

AN EXPLORATION OF MUSICAL INTELLIGENCE

by

Melanie A. Kendra

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Committee:

Janet K. Sawyers, Ph.D.

Mark J. Benson, Ph.D.

Vernon Burnsed, Ph.D.

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(ABSTRACT)

This study explored the meaning teachers and children in an elementary school setting make of music. This study utilized an adapted version of Thomas Armstrong's musical intelligence checklist, as well as additional questions probing both teachers and children to relate their past and present experiences with music and how they are musically intelligent. This study was conducted with two third grade classes and two fifth grade classes, with the researcher spending one class period with each group. Implications for how music is affecting elementary students, as well as the meaning it holds for teachers, were discussed. In addition, recommendations for future study of music in early education were made.

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AN EXPLORATION OF MUSICAL INTELLIGENCE

On a daily basis teachers make thousands of decisions. Many decisions are of minor consequence such as “How long should I spend reviewing fractions?” and “Should we use the computer to research online”. Other decisions, however, require teachers to juggle limitations and requirements from the state government, while still focusing on the children’s interests and instilling in them the joy of learning. In this time of educational reform, teachers and administrators are looking for ways to have the best of both worlds.

With existing state standards of learning, teachers are finding themselves with less time to focus on the joys of learning and spending the majority of their time preparing for tests created to verify children’s abilities. This often means less time and resources allocated to music and art programs, those programs thought of as *extra*. Teachers are encouraged to emphasize traditional concepts of math, science, language arts, and social studies.

However, recently music and its role in education has come to the public’s attention through movies like *Mr. Holland’s Opus* and *Music for the Heart*, which speak to the emotional aspect of music and its ability to enhance relationships. In addition, VH1 music channel advertises “Save the Music”, its fight to keep music in public schools. The public is taking a greater interest in music and it’s possible outcomes, especially those related to education.

Issues facing Teachers

Embedded in the debate of the importance of teaching music in public schools, is the issue of where it should be taught. Should music be taught separately in its own room with its own instructor, or should it be combined with the other core subjects in the general education classroom? Using a little of both, many educators, both general education and music specialists have often integrated several subjects into one learning experience. The thought behind integration was that by combining or interlacing the different subjects, the learning experience would have more meaning. “After all, the real world is not separated into distinct disciplines” (Burnsed, 1999). Following this trend, music educators have pushed for music to be incorporated into daily activities and curricular issues. However, research in this area suggests that music often is not integrated into a general education classroom (Bresler, 1993; Stake, Bresler, & Mabry, 1991). Several barriers such as teachers’ lack of knowledge, lack of resources, and overall pressure for academics have been noted as deterrents to music integration (Bresler, 1993).

In addition, Whitaker (1996) noted that in certain communities, the role of music was progressively devalued due to lack of time to communicate about integration. Interestingly, the teachers in this study noted many different ways by which music could benefit their class. However, they did mention lack of time and resources as an obstacle to full music integration. It seems that while many general education teachers might want to include music in their curriculum, they often fear that their “academic” or cognitive goals will not be attained, and the lack of time will hinder them from embracing music in their classroom.

Another issue facing general education teachers is *why* should they teach music in their class. Besides its aesthetic value, music has been found to produce many nonmusical or utilitarian outcomes. Many researchers have found that music seems to increase math and reading abilities (Bygrave, 1996; Hanshumaker, 1986; & Hurwitz, 1975). Most recently, music’s effect on cognitive abilities has been noted in the Mozart Effect research (Rausher, Shaw, & Ky, 1993). This research was brought to the public’s attention with the publication of Don

Campbell's (1997) book, The Mozart Effect. The research stated that listening to Mozart's *Sonata for Two Pianos in D major* seemed to increase student's spatial reasoning.

In addition to cognitive enhancement, Campbell also noted that music has the potential to calm and stimulate. Music therapists often use music to calm an excited child. The opposite is also true. Upbeat, rhythmical music can excite most people. Translating this into education terms, calming music could be played during a rough transitional time to calm the students. Using music as an environmental cue is just another way music benefits education.

Informing the Decisions

Many theories and research studies provide frameworks for different models of educational reform. Multiple Intelligences theory (MI) helps to form a framework for learning and understanding. Howard Gardner's (1983) theory of Multiple Intelligences helps to form a connection between music and development of cognitive, social-emotional, and physical abilities, as well as in learning various disciplines or curriculum areas such as math, social studies, science, and literacy. Educators, sensing children weren't all the same and that the tests and practices we had in place only skimmed the surface about the differences among children were quick to embrace the theory first introduced in 1983 with Frames of Mind. Gardner characterized the prevailing view of intelligence as "something you are born with; you have only a certain amount of it; you cannot do much about how much of that intelligence you have; and tests exist that can tell you how smart you are" (Checkley, 1997, p.9). He noted that Intelligence Quotient (IQ) as traditionally measured and defined, profiles only language-logic ability. Gardner suggested that rather than one or two intelligences, we have multiple intelligences. Gardner states that there are eight intelligences including: Musical, Bodily-Kinesthetic, Interpersonal, Spatial, Intrapersonal, Linguistic, Logical-Mathematical, and Naturalistic intelligence. The differences we see in peoples' intelligences are due to different strengths in each of the intelligences and the combination of intelligences.

In Gardner's view, all intelligences can be improved, but how readily or greatly improved, will depend on interactions imposed by biology and environment. "Teachers have to help students use their combination of intelligence to be successful in school, to help them learn whatever the teachers and society believe they have to learn" (Checkley, 1997, p.10). Gardner goes on to say he believes children need to learn the literacies, and the disciplines, but with the recognition that there is more than one way to learn to read or one way to learn biology or one way to learn how to compute. However, Gardner also notes that "it is . . . nonsensical to say that everything should be taught in seven or eight different ways" (Checkly, 1997, p. 10). Whichever way one chooses to incorporate the different intelligences, the outcome of the learning experiences is a more comprehensive understanding of the concept presented.

As Gardner explored the meaning of musical intelligence, he noted that rather than a single behavior or ability, music is multifaceted. Gardner (1994) has proposed that it is comprised of three systems. Initially, these systems follow a stage-like progression, flowing from the Making system to the Perceiving system and then to the Feeling system. However, once skills are obtained in each area, the systems interact to provide further development. These systems are inclusive of the cognitive, social-emotional, and physical domains in separate and distinct ways, but interact with each other to form a whole, complete picture of musical development.

The first system, he describes is the "making system". This system consists primarily of behavioral acts, which tend to combine to form elaborate skills. This system would be representative of the physical domain, as it incorporates physiological responses. However,

mental operations or cognitive schemas are present in this system, and overlap with the other two systems.

In the second system, the “perceiving system”, the learner becomes a discriminating listener. This system would be analogous to and rely heavily on the cognitive domain. The perceiving system deals with enhancing thoughts or ideas through discrimination of the child or adult’s external world. In the third and final system the learner experiences affective responses to music. This system is called the “feeling system”.

In Gardner’s view, music development is a process in which the degree of interaction among the three systems gradually increases and includes the acquisition and use of all the systems. A view of the child as a music “maker”, “perceiver”, and “feeler” were evident in the results of this study.

Examining the Issues in Elementary School

As a teacher myself, and one who frequently integrates music, I was curious about why other teachers did not. I decided to conduct a study on the meaning teachers and children place on music, especially in an educational setting.

Selecting and slightly adapting Thomas Armstrong’s version of Gardner’s Musical Intelligence Profile (Armstrong, 1994), and creating a written section in which the children and teachers would describe their musical experiences, seemed to be the best way to obtain information to answer my questions. This design permitted me to be in and out of the schools in a relatively short time, allowing me to respect the teachers and students’ busy learning schedules. It also provided me data written by the children and teachers giving the study and its results a deeper, richer understanding.

When selecting child participants for the study, it was decided that the children would need to be at least eight-years-old. This age group was chosen for several reasons. First, the writing component of this study required that the child participants be able to put their thoughts into words. Most third grade students are able to form coherent simple sentences. In addition, to the writing requirement, children of this age were selected due to the musical experiences attained by that age. It was thought that eight-year-old children would have already had several musical encounters, both at school and outside of school, and these experiences would drive their answers for the study.

Children in the fifth grade were also chosen to participate in this study. In addition to the ability to write, these students were added in hopes to achieve a developmental perspective. Fifth grade students have had two extra years from which to draw upon and write about. In most of the developmental literature, these two years could equal vast differences between the third and fifth grade levels.

Being a “Music Maker”

The “making system” was noted most out of all of the data collected. Many children and teachers spoke of their instrument playing or singing. The teachers often reflected on the childhood experiences with making music. One teacher noted, “I was in church choir from kindergarten to twelfth grade.” Another stated that, “As a child, my family sang, played music, and participated in church choirs . . . I played the flute in seventh and eighth grade . . . My cousin and I would play tunes for our family.”

The children also noted a high occurrence of music making. Sprinkled throughout the narrative data were statements such as, “I play the flute now, and am going to play it in the sixth grade”, or “I am going to voice lessons so that I can sing . . .” One child noted that he played guitar, violin, recorder, flute and trumpet!

This occurrence of music making evidenced itself in the profile data as well. Over half of all participants, both third and fifth grade stated that they played an instrument or sang in the choir. Many fifth grade students noted their excitement about playing an instrument in the next year. Additionally, many third grade students were already taking private lessons to play an instrument.

Sixty percent of all students said they like to sing in music class. In response to the question of “My whole family can sing” 56% of the children indicated that this item described them. A resounding 76% of the students indicated that members of their family played an instrument.

However, along with this highly rated response to making music, was the indication that most of these experiences were influenced from people and organizations outside of the school. When the students were asked, “who helps you with your musical intelligence” more often than not, family and friends were listed. Many children mentioned watching older siblings as they practiced their instruments for hours. Others noted that their mom or dad would often help them read music or play a song.

