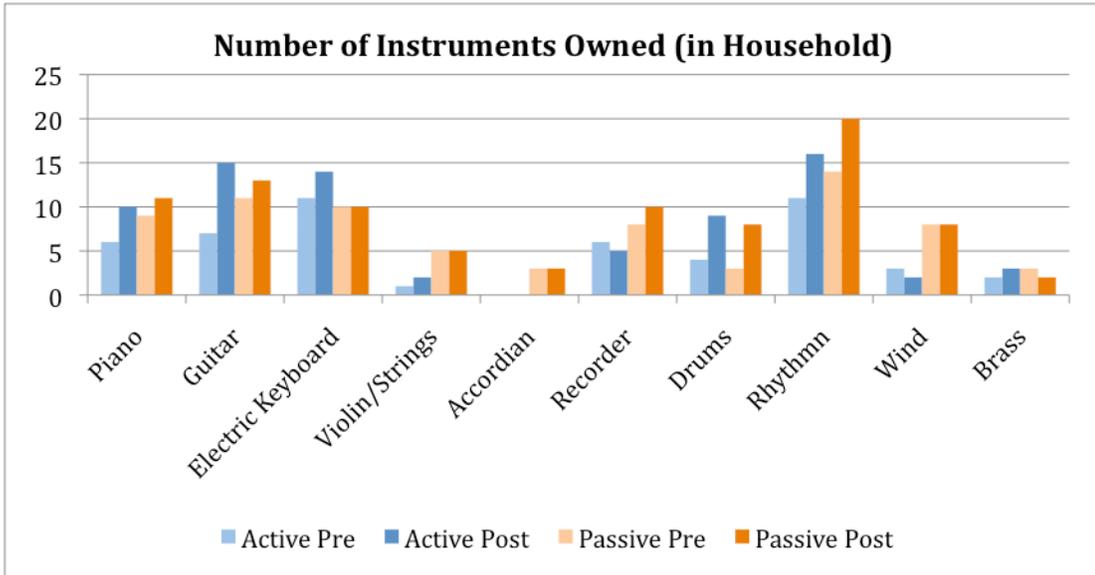
Comments on your experience

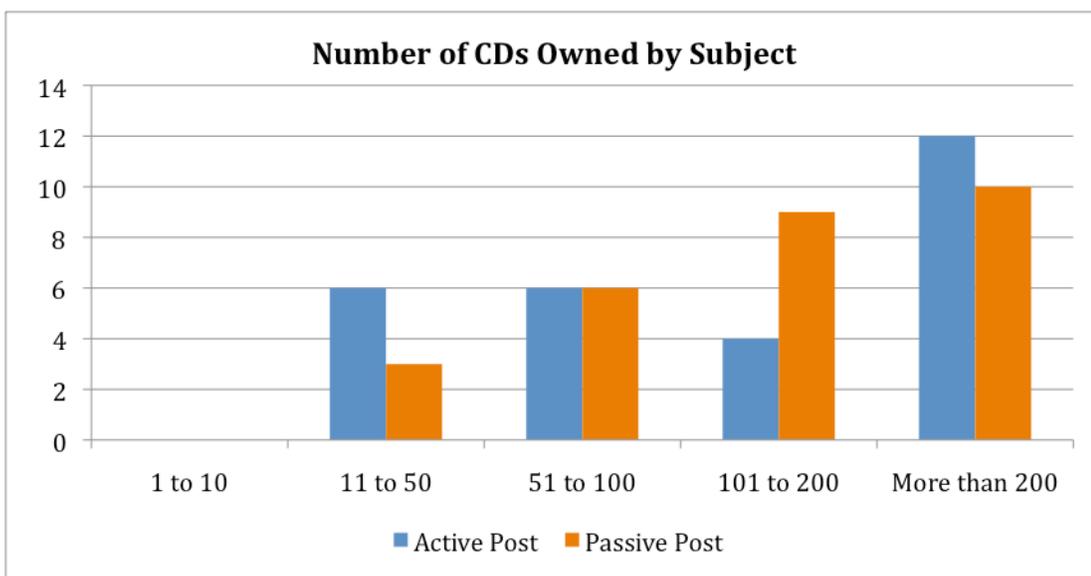
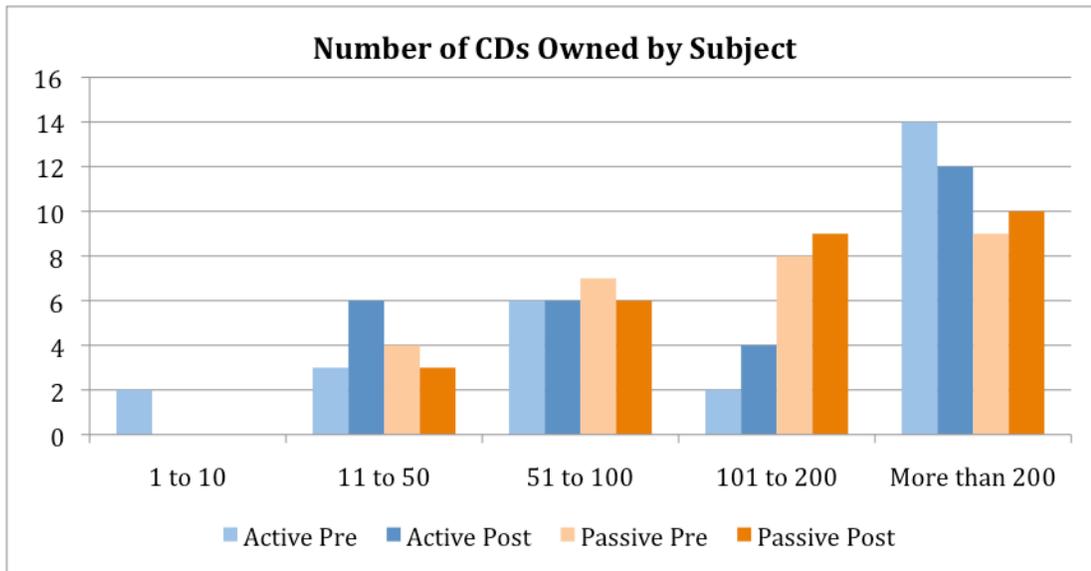
If you would like to, use the box above to write about your experience in the study. I may use some of your comments in my writings about the research, so you should feel comfortable with the possibility that others might read what you write. Share anything that you think might be pertinent to the research: your own musical past, your experience during the study, something you noticed in your child, things you think might change in