While the third grade participants did mention the music teacher in their school, they often listed parents and friends first. The fifth grade students mentioned the aid of the music specialist much less, focusing more on friends and outside instructors. It seemed, however, that while the friends helped them with their musical intelligence, the children did not sing with each other. Both grades report low percentages regarding the items assessing singing with friends. This finding might be due to the children’s self-confidence. By the third grade, and especially by the fifth grade, children are aware of how they look and sound in relation to their peers.

One highly recognized organization which seemed to influence these children’s music making, singing included, was the church. Both fifth and third grade students mentioned this establishment often in their narratives. Statements such as, “I sing in church a lot” and “I have sung in the church choir” were documented numerous times in the child narratives. One fifth-grade girl noted, “Church also helps me become more familiar with music and it gives me a chance to express my feelings in the songs that I sing.” Is this organization more influential due to its unwavering decision to incorporate music into its existence? Why do the children feel more comfortable expressing themselves musically in church, but not in school. It would seem that the church’s acceptance and support of music is not felt in the school setting.

In this study conflicting data was found concerning musical influences. While the narrative data most frequently mentioned outside influences on music making (i.e. the church and family), the profile data supported the idea that teachers are incorporating music into the classroom. Ninety-six percent of all students selected “My homeroom teacher lets us sing or listen to music in class”. This extremely high percentage seemed to contradict the few statements mentioning the school’s influence in the narrative data. One possible explanation for this contradiction is that the teachers *do* offer musical experiences in the classroom. One teacher noted that she tries to offer a musical way to express knowledge for many of their concepts. However, while the teachers are offering these experiences, the children do not seem to participate in these activities. Another finding in the data supported this suggestion.

The low response to “If I had to do a report on bears, I would make a rap song to tell what I learned” indicated that many of children, both in fifth and third grade did not feel comfortable expressing themselves musically. (It is important to note that the researcher orally explained that it could be any type of musical presentation, not just rap. Many children have already selected a musical preference by this age.) The children did not seem to grasp “rapping”

for educational purposes, at least in the third grade. In the fifth grade it was apparent from the snickers and guffaws that it would be “uncool” to rap a song. This finding seems to suggest that even by third grade music is used so little that the novelty of such an act caused many students to question the task.

Being a “Music Perceiver”

In addition to the music making, music perceiving was also mentioned frequently both in the narrative data and the profile data. A most impressive finding was the response to “I often get songs stuck in my head and sing them throughout the day.” One hundred percent of all students and teachers selected this item to describe them. While the lack of variation might make it a questionable discriminator of musical intelligence, the data indicate much more. This question suggests that it is musical or rhythmical information that is “sticking” with the students. The occurrence in both grades suggests that while there may be developmental differences in the exact rhythms one might remember, all the participants still processed the musical concepts creating a “musical memory”.

An interesting addition to the processing of musical information was noted in the teacher profile data. One third-grade teacher, who was noted to often include music into the curriculum, more so than any other teacher in the study, selected the least amount of items. While this contradiction in data might urge one to reconsider the measure, it also provides support for the processing of musical information. This finding suggests that while one person may not be as musically intelligent as another, he or she might still be able to process musical data and use it in daily activities.

The children, again, verified their strong ability to perceive music and sound by their high response to “The sound of rain outside my classroom window often catches my attention.” This heightened perception offers teachers many alternate paths to stronger focus and better education. To take advantage of this ability seems to be beneficial to all participating in the learning experience.

Another finding supporting the idea of child as music perceiver, was the high response to “My friends and I listen to music when we are together.” Overall, 88% of the participants selected this item on the profile. While the fifth grade participants seemed more likely to select this statement (100% of the fifth grade participants selected it), well over half of the third grade participants selected this item as well. The difference in scores might be due to the increase in peer roles in the fifth grade. However, more importantly, this item indicates that some form of music is influencing or playing a part in peer relations, which are already an influential force in young children’s lives and education. By understanding how music interacts with peer relationships, one might be able to extract the positive benefits and incorporate them into the school setting.

The children’s perception of music was also demonstrated by their response to the request, “Write about your musical smartness.” Many children spoke of their preferential perception. For example, while many students noted that they like Brittany Spear others stated that they like Jazz or Hiphop. Several of the fifth grade students mentioned that they enjoyed going to concerts or watching music channels on television. The third grade participants often noted that they like to listen to music in the car or on the radio at home. The participants indicated strong feelings about music and their perception of music.

These anecdotes support the idea that music does play an important part in children’s lives. The teachers also indicated they felt similarly about music’s role in people’s lives. All participating teachers selected the item “My life would be poorer if there were no music in it.”

While both students and teachers agree, and indeed most lay persons, the music programs and arts programs are often the first to be omitted when budgets are reduced. Why is that what we believe is good for us is taken out of the schools?

Being a “Music Feeler”

As Gardner noted, these three systems overlap and work together to produce development. As one sees from the previous section, feeling and perceiving often go hand-in-hand, one driving the other depending on the situation. This area of music was mentioned least frequently in the data. However, the impact of the statements that did contain feeling or emotion most often made up for the low occurrence. While few questions on the profile directly questioned the children and teachers’ feeling system, many of the questions indicated an emotional connection.

A high response to the item, “When my teacher plays music, I really get into class” (over half of all students selected this item) would indicate that the participants are feeling many emotions. First they are feeling positive emotions about school and learning. They are also feeling like they are in a groove. They are in flow, or as the question states, they are really into class. What teacher wouldn’t want his or her student “really into class”? This finding suggests that those teachers that incorporate music into their curriculum will be tapping into another, often times enjoyable, route to learning.

One profile question that more directly assessed the feeling system was the item; “I listen to music when I relax.” Ninety three percent of the fifth grade students and 80% of the third grade students selected this item. This high acceptance rate indicates that music provides a calming and comforting sense for the children. With so many new causes for fear and anxiety, especially in the school setting, this medium is providing an element of comfort. As with understanding how music interacts with peer relations (another highly emotional process), further studies are needed to fully understand how music can be included to relieve stressors and provide some form of relaxation at school.

In addition to relaxing with music, one fifth-grade girl mentioned that music “gets me into a happy mood”. Another mentioned that often she and her family and she would sing a song when saying goodbye to express their feelings. “We’re sorry you’re going away, We wish you could stay, We know we will miss you, We wish we could kiss you, We’re sorry you’re going away.” This simple song demonstrates how “feelingful” music can be.

An interesting caveat to this finding was noted in the teacher data. While most of the teachers mentioned that they shared their musical experiences with family members – not one of them reported using music to form teacher-child relationships, even though they were prompted to do so. This finding suggests that music’s more “feelingful” experiences, those used to enhance relationships, are not being utilized in a class setting.

Some negative feelings associated with music were noted in the study as well. One student stated that she hated music because she had had to sing the same songs since Kindergarten. Another child noted that he disliked classical music because it was boring. However, the most noted negative “feeling” with music was the lack of confidence. Not only did the children mention this, but several of the teachers also noted their lack of confidence when it came to utilizing their musical intelligence. One teacher that indicated on the profile that she felt extremely musically intelligent noted that, “I really shy away from using singing in the classroom. I think that if I were more self-confident about myself, I would use it . . . I think that I have a great deal of musical intelligence but I don’t use it as a tool in the classroom.”

Several of the fifth grade children also noted this lack of self-confidence in their narratives. Many stated, “I am not talented” or “I sing when I am alone”. This lack of confidence did not appear in the third grade narratives. It would seem that the fifth graders are much more aware of themselves and their abilities. Community and peer groups play a large role in the life of a fifth grader. It is possible that these relationships also make the fifth grade participants much more self-conscious not only in what they wear, but also in what music they listen to and in which musical activities they participate.

Also noted was the negative opinion of music as a final outcome or career. The most disturbing low finding was that of 16% agreeing that “When I grow up I would like to be a music teacher.” Only one fifth-grade student and three third-grade students stated they would like to become a music teacher. The difference in the scores between grades suggests that while third graders may not want to be a music educator, they are more acceptable of this occupation than the fifth grades. In addition this result might have been influenced by fifth graders extra experiences with music and music educators. Musical experiences are intertwined with the societal values, which may have led to a negative association with music education.

Conclusions

Overall one of the major trends noticed in this study was the lack of school influence on the children’s musical intelligence. Many students noted church or other outside sources as their main musical influence. Is this trend apparent in all schools? From discussions with other educators, it would seem that this trend is noticeable in many schools. Interestingly, none of the students noted that they were discouraged from music in any way. However, music seemed to be utilized infrequently, as evidenced by the low response to “rapping” a bear report. Now the question is why? Most of the teachers agreed that music was an important part of life. Most lay people would agree to this as well. Why is it that this important aspect of life is not included in schools? Research has shown it’s many benefits (Hanshumaker, 1986; Wolff, 1978), and the children have indicated that they are interested in music. Now one must find a way to combine these feelings of gravity into a school setting.

In addition to the outside influences, another highly noted tendency among children and teachers was that of getting songs or TV jingles stuck in their heads. The commercial industry is already taking full advantage of this propensity (Husch, 1981). With the fear that children must remember concepts to pass tests, music seems like a fun and beneficial way to learn concepts and remember them.

Both teachers and children also noted that they relax to music. Relaxation is a part of the day that is often omitted due to the time crunch that most teachers feel. However, taking a few minutes to relax and unwind can release some anxieties and get everyone back on track. Music is a quick and easy way to accomplish this within a school day.

Another finding of interest, was the negative attitude toward music education. Most children would not even consider becoming a music teacher. Often it is considered a joke; “You can always become a music teacher!” This value was also indicated by the low response to composing music as a profession. While this finding may be related to the high degree of complexity writing music requires, another possible explanation could be that children have been socialized to disregard music and musical occupations, especially in educational settings.

Where is the break down occurring that music is a wonderful asset in preschool, but not valued in elementary school? Why is music valued outside of school, but not within school? Further studies should examine the lack of value placed on music. Why are teachers not incorporating music into their curriculum, yet they feel that it is an important part of life? And

the children . . . how can we encourage them to transfer their positive feelings for music into the school setting? What other issues are at play with these feelings about music?

While many teachers are not utilizing music to enhance their teaching, this study suggests that music *can* enhance learning experiences. It also seemed that many of the items that children selected could be used to benefit the class and the teacher in this time of “teach to the test” and “rush, rush, rush”. As teachers decide how to best educate their class and how to make each experience the fullest, they should keep in mind that music not only soothes the savage beast, but it makes learning fun and memorable.

APPENDIX A

LITERATURE REVIEW AND METHODOLOGY

Introduction

The purpose of this study was to explore music in the lives of elementary children and teachers. Recently, the role of music has been highly publicized. Movies about the relationships between a music teacher and the students such as *Mr. Holland's Opus* and *Music for the Heart* have hit the box office. VH1 music channel advertises "Save the Music", their fight to keep music in public schools. Health magazines such as *Natural Living Today*, speak to music's ability to heal (Freeling, 1999). Most recently, Campbell's (1997) book, *The Mozart Effect*, written for the lay public promoted the idea that music is beneficial for academic, as well as healing reasons.

Music also plays a large role in what may be America's pastimes . . . work and shopping. Husch (1984) and the Muzak program ran extensive studies and found that stimulus progression, or the gradual increase of the stimulus, motivated people to work more. Based on the Muzak study, several large corporations play music in their office buildings to motivate their employees. The commercial industry has also taken advantage of these findings, and carefully studied music to add to commercials to encourage people to purchase their products.

In addition to the popular press, research presented at national level conferences (e.g. National Association for the Education of Young Children) and in research publications speaks to the multiple outcomes and potential effects of music, however, noting that more current research is necessary. This lack of current research places a stress on teachers and administrators decision of how best to include music in the curriculum. During this time of educational reform, research is needed to guide and inform the teachers that are working to create a curriculum that benefits all. Teachers are facing additional demands from the national level as legislators and the presidential candidates push for more competitive national scores, and from the state level in the form of Standards of Learning (SOLs), or sanctioned educational goals. Research is needed to help inform educators on the inclusion of music in this climate.

Music has been described as the universal language, linking people of diverse cultures, and ages, and in relationships such as parent-child and teacher-child. The child development literature has focused on identifying the stages of musical development (Foy, 1982; Jalongo & Stamp, 1997; Kenney, 1997) and the relationship of music to various aspects of development including cognitive, social, emotional, and physical development. From the education literature, models, frameworks, and theories exploring the potential of music as a vehicle for learning and expressing math and sciences, and other curricular area content have emerged (Hanshumaker, 1986; Hurwitz, 1975; Kenney, 1997). The music education and music therapy literature (Aldridge, 1993; Crowe & Scovel, 1996; Radocy & Boyle, 1997; Wigram, 1995) has explored the emotional aspects of music such as stimulative and sedative as well as physiological responses. Drawing from these multiple literatures, this study was conducted to explore the meaning that children and teachers make of music in their lives.

LITERATURE REVIEW

MUSIC AND ITS CONNECTION TO CHILD DEVELOPMENT

In an effort to understand the role of music in our lives, some researchers have taken a developmental approach. This research has provided music educators with a description of children's progression through stages or levels of music development (Jalongo & Stamp, 1997; Kenney, 1997; Shuter-Dyson, 1981).

Rather than a single behavior or ability, music is multifaceted. Gardner (1994) has proposed that it is comprised of three systems. Initially, these systems follow a stage-like progression, flowing from the Making system to the Perceiving system and then to the Feeling system. However, once skills are obtained in each area, the systems interact to provide further development. These systems are inclusive of the cognitive, social-emotional, and physical domains in separate and distinct ways, but interact with each other to form a whole, complete picture of musical development.

The first system he describes is the "making system". This system consists primarily of behavioral acts, which tend to combine and form more elaborate skills. This system would be representative of the physical domain, as it incorporates physiological responses. However, mental operations or cognitive schemas are present in this system, and overlap with the other two systems.

In the second system, the "perceiving system", the learner becomes a discriminating listener. This system would be analogous to, and rely heavily on the cognitive domain. The perceiving system deals with enhancing thoughts or ideas through discrimination of the child's or adult's external world. In the third and final system the learner experiences affective responses to music. This system is called the "feeling system".

In Gardner's view music development is a process in which the degree of interaction among the three systems gradually increases and includes the acquisition and use of all the systems. A view of the child as a music "maker", "perceiver", and "feeler" are evident in the description of children's musical development which follows.

From the research it is known that infancy is time of active exploration of sound. This exploration starts before the infant is born. Jalongo and Stamp (1997) note that babies respond to different rhythmic sounds while still in the womb. These responses continue after birth as the infant reacts to a range of sounds by kicking their legs and waving their arms (Jalongo & Stamp, 1997, Kenney, 1997). Several studies have noted the importance of this tendency in relation to infant speech and infant responsiveness to caregivers (Fisher & Tokura, 1996; Warren-Leubecker & Bohannon, 1984). In addition to motor responses, infants often coo in response to songs. They seem to have a fascination with extremes in musical dynamics (Kenney, 1997). Infants are also able to discriminate between pitches. Often lower pitches (such as a lullaby) has a calming effect on infants (Kenney, 1997). By one month of age infants are able to produce sounds that contain melodic structure and rhythm. At two months of age, infants are able to match pitch and contour of sounds produced by their mothers. By six months of age, infants participate in active listening (Kenny, 1997).

Shuter-Dyson (1981) states that in the second year of life, toddlers start to spontaneously create sounds and music through active exploration of their environment. Many toddlers will attempt to sing along to simple nursery rhymes, singing just a few words (Jalongo & Stamp, 1997). Often they will sing improvisationally during play. Toddlers engage in active manipulation of sounds. Jalongo and Stamp (1997) describe manipulation as the first level of

musical development. The toddlers will often bang instruments or other musical toys to find out about sounds that each makes. Toddlers are also able to distinguish between sounds made by different instruments. They also demonstrate more focused musical learning (Kenney, 1997).

Between the ages of two and three, children begin to reproduce phrases from songs they hear. It is not until they are between the ages of three and four that children begin to understand the general plan, or layout of a melody (Shuter-Dyson, 1981). Children of this age, generally have mastered the basics of musical objects (Jalongo & Stamp, 1997). These children will also start to combine music and movement. They are able to participate in simple action songs fairly easily.

During the fourth year of their life and continuing into the fifth year, children start to accurately discriminate and produce different pitches and can tap out simple rhythms. The ability to hear the difference between loud and soft music or sounds develops at the age of five or six. Children in this age group are also able to discriminate between basic “same” or “different” rhythms and tones (Shuter-Dyson, 1981). Generally, during this time frame, children start to participate in cooperative musical experiences such as rhythm bands. Simple echo songs, where the child will echo back what the teacher or adult sings, are popular during this developmental stage (Jalongo & Stamp, 1997). Children’s musical preferences start to become apparent around the age of five. This is also the time that children start to request information about the “right way” to play instruments (Jalongo & Stamp, 1997).

As children become older they experience improved singing ability. Tonal music is perceived better than atonal, or off-key music (Shuter-Dyson, 1981). Children start to represent music symbolically around the age of six or seven (Jalongo & Stamp, 1997). The children also begin to appreciate consonance as compared to dissonance (Shuter-Dyson, 1981). Children’s rhythmical perception and performance increases with each year. The children start to use music as a form of expression. However, they generally do not tend to use sound to represent objects outside themselves. For example, while children may use a musical instrument to express their anger, generally they will not use music and sound to represent the sound of thunder (Kenney, 1997).

Starting at the age of nine, children experience a large increase in tonal memory (Shuter-Dyson, 1981). These children also seem to have an increase in their musical expectancies (Radocy & Boyle, 1997). They demonstrate a greater familiarity with scales and intervals. These children also demonstrate further development of preference for a particular style of music.

Children’s harmonic sense begins to establish itself and the children start to appreciate the finer points, such as the feel and texture of music around the age of ten or eleven (Shuter-Dyson, 1981). Shuter-Dyson’s (1981) framework indicates twelve to seventeen-year-old’s appreciation of music as evidenced in their emotional response to music increases significantly. Examining music at the other end of the age spectrum, Holt (1978) described the journey of a middle-aged man just beginning to learn to express himself through music. Holt’s (1978) book lends credence to the idea that music is a mode of expression that can be developed at any point in life.

As with other aspects of development, scholars (Blacking, 1973; Burnsed, 1999) have explored the question of whether music is an innate ability possessed to some degree by all, or an inherited special ability possessed by a talented few. Gardner (1994) and Moog (1976) have come down on the side that music is a universal ability or intelligence possessed by all normal individuals, and is essential to the development of the whole child.

German researcher and educator, Helmet Moog, has argued,

“Musicality . . . is not a special ability but is the application of general abilities to music. The same abilities which enable a person to distinguish differences between noises . . . enable him also to distinguish differences in music . . . The ability to experience music is just as finely woven into the total fabric of potential human abilities as the potential for understanding speech, for reading, for motor skills, and so on. Therefore, the effects of musicality can only be considered as part of the total structure of human abilities” (Moog, 1976, p.45-46).

Further, these scholars believe that although all children are musical, the progression of their musical development is primarily dependent upon the musical environment provided from infancy on. Kenney (1997) has noted that currently in the United States musical illiteracy is accepted as the norm. Swanwick (1988) believes we are a musically illiterate society because “we do not ‘music’ back to children the way we ‘language’ back to them” (p.60). A child’s first sung word goes unnoticed whereas we eagerly look forward to and enthusiastically support a child’s first spoken word. Parents and society in our homes and schools continue this pattern of valuing verbal expression and ability and largely ignoring a child’s “musicality”. “Music is usually ignored as a talent for the select few or indulged as fun-time diversion (Kenney, 1997, p.104)

Relatedly, Hargreaves and Zimmerman (1992) have identified two ways in which musical development can be supported by a given culture. The first way is through what they refer to as “enculturation”. Enculturation is characterized as the informed or spontaneous learning of a culture’s music. The second type of learning is “training”, which is formalized and purposeful. The emphasis is on learning and performing established musical knowledge or skills.