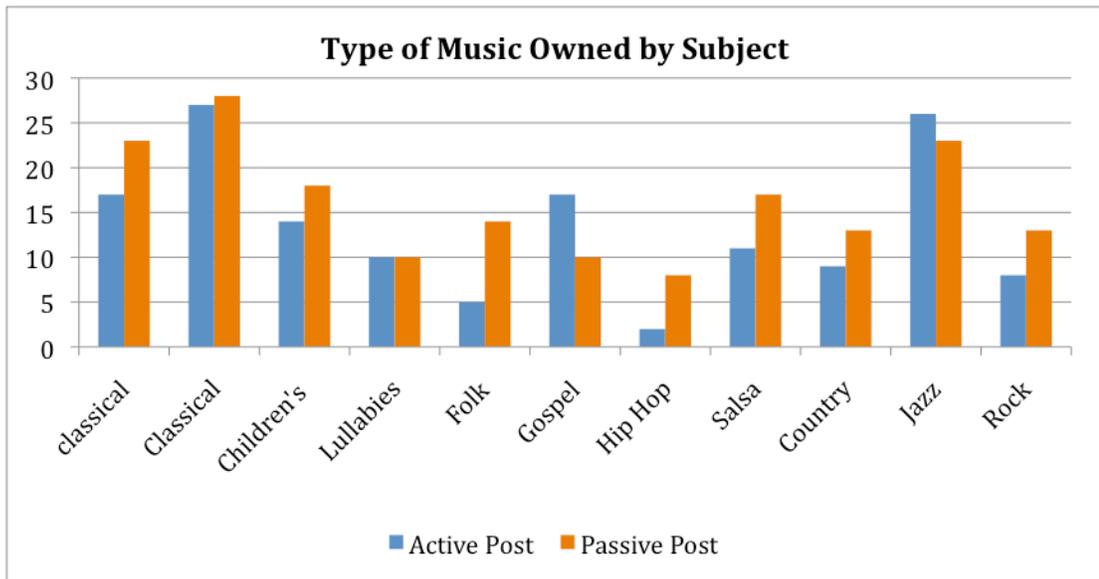
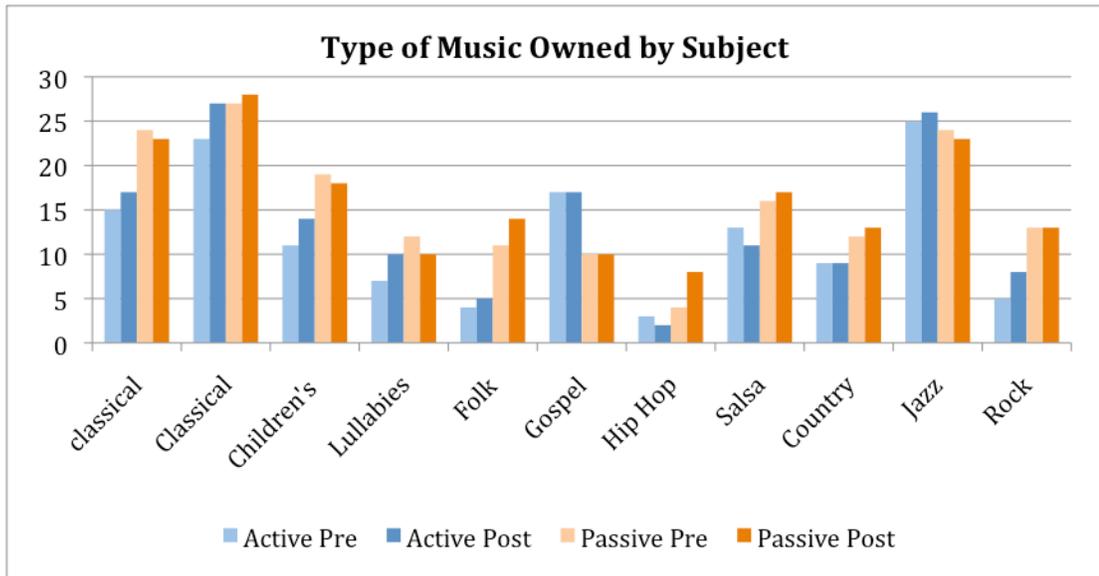
the future as a result of your participation, or something you would want other music teachers to know. Write as much or as little as you would like. This is in no way an obligation of your participation in the research study.

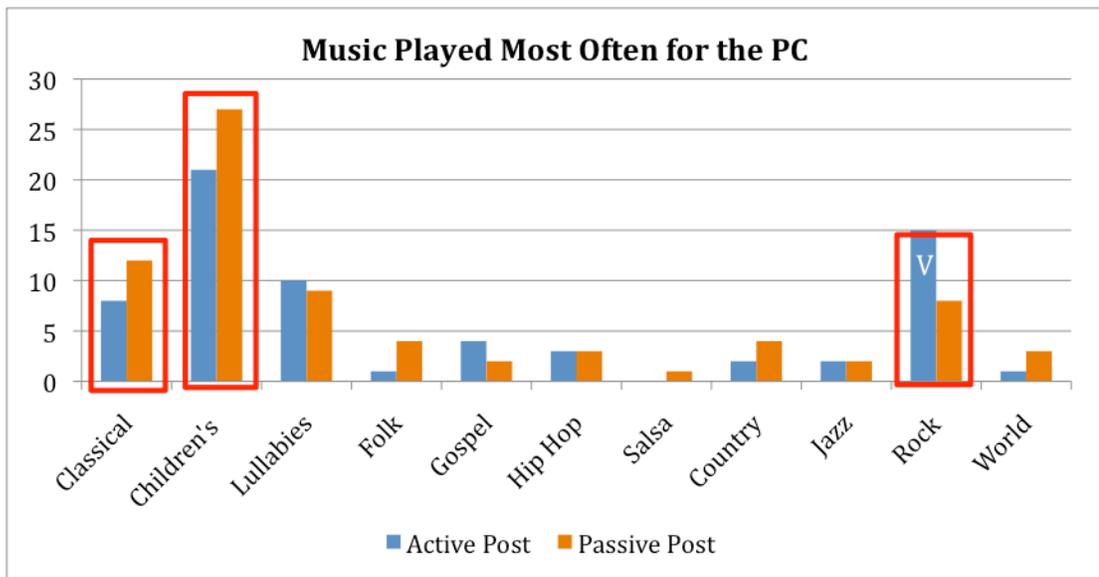
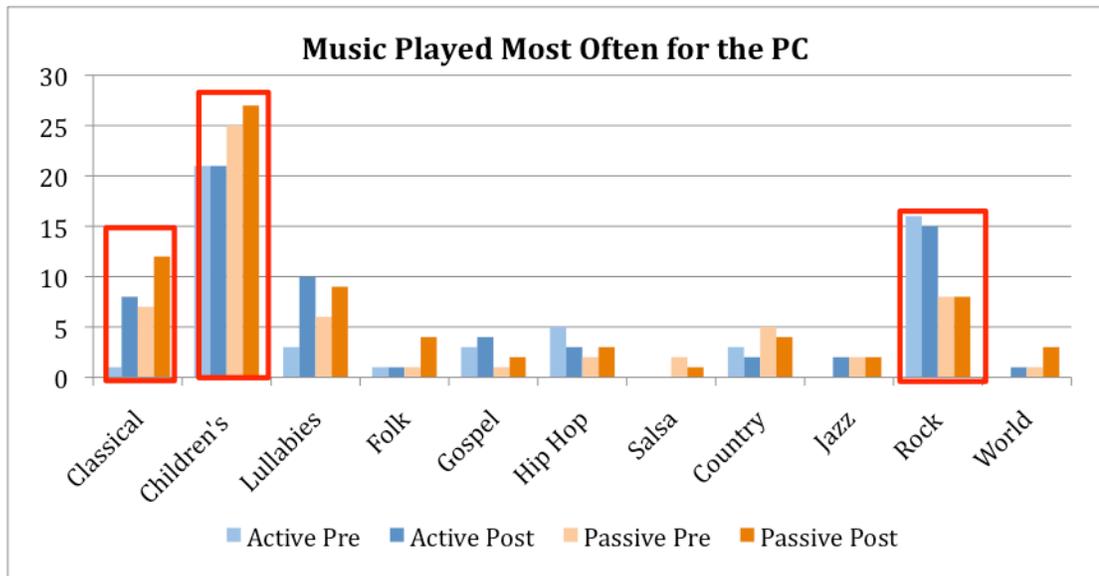
Appendix I