Musical instructors and educators are acquainting children with music and musical instruments at the preschool level, and many times earlier than that. The KinderMusic program and the Suzuki Music method often start children at very young ages in music lessons (Sulkins, 1999). On the other hand, Elkind (1987), a child development expert would caution such intensive programs at young ages. In his book, Miseducation: Preschoolers at Risk, he argues that children are being pushed faster and faster, losing their time to be a child and becoming, in essence, miniature adults.

Researchers are starting to look at musical expression in young children from a cultural perspective (Campbell, 1998, Gallis, 1994)). A music educator and a specialist in the field of music and young children, Patricia Shehan Campbell (1998) explored the concept of musical expression in children in her book Songs in Their Heads: Music and Its Meaning in Children’s Lives. Campbell (1998) sought to find the many different ways in which children spontaneously use music as a form of expression, which appear to be similar to Hargreaves and Zimmerman’s (1992) idea of “enculturation”. Throughout her book, Campbell notes that music is evident in almost every activity in which children participate. Whether the activity is shouting a rhythmical “Alive, I’m Alive” (p.175) while swinging, or if the children are sitting at the snack table chanting “If you drop it, pick it up” (p.176), children often utilize music in their play and expression.

In North American schools, musical forms of expression are often restricted to music periods or music classes (Jalongo & Stamp, 1997). The “hundred languages” philosophy urges teachers and parents to consider music and the other forms of representation in all aspects of life. The philosophy lends credence to teachers actively trying to incorporate music and the arts into their daily curriculum.

An important issue facing teachers incorporating musical appreciation into their curriculum is selection of which types of music to introduce. Teachers must struggle to define the boundary of appropriateness in regards to lyrics and themes suggested in different musical selections. “Rap” and “Heavy Metal” music selections have been recognized for their adult lyrics and content (Binder, 1993; Bryson, 1996). Binder (1993) argues that aside from adult content, these types of music might be viewed negatively by society due to the music’s association with low income, less educated Americans. Bryson (1996) concurred with Binder, adding that music can be used as a form of cultural rejection. While both researchers argue that music is often associated with a culture, and some of these cultural associations may lead society to reject the music. Teacher’s guidance help frame student’s understanding of these cultural musical experiences.

Music’s Connections to Children’s Lives

Intuitively, educators and lay persons alike believe that music plays a large part in children’s lives. Whether it is a teacher singing a song to her class in hopes of teaching math concepts, or it is a child humming to himself as he strolls on the playground, music is there. Music has been shown to have connections with cognitive development, social-emotional development, and physical development, a theme that will be expanded later. Through several processes, including learning by enculturation and learning by training, these connections interact and help the child to fully develop.

COGNITIVE CONNECTIONS

The term social constructivism implies that a person constructs his or her understanding of the world through social interactions (Burner, 1983, Rogoff, 1990, & Vygotsky, 1978). Both training and enculturation play a part in social constructivism. Whether with a teacher or a more experienced peer, children use social interactions to confirm existing schemata or create new ones to further understand their world. This theory provides a framework in which music can be used to help form connections between cognitive, social, and emotional development.

Drawing from the work of Vygotsky (1978), Bruner (1983) and Rogoff (1990), and further clarifying the idea of development in social contexts, the understanding of the concepts of zone of proximal development (ZPD), intersubjectivity, and scaffolding are of essence. These concepts combine to paint a picture of understanding, cognitively and socially.

Intersubjectivity, as defined by Bruner (1983), is a form of mutual attention or harmony. Rogoff (1990) defines this term further by adding that it is a sharing of focus between a child and a more skilled partner. She also adds that intersubjectivity serves as the starting point for a joint activity, which enables the participants to expand their existing knowledge and understanding to new situations (1990). The concept of intersubjectivity is essential to a positive teacher-child relationship. If the dyad does not have some form of intersubjectivity, then it is suggested that understanding will be inhibited (Rogoff, 1990, Bruner, 1983).

Both Bruner (1983) and Rogoff (1990) state that intersubjectivity is a key component to understanding the ZPD. The ZPD is, as Vygotsky (1978) defined it, “the distance between the child’s actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under guidance or in collaboration with more capable peers” (p.86). One can see why it is essential to first have a shared understanding so that scaffolding or moving to the next step is possible. According to Stremmel and Fu (1993), teaching in the ZPD is a reciprocal process with learning. Stremmel

and Fu state, “teaching and learning are inseparable and constitute a profoundly social process” (p. 339).

While the main focus of children’s expression of knowledge tends to be on what children can orate or write, schools in Reggio Emilia, Italy, are encouraging teachers to listen to and see the many other ways by which children demonstrate their understanding of the world. The concept of “The Hundred Languages of Children” is a philosophy that teachers, parents and administrators in the town of Reggio Emilia, Italy have adopted. This philosophy states that children represent their understanding of the world in a hundred different ways (Hendrick, 1997; Edwards, Gandini, & Forman, 1993). One of the many ways a child might express his or her knowledge is through music. Some research suggests that music and other creative arts are the primary vehicle of expression for young children (Carlisle, 1990). For example, while one child draws a picture, another might feel more comfortable expressing the same understanding through a song.

In the music education literature, researchers often study the nonmusical or utilitarian outcomes, such as cognitive development. In a noted review, Wolff (1978) defined several different areas, in which music had been studied, including language arts, mathematics, social studies, and physical growth. Despite noted methodological inconsistencies among the different studies, Wolff (1978) speculated, “there may be measurable effects of music education on the development of cognitive skills and understanding” (p.19).

Findings from studies in music education (Bygrave, 1996; Hanshumaker, 1986; & Hurwitz, 1975) have shown that children who participate in music activities or musical interventions score higher on verbal or reading tests, and math skills, as well as higher on temporal and spatial tasks.

Bygrave (1996) investigated the effects of music on receptive vocabulary skills in children ranging in ages from six to nine years. She found that, while effects were not apparent until the post-post-test period, music positively affected the receptive vocabulary skills of the subjects.

Hanshumaker (1986) reported on music’s relationship with math. He stated that math scores seemed to increase after the children participated in many musical experiences. These findings support to the suggestion of a positive relationship between mathematics and music.

Hurwitz’s (1975) research focused on the effects of music taught by the Kodaly method. Twenty primary grade children, ten boys and ten girls, participated in a musical intervention. Half of the students were exposed to intensive music training, using the Kodaly method. The other half served as a control group and did not receive any musical training. Hurwitz found that the children who received the training performed better on temporal and spatial tasks as compared to those that did not receive the training.

Physical and Physiological Connections

Another body of literature, music therapy literature, speaks to music’s connection to behavioral, stimulate, and sedative responses. The results of numerous studies show that music can have a calming or stimulating effect depending on the type of music presented (Aldridge, 1993; Bonebreak, 1996; Cassidy & Standley, 1995; Clair, 1996; Crowe & Scovel, 1996; Jensen, 1997; Tomkins, 1996; Wigram, 1995). Aldridge (1993), Crowe and Scovel (1996) and Wigram (1995) discussed the importance of musical healing and therapy in their research, noting several different measurement techniques. Techniques included monitoring heart rate and blood pressure. Clair (1996) added to this literature by investigating the effect of singing on alert responses in late stage dementia patients. Observing twenty-six adults living in a resident care

home as they participated in four daily sessions that consisted of reading the newspaper, singing familiar songs, and sitting in silence. Clair found that while not statistically significant, alert responses (defined as head movement, limb movement, changes in facial expressions, or vocalizations) were observed most frequently during the singing. Clair does note that both singing and reading produced significantly more alert responses than silence.

Cassidy and Standley (1995) examined the use of music listening on the physiological response of infants in a Neonatal Intensive Care Unit (NICU). Selecting twenty infants in their first week of life, Cassidy and Standley played lullabies for ten infants and used the other ten as a comparison group. After retrieving a baseline for heart rate, respiratory rate, oxygen saturation, and number of apnea/bradycardia episodes, Cassidy and Standley compared the rates and levels before and after lullabies were introduced. They found that music had a positive effect on oxygen saturation levels, heart rate, and respiratory rate in the first week of life.

In his book Mozart Effect: Tapping the Power of Music to Heal the Body, Strengthen the Mind, and Unlock the Creative Spirit, Campbell (1997) addresses music's connection to stimulative and sedative outcomes, as well as several other areas. Campbell describes how music can facilitate relaxation. Campbell also suggested that music aids in stimulating memory recall and creativity. Although many of his claims for the benefit of music mentioned in the book are not backed by research (Radocy, 1997), Campbell's book has increased public attention and interest in the music, and its possible connections to education.

Social and Emotional Connections

Sprinkled throughout Campbell's (1997) and the research, are the emotional or affective outcomes associated with music. Intuitively most lay persons would agree there is a connection between music and emotion, yet there is surprisingly little empirical research in this area. Meyer's (1956) definition of emotion suggests that emotion occurs when the tendency to respond is arrested or inhibited. In other words, if the unexpected occurs, the listener feels emotion. For example, most young children have not heard tritones, or dissonant chords played in a song or sung to them (Shuter-Dyson, 1981), this unexpected musical tone will cause the children to experience emotion. As the person matures, he or she will begin to notice more complex sequences and thus experience more complex surprises. Meyer also argued that there was not a meaningful way to measure the occurrence of emotion. This persuasive argument made in the mid 1950's, resulted in a lack of research concerning music and emotion (Radocy & Boyle, 1997). However, psychologists and psychomusicologists are currently searching for ways to close the gap in our understanding the link between emotion and music. Sloboda (1991) investigated the different emotions felt by eighty-three British adults while listening to music. Each adult was asked to fill out a questionnaire indicating occurrences of physical reactions to music. Each participant was also asked to locate specific musical passages that would reliably evoke these physical responses and emotions. Sloboda found that tears were more likely to be evoked by passages containing sequences and appoggiatures (auxiliary melodic notes) and shivers were elicited from passages containing new or unexpected harmonies. He suggested that repeated exposure to certain types of music can increase emotional response because the listener discovers the subtle differences with each listening session.

Building on the understanding that music can stimulate emotions, Giles, Cogan, and Cox (1991) initiated a study to determine which music types would serve to alter children's mood. Two hundred and fifty-five, first and second graders drew pictures while they listened to Disney music, New Age music, or classical music. These pictures were analyzed for evidence of

aggression or depression. Their findings suggest that New Age Music or Disney music had a positive effect on the emotional health of a child.

Emotional development.

The literature related to emotional development in young children is helping in uncovering the connection between emotion and music. Our understanding of children's emotional progression is increasing rapidly with the development of new methodologies. As Hyson (1994) notes in her book The Emotional Development of Young Children: Building an Emotion-Centered Curriculum several trends have been documented. One of the major trends described is that of a child's move toward "wider, more complex emotional relationships" and "more varied, complex, and flexible ways of expressing oneself" (Hyson, 1994, p. 59).

One theory used to describe the development of emotion is Greenspan's (1989) stage model of emotional development. Drawing on Freud's ego development theory, Greenspan suggests that children are active constructors of their emotions. Greenspan states that children actively strive to regulate their emotions. This regulation is noted early in infancy as the child attempts to cope with its feelings of fear, anger and loss when the caregiver leaves the room. Greenspan's stages progress from "self-regulation and interest in the world" at the ages of 0-3 months, to a "falling in love" stage at 2-7 months, then developing "intentional communication" at 3-10 months, on to the an "emerging sense of self" at 9-18 months, to the ability to create emotional ideas, and then finally "emotional thinking" at 30-48 months. This model has a unique component of overlapping stages. This overlapping allows for a range of ages at which a certain skills can develop.

Multiple factors play a role in emotional development. Saarni, Mumme, and Campos (1998) suggest several factors to take into account when researching emotional development, including cultural influence, environmental influence, and individual differences. A precursor to these influences, as noted by Hyson (1994) was the influence of skills from other domains and the physical and biological characteristics. All these factors play a role in how emotion develops and is understood.

Also included in our understanding of emotional development, are the techniques people use to communicate emotions. Facial expressions, gestures or body language, use of sounds and words, and symbolic activities are common behaviors by which one communicates emotions (Caron, Caron, & MacLean, 1988; Fernald, 1993; Frijda, 1987).

Generally the ability to both express and control these behaviors progress with age and skill. For example, an infant is limited to the use of facial expressions, body gestures, and use of sounds. As this child develops, the use of words will be utilized to express emotion, and then finally symbolic activities, such as pretend play. However, as the child progresses, he or she does not lose the ability to use body gestures or facial expressions. Instead, these indicators of emotion build on each other. These behaviors have also often been used as measures when emotion is being studied (Caron, et al., 1988; Fernald, 1993; Frijda, 1987), especially regarding responses to music.

Another strong connection formed during the elementary years, which involves emotional development, is the connection between the teacher and the child. As noted earlier, this connection is important for several reasons. Social constructivists believe that this connection fosters learning. A position statement from the Music Educators National Conference (MENC) specifically states that the teacher-child relationship can foster learning in the music domain. MENC emphasizes this dyad in their guidelines stating that young children's musical experiences should be *child-centered* and *teacher-supported*. MENC adds that effective music

teaching facilitates learning through interaction with more experienced adults and peers, again stressing the role of teacher-child relationship.

Teacher-child interactions.

Teacher-child interactions fall under the broader category of classroom climate. The term classroom climate has traditionally been used to refer to the factors external to the learner that may have an effect on different learning experiences. For example, it has been found that the lighting of the room or the arrangement of the furniture may advance or hinder learning (Marzano, 1992). More recently researchers have included psychological factors such as attitudes and perceptions of teachers and children as part of the classroom climate. In regard to teacher attitudes or attributes, teacher acceptance of the child and the affective or emotional comfort produced by the teacher in particular, have been studied (Marzano, 1992).

Addressing the issue of emotional connections, Pianta (1999) states that when teachers are asked why they teach, “ these discussions are invariably about relationships between students and teachers, the experience of which constitutes a large proportion of what goes on in school. Unfortunately, researchers, teacher educators, and school administrators have been late in figuring this out . . .” (p.3) Further research conducted by Pianta and associates reflects an increased interest in understanding the role of other adults in addition to parents or guardians, in a child’s life (Pianta, 1992). Pianta has investigated the role of teachers in children’s lives. The framework of Pianta and colleagues’ relates teacher-child relationships to mother-child relationships and attachment theory. The most important relationship a child can make is with its primary caregiver, such as a parent, usually its mother (Ainsworth, 1967; Bowlby, 1958), In today’s society, children often spend large amounts of time away from primary caregivers in daycare, or before and after-school programs. With the increase in interaction time between teachers/caregivers and children, the relationship between the two incurs a greater significance.

But what does a teacher-child relationship mean? Bronfenbrenner (1979) states “as participants engage in dyadic interaction, they are likely to develop more pronounced feelings toward one another. These feelings may be mutually positive, negative, ambivalent, or asymmetrical” (p.58). Manke (1997) goes as far as to suggest that that negative student-teacher relationships take time and attention away from learning. These feelings ultimately determine the success of any learning experience, including musical experiences. Wooten and McCroskey (1996) supported this notion with their findings that “ if students trust their teacher they are more likely to turn to them for guidance in their learning efforts and be accepting of the teacher’s influence attempts” (pp.94-95) and maximizing the learning that occurs. Pianta (1999) suggests that teacher-child relationships not only influence cognitive outcomes, but also encourage social-emotional adjustment as well. Pianta compares the student- teacher relationship to that of the parent-child relationship. Howe and Matheson’s (1992) findings from a contextual study including one hundred and one, toddler age children that attended some form of childcare, their parents and childcare givers also support this view. The children were observed at home and at the child care facility. Comparing interobserver reliability, as well as utilizing the Attachment Q-sort, Howes’ and Matheson’s results indicate children form relationships to teachers similar to the relationship with their mothers. Bronfenbrenner (1979) defines the primary dyad (those normally reserved for parent-child dyads) as “one that continues to exist phenomenologically for both participants even when they are not together” (p.58). He suggests this strong emotional bond influences the other’s behavior even when they are not around, “the two members remain in each other’s thoughts” (p.58). This type of dyad may be seen in the teacher-child relationship, and therefore be considered for further exploration in the developmental arena.

The teacher-child relationship is an important influence on the “child culture” (Campbell, 1998). Campbell (1998) describes the “child culture” as young persons “united by the experiences of their brief lives and the knowledge they have acquired and stored within them” (p. 184). This culture is unique from the family culture and school culture. The children in this culture share similar interests due to their similar extent of knowledge. This culture is also very flexible. One day it could consist of the children on the playground, while another time it might include children from the bus. This culture is multifaceted and pliant. An important aspect of this child culture is music. As was noted earlier, children often demonstrate rhythmical movements and expression when they are together (Campbell, 1998). A teacher’s influence saturates the whole child, and this means it impacts the child’s musical expression as well. The child culture, teacher-child relationship, and music all work together to influence a child’s life.

Family Influences.

Another influence on children is that of the family. The family attributes work hand-in-hand with teacher-child relationship and music to influence each child’s progress. As for the role of parents and family in relation to general education, parents most often know more about their child than any other person does in relation to music. As Sarason (1995) notes, parents can provide the teacher a well-rounded picture of the child. This is equally so with the child’s relation to music. Jalongo and Stamp (1997) note that families encourage their children artistically and musically by sharing their expertise and enthusiasm. In a study of children identified as having exceptional abilities, Howe (1990) found that the only common characteristic was their early home lives. Howe (1990) noted that the parents of these children respected and supported their child’s effort to express him or herself through different media. Palincsar and Klenk (1992) furthered our understanding of the role of parental involvement in artistic development of children by their families by noting that parents who provided a home environment with a wide range of musical and artistic experiences supported children’s experimentation with these mediums. Jalongo and Stamp (1997) suggested that the home environment, as compared to the school environment, provides more one on one attention and due to this, each experience is more beneficial. They also state that the close emotional relationship between parent and child is a significant factor in the parental role in the musical development

The child-culture, the family-culture and the school-culture all combine to form the larger society. Several sources have noted that aesthetic experiences or musical experiences do not take place outside of these cultural contexts (Jalongo & Stamp, 1997; Radocy & Boyle, 1997). In her book, Songs in Their Heads: Music and Its Meaning in Children’s Lives, Campbell (1998) describes how children’s music reflects societal goals. For example, many preschool and kindergarten classes, as well as families sing the ABC song. This song emphasizes the importance American’s place on academics and education.

In addition to the societal goals, music often relates to historical concepts. The childhood chant of “ring around the rosie” often heard on the playground describes England’s historical period when the Bubonic Plague struck. Ring around the Rosie was the mark on the skin. Pocket full of Posies describes the posies placed on those that succumbed to the disease. Finally “ashes, ashes, we all fall down” describes the bodies being burned so the disease would not spread. While it is on the morbid side, it slowly turned into a childhood chant that can be heard to this day.

Chatwin (1988) describes the Aboriginals songs in his book The Songlines. Chatwin (1988) describes how the Aboriginals believed that the world was sung into existence. Songs were not only a form of communication, but also a map and direction finder. The Aboriginals

believed, and still believe that their ancestors scattered a trail of words and musical notes as they went on their walkabout. The words of the song described the surroundings while the rhythm of the song represented the terrain. "Providing you knew the song, you could always find your way home" (Chatwin, 1988, p. 13). As Lomax (1968) described, "a culture's favorite music reflects and reinforces the kinds of behavior essential to its main subsistence efforts and to its central and controlling institution" (p.133). Stated simply, "music reflects a culture's values, attitudes, and temperament" (Radocy & Boyle, 1997, p.28).