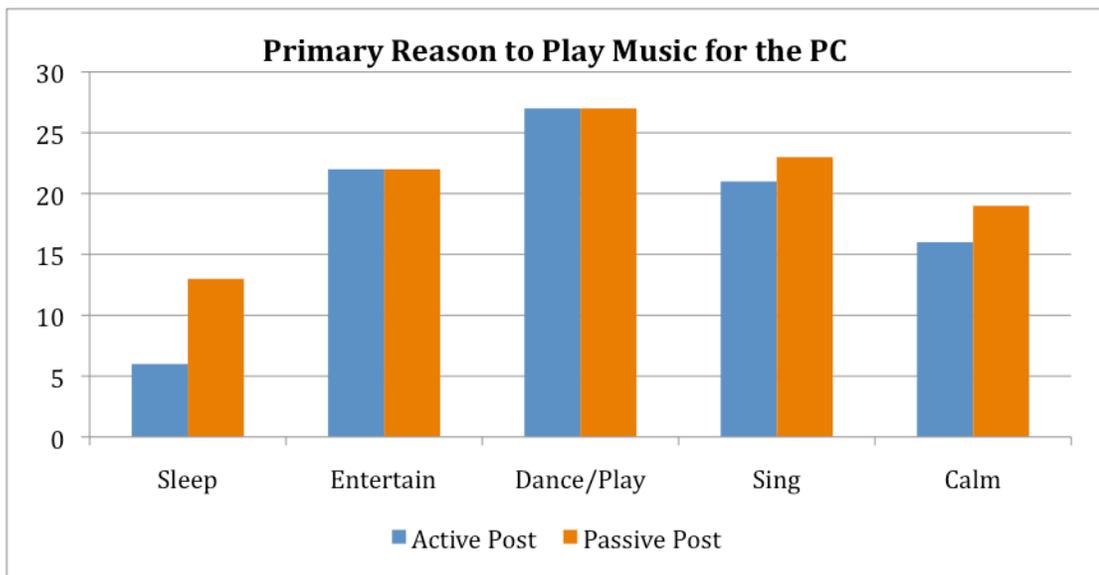
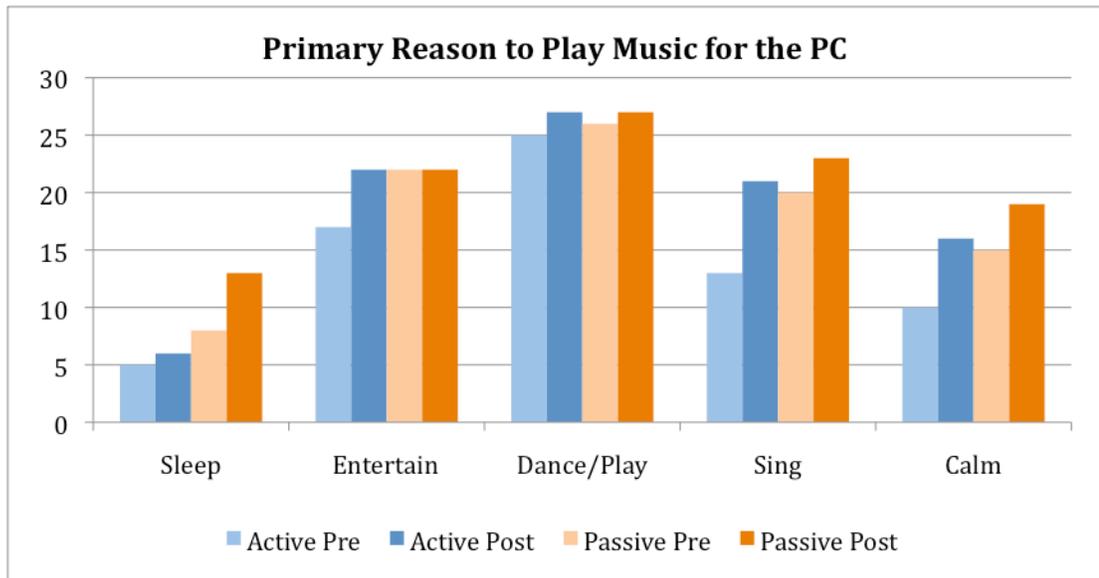
IMME Section A Results

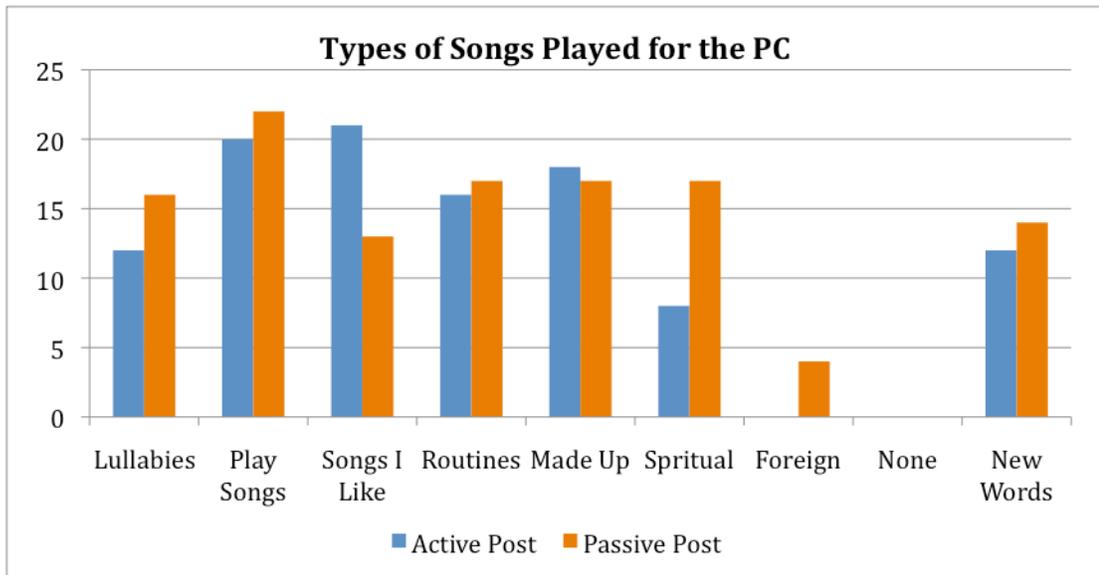
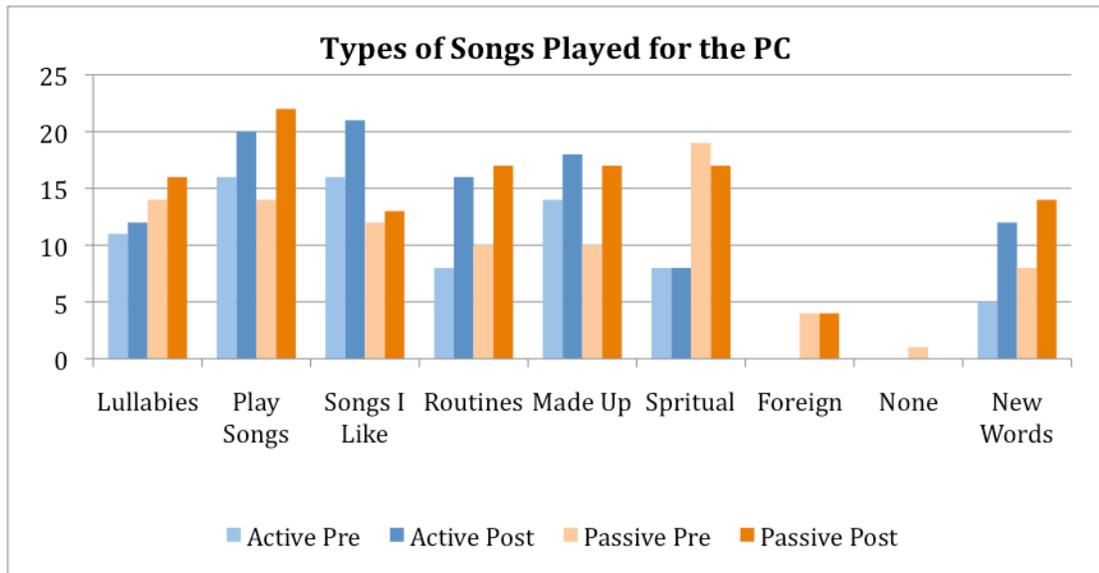