Radocy and Boyle (1997) further describe the effect of music on culture and culture on music. They describe music as "an integral cultural component, serving as both a cohesive and perpetuating force" (p.26). Radocy and Boyle also point out that music is present in all cultures. However, while it is present in all cultures, individual musical mannerisms vary from culture to culture due to the sociocultural subtext within each culture.

Aesthetic Connection

While research on the benefits of arts education focuses on one or two specific outcomes per study, music educators and arts advocates present several overarching goals for the incorporation of the arts into education. These goals can be linked back to the culture and its high value for skills and traits. The first overarching goal is perceptivity and imagination. A musical example of this goal can be noted in every movie theater. Most movies incorporate music into the film to heighten the audience's awareness of impending doom or romance. At the same time music is enhancing the audience's perception of the movie and stimulating their imagination of upcoming events. Jalongo and Stamp (1997) explain that this heightened perception starts with and can be accomplished through an active arts program. Imagination is thought to develop simultaneously and to interact with perception. Elliot Eisner (1990) describes this relationship. "Imagination is fed by perception and perception by sensibility and sensibility by artistic cultivation . . . with enlarged perception, the resources that feed our imaginative life are increased" (p.15).

Also included in the overarching goals are interpretation and appreciation. Interpretation is a function of daily life. This skill is highly regarded by our society and according to Jalongo and Stamp (1997), this skill can be acquired and strengthened through an arts program. As the children are introduced to new art forms and are asked to distinguish between the quality of materials and work produced, they are honing their interpretative skills. These interpretative skills lead to appreciation of quality work (Jalongo & Stamp, 1997), a trait that is highly valued within the American society. It is expected that once a person is hired to a corporation, they will produce quality work and appreciate those around them that also produce quality work.

Finally, Jalongo and Stamp (1997) describe commitment to craft. Having an arts program in schools teaches children about determination and perseverance. The children participate in a safe and nurturing environment where these skills are modeled on a daily basis. The children are encouraged to continue their task until it is completely finished. As with the rest of the goals, this too speaks to our society. Arts programs have tapped into society's ideals and have incorporated highly valued goals and traits into the programs. In addition to learning different artistic and musical concepts, the children in these programs are also enhancing traits to further their livelihood no matter what they choose to do.

Jalongo and Stamp (1997) also state that aesthetic experiences must forge a connection with the children's previous and current experiences. A teacher might select a few children to choose a music activity that corresponds with a fieldtrip they have had. By doing this, the teacher

not only makes the activity voluntary, she also related the music activity back to a previous experience the children have had enhancing the overall learning.

Another aspect of aesthetic experiences is that they are social. By this, it is meant that music and arts are a shared experience. Whether it is an experience between a listener and the composer of a symphony or an avid art collector and a master painter, at least two people are sharing the experience. Whom the child is with affects the musical experience just as much as the music selection. These experiences are affected by what each person brings to it.

Radocy and Boyle (1997) further expand the definition of aesthetic experiences to include five other characteristics. Citing Gerard L. Knieter (1971) as the originator of the characteristics, Radocy and Boyle (1997) describe the characteristics of focus, perception, affect, cognition, and cultural matrix. When one has focus, he or she has devoted his or her attention to a particular form of art. Without focus, a response to the art form is inconceivable. Perception is the process of becoming aware of the artwork. The occurrence of affect can be described in two ways. The first type of affect is the physical response one has to the art form, or in this case music selection. One might have an increase in heart and respiratory rates. The second form of affect is the “feelingful” (Radocy & Boyle, 1997) reaction. One might state that the music sent shivers down her spine. These affective reactions can range from simple to complex.

The next two characteristics are interwoven and cannot be taken into account without the other. Cognition is a particularly important aspect of the experience. This is the feature that allows an individual to recognize the stylistic attributes of a musical work at the many different levels (analysis, synthesis, abstraction, generalization, and evaluation). However, it is the cultural matrix attribute that takes the cultural context of the experience into account. One is not able to experience music or cognition without the underlying context supplied by the culture.

While Jalongo and Stamp’s (1997) ideas about aesthetic experiences are on the practical application side and Radocy and Boyle’s (1997) are more on the theoretical side, each set of characteristics must be taken into account to truly present an aesthetic experience.

Music for Every Child

Several education models speak to music’s ability to enhance overall learning. Gardner’s Multiple Intelligences theory and Forman’s Cross Modal Representation theory are two theories that support music in an educational setting.

Theories

Multiple intelligences.

Included in these schools of thought was an introduction to musical intelligence. Musical intelligence is the capacity to think in music, to be able to hear patterns, recognize them, remember them, and perhaps manipulate them. People who have a strong musical intelligence don’t just remember musically easily - they can’t get it out of their minds, it’s so omnipresent. Gardner defines melody, rhythm, and timbre as the core elements of music and suggests the affective aspects of music might also be considered close to music’s core (Gardner, 1983, p.105). In fact, according to Gardner, affect may be the central puzzle surrounding music. “We don’t completely understand the emotional factors of music, but we know they exist, just as we know that the quality of love transferred by care given to the child is important in building trust, security, and comfort” (Gardner, 1994, p.97). An understanding of these phenomena may eventually explain, “the general qualities and states crucial in artistic activity” (Gardner, 1994, p. 97).

Gardner believes that musical thought processes are different from logical-rational thinking. Interacting with aesthetic objects children not only construct patterns of thought, but experience new configurations of feelings. Or as Bunting (as cited by Swanwick) puts it, “musical rhythms and tensions seem to mirror the flow of feeling with us on a direct, non-verbal and non-illustrative way. Most of us would consider this music’s most important quality and it is not a thinking process but a feeling one” (Swanwick, 1988, p.65).

Howard Gardner’s theory of Multiple Intelligences helps to form a connection between music and development of cognitive, social-emotional, and physical abilities as well as in learning various disciplines or curriculum areas such as math, social studies, science, and literacy. Educators, sensing children were not all the same and that the tests and practices we had in place only skimmed the surface in explaining differences observed among children, have embraced the theory first introduced in 1983 with Frames of Mind. Gardner argued that “just as we look different and have different kinds of personalities, we also have different kinds of minds” (Gardner, 1983). Gardner characterized the prevailing view of intelligence as “something you are born with; you have only a certain amount of it; you cannot do much about how much of that intelligence you have; and tests exist that can tell you how smart you are” (Checkley, 1997, p.9). He noted that Intelligence Quotient (IQ), as traditionally measured and defined, profiles only language-logic ability. Gardner suggested that rather than one or two intelligences, we have multiple intelligences. The differences we see in peoples’ intelligences are due to different strengths in each of the intelligences and the particular combination of intelligences.

In comparison to other theories, Multiple Intelligences theory has a different type of underlying structure. “MI theory is a cognitive model that seeks to describe how individuals use their intelligences to solve problems and fashion products. Unlike other models that are primarily process-oriented, Gardner’s approach is particularly geared to how the human mind operates on the contents of the world (object, persons, certain types of sounds, etc (Armstrong, 1994, p.14). The MI theory is often confused with learning styles (e.g. Visual-Auditory-Kinesthetic), which are actually sensory channel models, not a cognitive model. While MI might utilize the senses, “is not tied to the senses – it is possible to be deaf and be quite musical” (Armstrong, 1994, p.14). In addition, MI is often compared to personality types (e.g. Myers-Briggs). Again, personality trait theories are not cognitive models, but rather personality models. While there may be a correlation between the two models, comparing the overall models is like “comparing apples and oranges . . . each model touches upon a different aspect of the whole learner” (Armstrong, 1994, p.14).

In Gardner’s view, all intelligences can be improved, but how readily or greatly improved, will depend on interactions imposed by biology and environment. “Teachers have to help students use their combination of intelligence to be successful in school, to help them learn whatever the teachers and society believe they have to learn” (Checkley, 1997, p.10). Gardner goes on to say he believes children need to learn the literacies, and the disciplines, but with the recognition that there is more than one way to learn to read or one way to learn biology or one way to learn how to compute. However, Gardner cautions that “it is . . . nonsensical to say that everything should be taught in seven or eight different ways” (Checkly, 1997, p. 10).

Gardner has set certain criteria for the intelligences. In order to be considered an intelligence, the content must answer three questions: “Is there a particular representation or structure in the brain for the ability? Are there populations that are especially good or especially impaired in intelligence? and Can an evolutionary history of the intelligence be seen in animals other than human beings?” Those identified as meeting Gardner’s criteria include: Linguistic

intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, naturalistic intelligence, and musical intelligence.

Several schools have adopted this teaching technique and have noted its benefits. Campbell and Campbell (1999) reported on two such schools where the academic and social outcomes were advantageous. A Kentucky principal and two of his teachers introduced the MI technique to the school in an intervention form. Taking note of the scores from achievement tests before the intervention and several years after the technique was introduced into the elementary school, a substantial increase in the achievement scores was ascertained. The second school Campbell and Campbell reported on introduced MI from the school's founding day. Ranking the students' achievement scores as compared to those others who participated in the Metropolitan Achievement Tests, the students in their third year of attendance performed at the 75th percentile, demonstrating that this learning technique can compete with traditional teaching.

The theory of multiple intelligences, in and of itself, may not solve anything in our society, but linking the multiple intelligences with a curriculum focused on understanding is an extremely powerful intellectual undertaking. This theory allows one to explore and master domains that matter in the real world (Gardner, 1994).

Cross-modal representation.

Another theory closely related to MI theory is the theory of Cross-Modal Representation. This theory states that cognitive concepts can be represented in different domains. Forman (1994) states, "Children learn more deeply when they represent the same concept in different media" (p.41). Similar to Gardner's theory, Forman believes that knowledge can be learned and demonstrated in multiple domains. However, unlike Gardner, Forman makes no claim to distinct intelligences. Forman does not even address the issue. The point of both the MI theory and Cross-Modal Representation theory is that a child can acquire and express knowledge in several forms – not just in writing or orally.