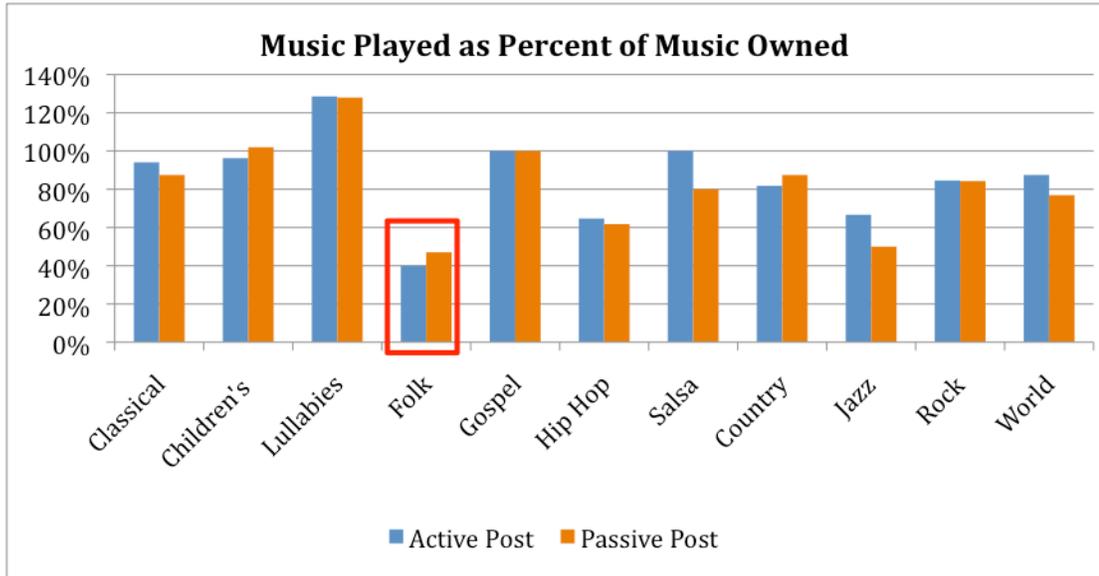






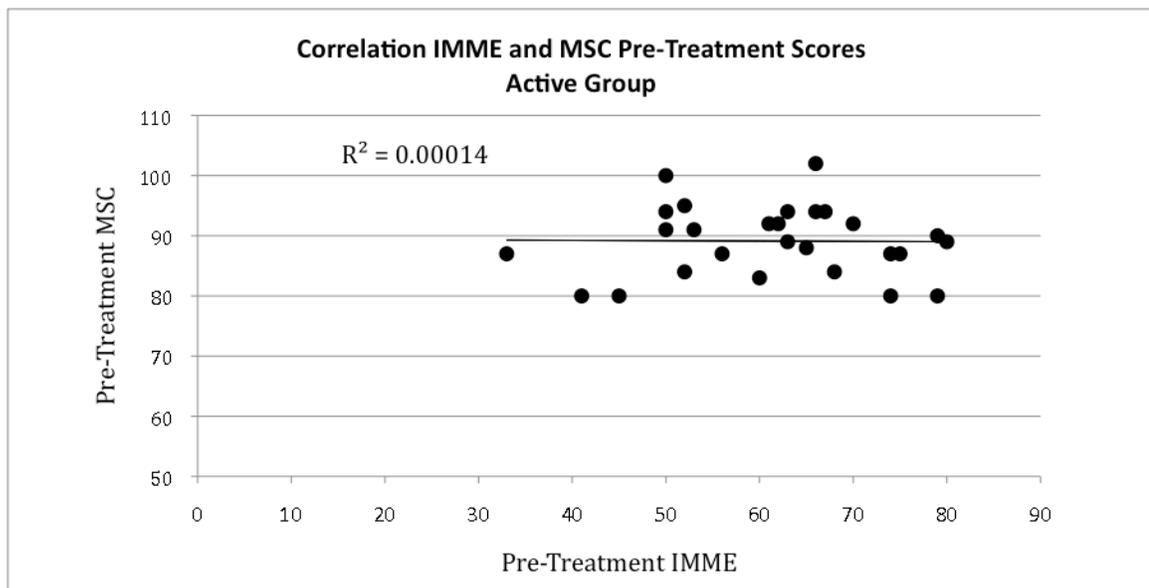
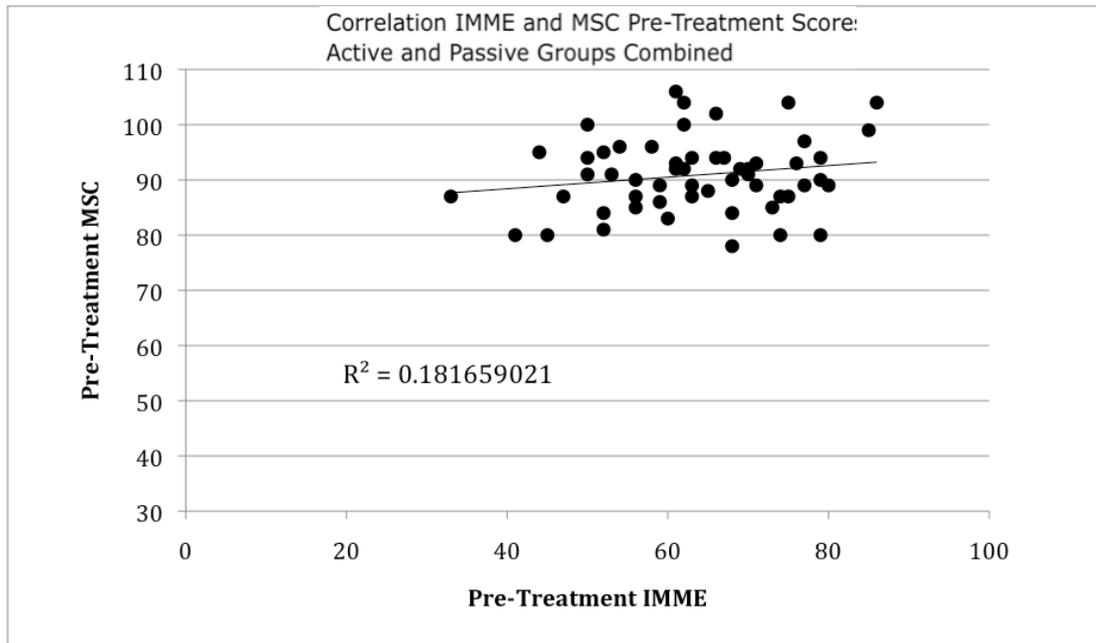