Integrated Curriculum

To provide these multiple forms of knowledge many educators, both general education and music specialists have often integrated several subjects into one learning experience. The thought behind integration was that by combining or interlacing the different subjects, the learning experience would have more meaning. "After all, the real world is not separated into distinct disciplines" (Burnsed, 1999). Multiple Intelligences theory uses the same concepts as integration, except while integration intermingles the core subjects, Multiple Intelligences intermingles the different intelligences. Following this trend, music educators have pushed for music to be incorporated into daily activities and curricular issues. However, research in this area suggests that music often is not integrated into a general education classroom (Bresler, 1993; Stake, Bresler, & Mabry, 1991). In her study investigating music instruction performed by a non-specialist, Bresler (1993) found that if music was integrated into the classroom (which did not occur frequently), it was mainly used for utilitarian outcomes, such as teaching number facts or learning parts of speech, rather than for aesthetic purposes. Aesthetic and emotional values of music were often disregarded. Bresler (1993) noted that several "barriers" to improved music curriculum included: teachers' lack of knowledge, lack of resources, and overall pressure for academics. Whitaker's (1996) study in which the researcher followed a qualitative paradigm documented the integration of music into a third grade general education classroom. Whitaker noted that in certain communities, the role of music was progressively devalued. Whitaker further suggested that a lack of time for teachers to communicate about integration was the

primary reason for the devaluation of the integration of music. With the lack of integration utilization, researchers have turned to other supporting concepts for research justification.

Music Educator's National Conference Guidelines

The Music Educator's National Conference (MENC) association provided teachers with curriculum guidelines to assist teachers in music instruction (MENC, 1994). Incorporated in these guidelines are the ideas that children need both individual and group experiences with music and musical instruments. A strong emphasis is placed on the teacher's role in this process. MENC (1994) notes that musical experiences should be child-centered, child-initiated, and teacher supported. In addition, MENC feels that effective music teaching should: (1) support the child's total development including physical, emotional, social, and cognitive growth, (2) be individualized to each student, (3) be facilitated through experiences with adults and more experienced children, as well as music materials, (4) consist of learning experiences and materials that are real, concrete, and relevant to the lives of the children, (5) provide opportunities for children to choose the difficulty level and type of musical experience, and (6) allow for sufficient time for exploration (MENC, 1994).

Connecting Back . . .

As noted earlier, music connects to several aspects of a child's life. It can connect the home and the school, it connects teacher and child. The main goal of Multiple Intelligences Theory is to aid the teacher in providing individual instruction and understanding to all students. MENC also emphasized the importance of child-initiated, teacher-supported activities. This teacher-child connection provides the bridge back to music and its connections to elementary education. As Miller (1987) notes in her review of children's musical behavior in natural environments, a child and his or her mother form a sonorous bond from the very first echo between the two. This statement, while emphasizing the attachment to the mother, also connects music to the teacher-child relationship. Music and sound play a large role in the attachment process. Whether it is a mother echoing her newborn infant's coo, or a teacher softly humming to calm a child, music helps to form and solidify the bond formed between two people. The emotionality expressed in music can be seen as a reflection of the emotion expressed between two people in an attachment bond.

Social Constructivism can also be influenced by music. By its very nature, music is an experience by which children learn about life and societal rules. Mead (1972) states that music is a fundamental human need. It is a need that bridges cultural diversity. Music allows children to experience different cultures and customs in a medium familiar to all. It allows children to explore and investigate with other children to form their own opinions and understanding of the world. Musical activity provides the children opportunities to extend their learning horizons by introducing new concepts in a familiar rhythmical way; a way long ago demonstrated to the child when the parent or caregiver rocked and hummed the child to sleep.

As a teacher, one is obligated to try to understand a child to the best of his or her ability. Music offers teachers another avenue to understanding, communication and expression, and relationships with children. It is one of the Hundred Languages children use to communicate their ideas (Edwards, Gandini, & Forman, 1993).

METHODOLOGY

Despite a great deal of recent interest, there is little research on the benefits of integration of music in general education, elementary classrooms. Due to the exploratory nature of this study and its emphasis on uncovering the meaning teachers and children attach to music experiences,

or the lack of them, in classrooms, a qualitative paradigm was utilized. Following this paradigm this study placed importance on contextual factors such as understanding of a particular social situation, event, group, or interaction, and emphasized meaning and process over product. As a qualitative study, it also emphasized the importance of the researcher’s role in the study. The researcher selected the participants, formed the central assumptions, and placed her own values on the study (Creswell, 1994). This reflexivity was thought to lead to a more comprehensive understanding and use of the study. Of utmost importance to this study was exploring and understanding the meaning teachers and children attach to experiences with music in general education classrooms.

RESEARCH QUESTIONS	PARTICIPANTS	DATA COLLECTION	DATA ANALYSIS
To explore : The meaning third and fifth grade children and teachers make of music in their lives.	Third and fifth grade teachers that incorporate music frequently into their curriculum Third and fifth grade teachers that incorporate music less frequently into their curriculum. Third and fifth grade students. Music specialist	Collection of music checklists and profiles Collection of narratives written by all participants after a discussion about musical intelligence. The music specialist will supply comparison data for randomly selected child narratives	Narrative analysis Read, reread and code

Setting

This study took place at “Green Leaf” Elementary School. Green Leaf was selected for the study as some teachers in this school are participating in the Basic Schools Renewal Program. This program advocates eight basic values and encourages the teachers to incorporate these values into the curriculum and everyday activities. At Green Leaf, there has also been an emphasis on integrating the arts into the classroom curriculum.

Green Leaf Elementary School houses over 470 students from several different socioeconomic statuses. The fifth grade numbers around 80, and the third grade around 85.

Participants

The participants included one music specialist, two teachers from third grade, two teachers from fifth grade, approximately forty students in third grade and approximately forty students in fifth grade, all from Green Leaf Elementary School. The music specialist identified one teacher from each grade level who has implemented integration of music into his or her classroom. The other teacher at each grade level was selected for his or her low level of music integration. The children involved in the study were all class members of the identified teachers.

The two age groups were selected because they appeared to offer great potential for exploring the meaning attributed to music experience as related to learning and in forming relationships. Support for this notion came, in part, from Pianta’s (1999) research on relationships between children and teachers. His research and that of others has lead him to the conclusion that children’s “pathways” to schools success or failure are set by the end of third grade. Pianta’s work coupled with Gardner’s (1983) work on multiple intelligences raises the question of the potential of early musical experiences for helping set the course for forming teacher-child relationships and learning.

Two grade levels were selected to make it possible to look for developmental differences in the meaning of music intelligence and experience made by the two age groups. It was also thought that children of these ages would have had a history of musical experiences, both in and out of school, which they would be able to describe in writing.

Measures

The measures selected for use in this study were drawn from the work of Thomas Armstrong (1994). In his book, Multiple Intelligences in the Classroom, he provided checklists and activities to identify musical intelligence in teachers and children.

Teacher Measures

The teachers were asked to complete a checklist (See Appendix C) designed to profile their musical intelligence. Prior to the data collection at Greenleaf, the checklist and the questions were pilot tested with several teachers to refine the wording and to ascertain their potential in assisting the researcher in gaining an understanding of the meaning teachers make of music and musical intelligence. The pilot teachers indicated the questions and the items on the checklist were clear. They were able to complete both the checklist and the narratives within 30 to 45 minutes. One teacher stated that she really enjoyed the tasks. It was thought the checklist would help the teachers understand musical intelligence as defined by Checkley (1997) and Armstrong (1994) and to focus their reflections on their own musical experiences. Armstrong (1994) and Checkley (1997) both reported that individuals who are introduced to multiple intelligences enjoy constructing their own multiple intelligences profile. Gardner (Armstrong, 1994) claimed that by constructing the multiple intelligence profiles, teacher's awareness and appreciation of children's multiple intelligences is heightened.

After completing the checklist, the teachers were asked to respond in writing to two posed questions (See Appendix C). These questions were used to assess the meaning they make of their musical intelligence and music experiences.

First, the teachers were asked to reflect and write on the development of their music intelligence. They were prompted to note significant events, facilitating or inhibiting experiences, and particular people who influenced their development of musical intelligence. They were also asked to pay particular attention to their school experiences related to music.

The second question asked the teachers to think and write about how their musical intelligence affects what they do with music in their classroom, with their curriculum and with particular children.

Child Measures

Similar measures were used to explore the meaning children make of music intelligence and musical experiences. After a short discussion and exploration of musical intelligence the children in third and fifth grade were asked to profile their musical intelligence (See Appendix D). They were asked to indicate their response to the statement by circling the number of the items that described them. The children were also asked to reflect and write about their music intelligence (See Appendix D).

The checklist, a rating system, and the questions were pilot tested with a third grader and a sixth grader. Some of the wording on the checklist items was changed in response to feedback from the children that the statement was not clear. It was also determined that the checklist was a better indicator of the children's musical intelligence than a piloted rating system in which children were asked to circle one of three pictures that depicted their level of musical

intelligence. Additionally, it was decided that in order to control for different reading levels, the items on the revised checklist were read aloud by the researcher.

The questions were also piloted. The sixth grader did not experience any difficulty in responding to the two questions. However, the task was too difficult for the third grader. Therefore it was decided to use the questions with fifth graders and to revise the writing task for third graders such that they could respond with shorter answers to more questions. Third and fifth grade teachers were asked to help with developing the questions and procedures. The revised checklist and questions were piloted again with other children and determined to be adequate.

Music Specialist Measures

The music specialist was asked to complete the same measures as the classroom teachers. In addition, she was asked to review randomly selected data from the children and to write her perceptions of the child's musical ability (See Appendix D).