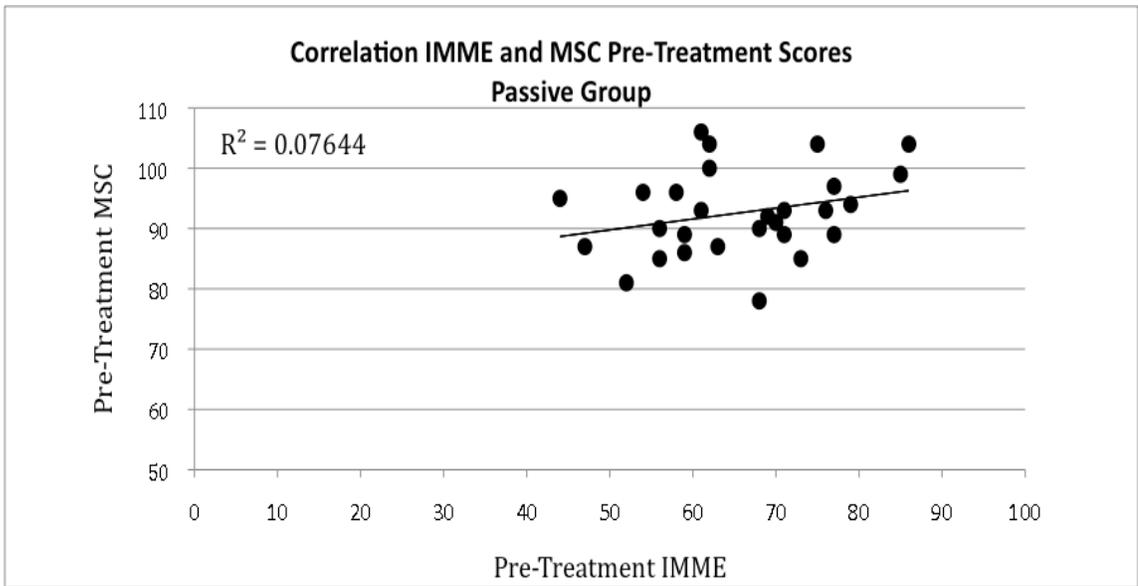




APPENDIX J

Correlational Detail





APPENDIX K

Raw Scores for *IMME* and *MSC* Surveys for all subjects

Individual Subject IMME Pre- and Posttest and MSC Pretest Scores

Obs	IMME				MSC	
	Active Group		Passive Group		Active	Passive
	Pre	Post	Pre	Post	Pre	Pre
1	33	66	68	71	87	78
2	41	63	77	87	80	97
3	45	44	58	60	80	96
4	50	57	56	64	100	85
5	50	54	76	80	91	93
6	50	59	62	83	94	104
7	52	52	63	74	95	87
8	52	84	61	72	84	106
9	53	61	79	87	91	94
10	56	73	61	69	87	93
11	60	64	69	76	83	92
12	61	68	59	55	92	89
13	62	65	75	75	92	104
14	63	76	59	76	89	86
15	63	80	56	69	89	90
16	63	64	77	82	94	89
17	65	67	73	71	88	85
18	66	73	54	63	94	96
19	66	75	85	89	102	99
20	67	64	70	80	94	91
21	68	81	62	71	84	100
22	70	78	68	74	92	90
23	74	81	71	74	87	89
24	74	80	71	69	80	93
25	75	75	44	64	87	95
26	79	78	86	86	90	104
27	79	83	52	57	80	81
28	80	84	47	63	89	87
Total Result	1,717	1,949	1,839	2,041	2,495	2,593

APPENDIX L

Voluntary Subject Responses During and at the Conclusion of Treatment

Subject Responses from the Posttest *IMME* Survey

Passive Group Subjects

I read them all, very faithfully because I actually care about the subject and feel a deep need to provide musical experiences and training for my children that are beyond our (my wife's and my) ability to provide without outside assistance.

While participation in the passive group was quite informative and, yes, helpful, I also found it increased my jealousy of those who have the skill sets necessary to teach music to their own children.

Even at the end of this program, I still find myself providing audio books to my children more often than I provide them with music CDs, probably because I am myself more in tune with books, literature, and the written word than I am with music.

I learned so much about music as a result of participating in your research! It was fascinating to consider all that is going on in my child's life when I wouldn't have thought about it before. Even though my singing voice is pretty bad, I still tried to sing more than I normally would, and my child loved it!

Intentional Music-Making is just as important as other activities we chose to have our children participate in at an early age. They learn to explore all the different avenues of music without feeling self-conscious. My daughter and I enjoyed this program and we will keep intentional music-making in our home daily.

The emails you sent made me re-think how I view myself as a "music-maker". Where before I never would have considered myself to be a singer, during this time I have allowed myself to admit that I not only kind of enjoy singing and dancing, but I should do it more often for my and my kids' sakes, because I'm not too awful! Thanks!

I am very excited about this study. I was able to learn so much about music and

children's ability to make music and I can say now that I am recognizing when my daughter sings and creates music. She has been exposed to new types of music that I would not play by choice and she loves to dance to music and play with musical toys. She has started to sing along a little now. We love to play and sing together. She is like a little parrot, repeating and copying everything I say and do, and that includes singing, I love when she is in the car and asks me to sing a particular song to her, I add a lot of gestures to my songs, so she can learn the songs quicker, and before she could say the words, she was able to imitate the gestures. I am so impressed on how much she has learned in a short period of time. Thank you for making me part of this study/ research and for sharing so much valuable information with us.

I found emails/blog posts thought provoking and informative. I took much of what I read to heart and made an effort throughout the week to do what you suggested

Participation in the study definitely made me more conscious of musical decisions I was making with my kids and encouraged me to encourage them more in their musical pursuits and interests. The e-newsletters were very thought-provoking.

Thank you for encouraging us and teaching us wonderful ways to be musical with our children on a daily basis. We will take the lessons and continue on this wonderful journey. This was an enjoyable experience! Thanks again!

Thanks for doing this! It really helped me to think more about how I use music with my children. I have started a couple other activities that involve music with my kids. I have no doubt that music is and will always be a very important part of our family.

I really enjoyed being part of this study. It helped me understand better that I am musical even though I previously thought I wasn't and that I have a lot of power to open the world of music to my 14-month-old son. During the 10 weeks I tried to play more music for him and dance and sing with him.

Having an autistic child, I have become more aware of how music changes his moods for the better and how singing directions or singing a task makes it much more palatable. The study has strengthened my belief in the power of music and the essential place it has in our lives. I have noticed my son humming and singing to himself during independent play and he requests to listen to specific music and books on CD. He and I are creating new bonds as we dance and sing and play. I thought I was pretty aware of music before this study, but I am being more intentional now. Thank you for the information, encouragement and the chance to make these connections with my son. It has been wonderful.

It has been so interesting to learn about how we are all born musical, because it isn't something I would have thought of before. This change in the way I think about music made a difference, because I tried to intentionally put music into some of our every day routines and my daughter responded so positively.

The emails were helpful in getting me to be intentional about being musical with my child. When I took the time to think about it, I realized that we were doing a lot of musical activities throughout the day. I tried to watch for times where I could encourage my child to participate in musical activities (singing, dancing, etc...) It was fun to see him singing songs, making his own songs, dancing to music, and even "directing" music at concerts we took him to. In the future I hope that I will be more aware of the musical opportunities that I can give to my children. My husband and I highly value music, and we hope that our children will also develop a love for music.

I really enjoyed reading the e-mails! It really made me reflect on my own childhood and remember just how important music was in my household...My mom always had some sort of music playing on the stereo (very wide range from John Denver to the Beatles to the Sound of Music soundtrack to rock and roll). My dad put himself through college in a hippie rock band and there was rarely a family gathering where he didn't play his keyboard or his very German accordion. (completely different genres!) Sadly, through time, my family has seemed to have moved away from this. Reading the e-mails in this

study "jogged" so many memories for me and it helped me to remember how much of my childhood revolved around music. As a result, it's inspired me to be more aware of the importance of music in my little one's lives. Thanks for sharing your research!

I really enjoyed some of the suggestions and this study really helped me to take notice of some missed opportunities to take with my toddler.

This study has really increased my awareness of the importance of music in children's development as well as the potential for us all to nurture musicianship. I plan to be more deliberate in incorporating music into my children's everyday lives.

I really enjoyed participating in the study. I have now noticed my children being more musical. My son likes to sing and make songs up and my daughter sways back and forth when she hears music. I am so happy we were part of the survey.

Reading the emails every week gave me enough information to feel like I could at least try what you were suggesting, and also helped me better see when my child was being musical throughout the day. I enjoyed this experience.

While I don't necessarily feel more musical myself as a result of participating in this study, I do think I can better appreciate music and its place in my daughter's life. I hope to encourage her in her future musical pursuits.

Active Group Subjects

Thank you so much for including us in your study. Not only did I enjoy the chance to spend true quality time with my son and daughter, I was able to bring other members of the family, which was fun and informative. I can't believe how much singing with my daughter makes me feel closer to her, and makes everyday things seem more special, even if you're not necessarily the best singer. Somehow, I came out feeling much better about my singing voice than ever before!

When I signed up for this I figured nothing would change. However, I have noticed that my kids ARE pretty musically inclined on a DAILY basis and seem to love music. My 4yr old daughter (now that I think back) was in early intervention and the teacher she had would sing to her in rhymes which is how she seemed to respond best through music! She is still the same way today, very in tune with music. She is always singing in the car. She does ballet and ALWAYS has music on and is dancing to it. My son even dances when a song he likes comes on and seems to sing to things in the car now I've noticed. Maybe they've done it all along and I just wasn't noticing. My oldest daughter is now playing the cello and the twins always seem very interested and will sit and listen to her practice. My husband always has his radio on one the computer and has a dance party with them before they go to bed for about an hour. So I guess music is definitely a bigger part of my kids lives than I realized. Music seems to make them happy!

I was amazed at just how musical my son was. After coming to music class only two times, he was singing all around the house. He started to dance and sing to random songs he made up and to ones that we were listening to. He actually started to pick up the words to songs that he likes. Sometimes I will hear him singing or humming a tune to song that I have recently played.

When I read the emails and thought more about it, my wife and I realized how much we already did incorporate music into our lives on a daily basis. The information we learned helped us to more easily identify when our son was being musical, and then we could try to encourage whatever he was doing. It was also nice to do this at home as a family.

Coming to the music class made me nervous at first, since I don't usually like to sing in front of people I know, much less total strangers. However, the teacher made us feel so at ease that I was singing and dancing before I even noticed it. It was a natural outflow to do more music at home, and I tried to remind myself to do this every day during the study.

I am thankful for the opportunity to come to your class. I am much more at ease and willing to sing to my son. I like to dance with him as well. I will turn the radio on rather

than the TV. I believe will be a more musical family and my son will truly benefit from it. I hope we keep on incorporating music into our family life through the years as he grows up.

We not only enjoyed spending time together in class making music, but we carried it back to our everyday life. I really want to build on what happened during these 10 weeks and plan on finding a Music Together class for us to attend in the Spring.

I was surprised at how comfortable I was with "making music" in the class, especially in front of others! I also saw such a great benefit to the children by how instinctually they were engaging in the class. As my infant son grows I plan on getting involved in other music classes and exposing him to as many different types of music live, and recorded as I can. Thank you for opening my eyes to this primary, yet essential skill!

My daughter and I really enjoyed the class. This was the first opportunity she and I had to take a class together. My daughter does enjoy singing spontaneously, but I began to notice she would sing the songs she learned from the teacher, and to my surprise, so did I, which I was not expecting at all since I don't usually like to sing! I'm thinking about going on to do another class like this one. Thank you so much.

This study helped me be more aware of the relationship between music and my child. I intentionally turned to music as a method over the past 10 weeks and made intentional decisions about varying the types of music we listened to and danced to. I have used music and dance as a "reward" for positive behavior...such as "eat 4 bites of supper and we can dance".

I enjoyed being a part of the study. My child who participated in the study was already more interested in music (listening to and making) than his two older siblings before the study began. After the conclusion of the study, I found him incorporating some of the techniques used in class at home, spontaneously, on his own. I have personally not made too many changes since the study but do find myself encouraging my child when he is

making music more so than I did previously. I hope to enroll him in more formal music instruction when I feel he is ready for a musical instrument.

My son and I really enjoyed the classes. The class probably helped me more than it did him. I knew we had to participate in singing as part of the group so that really brought me out of my comfort zone with my own singing! I really enjoyed just playing on the instruments with him. It was also very comforting to see all the other parents actively participating...I felt less conspicuous! The class also reminded me of the fun I used to have with my older kids by dancing and singing. As we get older, we sometimes forget those things...or maybe its an energy thing! There's 21 years difference between my youngest and my oldest son.

Music is such an important part of my boys lives. We still go to concerts together. All of my 3 older boys play instruments and my step-daughters both play the trumpet. As much as I like music, I think, had I applied myself in school, I may have learned something. I think it was more of a confidence issue since even as an adult I am quite shy doing music in a group setting. Thank you for the opportunity to participate. We had a wonderful time!

I didn't know what to expect in this class, especially when it came to my son, who can be very "energetic" and hard to engage. He loved it, though, and surprised me at home with the amount of music he did on an everyday basis. And he was thrilled when I broke out of my comfort zone at home and joined him in a song or dancing to something on the radio. We both enjoyed the chance to do this together, and I thank you!

I thank you very much for this opportunity! It was a good reminder for me, a busy mom of three, to make the important things a part of my life and how little time it takes to make music - it can become a part of everyday life so easily! Watching my son enjoy the music each week in class was such a joy and a time that I will always treasure. We started turning the tv off at night and putting on music. It is some of the most fun we have ever had as a family - dancing and singing together! We dug out some of our old rhythm

instruments and my 3 sons are now talking about starting a family band. I have found so many ways to sing to my preschooler during the day. Your class made me think of so many more ways that I could introduce music into our days. I always thought that music had a calming effect on my sons, but I have found even more ways to create fun and make things easier by singing them instead of saying them. Thank you so much and best wishes with your study!!

I originally joined the study kind of thinking "oh....hmmm yet another thing to add to my calendar.", but soon as the weeks went by, my daughter and I really looked forward to each class! Some of it was just the chance for the two of us to be together to do something JUST US, and some of it was we really liked the music and even the singing! We are even talking about doing another class like this one. My daughter was always kind of reserved in the class - just watching it all, but as time went on she was starting to join in more. I knew she was taking it all in though - at home I'd hear her singing to her toys or she would ask me "what's the song again - what were those words?" I intend to buy the songs CD from the class and keep on singing them.

We do listen to LOTS of music in the car - something is always playing, which is usually some form of children's music. I'm always looking for something more than kids voices singing to piano with a very slow tempo - can't take that too long and neither can my children! We all sing along and replay our favorite songs over and over. However, I did realize that I was kind of using music in that case just to "pass the time" - was I really playing it at home? Was I playing other kinds of music to give them exposure to it? No...not really. I do sing to my kids at night - usually hymns, or old youth group songs I remember. It's been slow trying to introduce some new things - usually my daughter says "that is mommy and daddy music...I want to listen to my music now"! So...I need to be patient and just keep trying and probably be better about dancing and singing along. My son seems to accept the music faster, though he still has his preferred favorites. I'm happy to be able to get access to the music we used in class - a great variety in music. My son only sat in on one class and he's already been asking me about particular songs! So...it was a hit with us all.

I did enjoy the class a great deal. I thought Miss Kelly was wonderful and she did a great job helping me feel more musical than I ever thought I could be! I think we are going to miss our Monday nights together! I hope to keep up what we started in the class. Thank you for including us in your research.

My daughter and I very much enjoyed coming to music class every week. We bonded together, and singing with her helped me not feel so self-conscious about my not very good singing voice. Hopefully we can find something else like this class to do together.

My husband and I both use music a lot and sing to our children, despite my three year old's annoyance sometimes. I tried to sing more kids music with my children at home, especially for everyday stuff, which they seemed to like, and I hope to find another music class like this one.

The blog posts were very informative; they gave practical tips for parents to incorporate music into their everyday routines with their children. The posts were often very witty and inspirational. My children and I enjoyed taking the music class so much that we are now looking into finding another one. I didn't realize how much my girls loved the instruments and songs until we took this class. We enjoyed going to class every Monday and are so sad that it is over already! Thank you so much for such a wonderful experience.

The past 10 weeks has greatly improved my child's social interaction skills as well as highlighted just how much he enjoys singing, dancing and making music. His play time at home with his musical instruments has increased tremendously. He has even started his own marching band. His love for making and listening to music has increased my own level of musical interest. This class has been an option for me to see how expressive my son can be with music as a medium. I look forward to participating in future classes that are similar and supporting my sons musical interest. Thank you very much for extending

this class to my family and we greatly appreciate all the hard work and time you put into making it an enjoyable success.

When I first agreed to come, I wasn't sure how I would be able to get over my fear of singing in front of others, but I did and I'm so glad that I got brave! It was so great to be around other parents who were "normal" like me and still sang and played with their kid even if they didn't sound perfect. My son and I had such a great time, and I tried to sing and dance more at home. Thanks so much, we loved it!

This was an amazing experience for my daughter and I. While in the class, she was an active participant but not incredibly vocal. Yet, at home we saw a tremendous increase in her interest in a variety of music types. My husband remarked how he couldn't believe how much more he noticed her singing to herself and along with music, as the class progressed. We are grateful for the opportunity that the study provided us with and we are actively seeking to enroll our daughter in a music together class.

Not that I'm an opera singer or anything, but no one in my family can believe that I actually sang in public for this class! Being able to sing in front of other people gave me the confidence I needed to sing more at home with my child, where before I was basically too scared to do so. I feel more confident to sing with my son, and to ignore that voice that tells me that I am a bad singer, if only for his sake. What a fun 10 weeks!

I loved being a part of this study even though my son was only an infant while we were participating. I noticed that he was always alert and attentive during each of the classes. Even if he was tired or hungry, he wouldn't display the usual amount of fussy behavior because he was engaged in what he was seeing and hearing all around him. I also noticed that sounds he was making were often in response to music that was playing at home, or that I was singing, where before I wouldn't have caught on to that. Being a part of this experience definitely made me want to participate in other music parent/ child classes as my son grows. Thank you for this incredible opportunity and experience.

Active and Passive Group Comments from the Website

I think even though my parents aren't what you would call "musically inclined" and my dad always joked that the only instrument he could play was the radio, I think my parents had a huge influence on me musically. The radio was almost always on and I remember recording duets with my mom and listening to Hooked on Classics in the car with my dad. They also encouraged me to learn how to play an instrument myself so I started flute lessons in fourth grade and continued until seventh grade. **(PG)**

Yesterday I sang hymns to my one year old on the way home from church without the help of an accompaniment. She was fussy and I asked if she wanted me to sing and she said yes. It is so fun to see her blossoming musically; I really think she is going to be talented in that area. **(PG)**

I just had to come on and say how much more aware I am of music. Not only do I find myself playing more music, and more types of music, but my son is singing all the time. He sings his random words to a tune I hum to him or even to a songs I have had on in the house... He sang the whole car ride home today. very cool! **(PG)**

I have found that I use music probably more than I thought on a day-to-day basis. When we're home, I often have music going in the background. It's always on in the car as well. I do sing to my children and last night, thinking about this study, intentionally sang to my daughter before I put her to bed. Most of the time I will belt out crazy tunes much to my son's displeasure! **(PG)**

I talked with my husband briefly last night about this study and about how I play music for my daughter during her naps - at first it was just for white noise to block out her brother, but I know even as she sleeps, it is influencing her and at a very early age (six months) she started reacting to music. I never did that with my son and although he loves music today, I wonder if he would love it even more if I had. Anyway, some things to ponder. We have been listening to Judy Rogers in the car and it's very fun to remember my childhood. **(PG)**

I can definitely relate to this blog post and some past bad feelings from teachers or others who made negative comments about my singing and voice. I am, admittedly, very shy about singing in public. I feel as though this is all around us in our society, whereas some cultures embrace everyone being musical so much more than we do. One example comes from my experience teaching religious education at our church this summer. We teach the children 'The Tree Song' which is a song that we share with our twinning school in Jamaica. In Jamaica, the children all sing out loud and strong and put so much passion into their song, as though they are one with the music. Here, it takes a while to get the kids to even sing the chorus and maybe even longer to get the teachers to do so. I also think a lot of our tv programming can perpetuate the stereotype that music is only for the super-talented in America. On another note, I thank you very much for this wonderful opportunity! Our first class was wonderful and my son was singing songs from the class (that I hadn't even remembered) on the way home. You are making me rethink and rediscover the importance, and mostly the joy, of music in our lives and I'm grateful for that. **(AG)**

I feel so fortunate that music has always been a part of my life. My earliest music memory is singing Sunday School songs. We would sing them all the time. (My whole family attended the same church, so it was easy for me to sing the same songs at different houses). After discussing this topic with my mother, she reminded me that I have always enjoyed singing- everything from the Oak Ridge Boys to the Alvin and the Chipmunks's theme. This early love for music carried me through my elementary years. I was involved with a few children's choirs and took piano lessons for several years. I am happy to report that I do try to include many musical activities in my son's (Travis) daily routines. We sing songs about any topic, we bang pots in the kitchen rhythmically, and we play music constantly. Travis is learning to make noise along with the melody, as well as move his body to the beat of music. I know that he may not remember these early memories, but I could never forget these musical moments with him. **(PG)**