PROCEDURE

The researcher first informed and asked permission of the appropriate central office personnel (See Appendix E for Permission Request) of the "Dillwood" County Public Schools to conduct this study at Green Leaf Elementary School. Once permission from the central office was granted, the researcher contacted the Green Leaf principal and music specialist to seek their cooperation (See Appendix E). (Preliminary contact had been made with the music specialist and she had indicated an interest in participating in the study.) The music specialist was informed about what her participation in the study would entail, as well as her right to withdraw from the study at any time. Once the music specialist had given consent to participate in the study by signing a consent waiver (See Appendix E) she was asked to identify and rank teachers in the third and fifth grade on their integration of music into their curriculum.

Four teachers were selected to participate in the study, and asked to sign consent forms (See Appendix E). Once permission was granted, the teachers received letters and permission forms for each student. The forms (See Appendix E) described the study, and the rights the students had if they chose to participate in the study. The children also received a form that was sent home to their parents/guardians (See Appendix E). These forms were handed out at the end of the week, and the researcher came back the following Wednesday to collect student forms and compose a complete list of students able to participate in the study. After retrieving the forms, the researcher contacted the teachers and scheduled a convenient time to visit each teacher's classroom, as well as to conduct the teacher portion of the study. The teacher portion of the study required them to attend a group meeting at which the researcher briefly described Gardner's theory of Multiple Intelligences. The information shared with the teachers focused on music intelligence. The teachers were then given a music intelligence checklist and asked to check any item that described their music-related behaviors. The researcher collected the completed checklists. Next, the teachers were asked to respond in writing to two questions (See Appendix C) that were presented on a provided form. The teachers were encouraged to complete their writing at the meeting. However the teachers requested to complete the form at home and return it at a later date. The responses were collected the following week when the researcher collected the data from the children.

In discussions with classroom teachers and the music specialist it was decided that the essays would be written in the child's classroom rather than during their 30-minute music class. The music specialist indicated that she rarely has the children write during their music class

whereas the classroom teachers indicated that the tasks were similar to writing activities they do with the children in their classes. During the class, the researcher, with the help of the teacher, described “music intelligence” or “music smartness” (See Appendix D for script) to the children. After introducing “music smartness” to the children, they were asked to complete a music profile (See Appendix D) which was read to the children. Once completed, the researcher collected the profiles and asked the students to reflect and write about their music smarts. The children were reminded that this is a free writing exercise and that spelling and grammar would not be graded. The researcher emphasized the importance of their thoughts and ideas. The children were then instructed to write as long as they needed and to ask any questions they had. The researchers collected all forms before leaving each class.

APPENDIX B

PILOT DATA

Preschool Teacher

Reflect and write on the development of your musical intelligence.

Even though this might sound off base, my musical development has always been strongly correlated to my “athletic” development. I have always been drawn to sports – since the age of 3. My parents tried introducing me to the piano at age 5 – and I felt unsuccessful after one lesson. Sports always came easily to me. I quickly assumed that I wasn’t a “music person”. The more I told people this, the more I believed it. When it was time for school, music class was something I dreaded. Honestly, I never gave it a chance. None of my classroom teachers played music – ever. So to me, music was only to be used in music class (that’s what I thought). However, in 10th grade my English teacher hooked up her boom box and played a song. She asked us to respond to it. I loved it. I still know the song . . . every word . . . and I often think about how amazing it is that I still remember a seemingly insignificant 20 min. activity. I want to also add that my mom is very musically inclined and she always tries to tell that I have a nice singing voice. She would be upset if she knew I didn’t check that on the survey.

How does your musical intelligence affect what you do with music in your classroom, curriculum, and with particular children?

At first, I felt very insecure about singing in front of anyone. But very quickly I was able to belt out my off-key voice to almost anyone.

I sometimes feel insecure about what types of music are appropriate for my classroom. I am always playing children’s or classical music – because they love it. However, I hear the kids singing Brittany Spears and BSB (Back Street Boys) etc. and I wonder if that is appropriate for the classroom. Obviously they hear that at home and in the car – should they be exposed to new and different at school? Or should it be music they are familiar with, or a combo of both?

I don’t do enough with instruments, because we have open classrooms. That is my excuse anyways. They are loud and obnoxious and I don’t know how to do anything structured with them. I remember in elementary music having to sit there holding my tambourine with letting it make a sound . . . that was awfully hard. All I wanted to do was bang it as hard as I could. I am currently waiting until it nice and we can do it outside.

I am no longer embarrassed that I can’t carry a tune or play an instrument, because I continue to have successful music experiences in my classroom at center and circle time. There are particular children who respond very well to music. There are two kids I know who need music in order to function cooperatively in a classroom setting. I know immediately if I have forgotten to turn on a CD. We have music CD-ROM that I will put on for these two particular children if there is a problem. They settle down immediately and are able to respond and “function”.

Pilot Study Data

High School Teacher/ Child Development Lab Director

Reflect and write on the development of your musical intelligence.

I enjoy listening to music. I only remember signing in school or church. As a child/teenager and always felt extremely untalented in my rhythmic and musical abilities. I enjoyed singing in the choir as a teenager but was glad there were enough people to drown my voice. Even today emotionally I feel much more upbeat and happy when there is music but will only sing in the car with my children and only sing at church very softly so the people in front can't hear me, only God. I have do sing with my children when I am teaching but usually have recorded music to assist me. I empathize greatly with my students when they are embarrassed to sing in the class with children. I try extremely hard to encourage them and suggest props to help them so they don't feel like they are doing a solo until they feel more comfortable. I am not inhibited at all to sing the short children's songs in class, at home, in Sunday School, etc. even when adults/students are present in children's classes. I think this is because I sense children's enthusiasm and joy when we sing or music is playing while we play frequently singing as we play. I listen to music casually in the car but I never turn on music otherwise when studying, working, cleaning, planning. *Flash Back:* I do remember fondly twirling baton to music and learning my routines that were planned to the particular beat or rhythm of the song. "Bye Bye Ms. American Pie" Ha Ha!

I don't remember music in school – except in 5th and 6th or 7th grade. I can now picture in my mind our long narrow music room with chairs theater style and our principal was the music teacher – I don't remember any of the songs – Wow! How old am I???

The only music I remember at home was on TV, "The Grand Old Opry" on Saturday night and then my mom and dad would leave going to the dance and Granny would come play with us. I vaguely remember the "Lawrence Welk Show" at my Granny's house on her TV.

How does your musical intelligence affect what you do with music in your classroom, curriculum, and with particular children?

When teaching curriculum to students I strongly emphasize the importance of music. Knowing that I am inhibited, I try to learn from those that are not, but also focus on how to incorporate music when feeling very incompetent in this area. Examples of ways I use music :

Music in Groups:

- Children songs without assistance or recorded music "The stop light says . . ."
- Singing with records/tapes/CDs
- Creative movement with singing
- Instruments

Music During Play:

- Music playing while children play
- Singing with children while we play
- Headsets and music/ stories to listen quietly
- Making instruments

Music to teach content:

- Selecting songs that teach a topic
- Selecting songs that connect with stories

Softly singing to comfort:

- Rocking children in class – mostly humming
- Mainly with my own children – I especially remember singing to them when rocking them to sleep and continue even today singing “Mommy loves Bryan/Brett” to the tune of “Silent Night” when I wake them up and we are snuggling before they get out of bed.

Pilot Study

Third Grade Student

Write about your music smarts. Are you like the Beach Boys, why or why not? (See script in proposal for other probes/questions.)

(Note: Beach Boys replaced Back Street Boys due to the previous knowledge that this student liked the beach boys.)

- I've gone to concert
- My music teacher
- My music teacher helps me
- I listen to music in the car
- My favorite singer is the beach boys
- I tap my hands (a demonstration of this showed that he played "air drums")
- She (the mom) help me to sing at home
- I sing
- I sing to a CD
- I don't know a lot

Sixth Grade Student:

Write about your music smarts. Are you like the Beach Boys, why or why not? (See script in proposal for other probes/questions.)

- I make up my own song
- I make up song to remember stuff
- I listen to different song
- My music teacher helps me with my sax by telling me my notes
- I play the sax by myself
- I listen to game boy (music)
- My mom and dad helps me with my sax
- Sing along with the radio
- I tap on my desk

Third Grade Student (after revision of questions)

1. *What are some musical things you do at home?*

I like to play piano, listen to my sister play clarinet, and listen to are CD and Tape player. The taper player in the car I sing to the song.

2. *What are some musical things you do at school?*

In music class I play instruments, sing songs, and listen to a tape player at school. I sing at school.

3. *Are there special people or friends at school or outside school who help you with music activities?*

My piano teacher: She helps me play piano better.

My other piano teacher: She gets me more skilled with piano

My sister: She makes sure I get it right and if not she helps me

My school music teacher: She helps me recognise different instruments

My friends I practice with: they practice different songs so they sound good together

Child Checklist

These participants were asked to raise their hands if the statement described them.

1: 6th grader 2: 3rd grader

1. My friends and I like to listen to music when we are together. 1,2
2. I play an instrument or sing in a choir. 1,2
3. I tap my fingers on the desk when I am bored. 1,2
4. If I had to choose a center to go to during free time, I would choose the center with the tape recorder and headphones. 1,2
5. I get songs stuck in my head and sing them throughout the day.1,2
6. I like to sing in music class. 1,2
7. If I had to do a report on bears, I would make a rap song to tell what I learned. ---
8. The sound of rain outside my classroom window often catches my attention. 1,2
9. I like when my teacher plays music while we are doing our lessons. 1
10. My friends tell me that I am always singing! 1
11. My friends and I like the same type of music. 1,2
12. My best friend and I have a song that we always listen to together. ---
13. When I hear music, I am one of the first people to get up and dance. 1
14. My whole family can sing.1,2
15. Members of my family can play instruments.1,2
16. When I grow up I want to be in a band. ---
17. When I grow up I would like to be a composer (like Mozart). ----
18. When I grow up I would like to be a performer (like Brittany Spears). ---
19. When I grow up I would like to be a music teacher. ---
20. I listen to music when I relax. 1
21. I would choose listening to music before writing something. 1,2
22. When my teacher plays music, I really get into class. 1
23. My music teacher helps me to sing and play instruments. 1,2
24. My homeroom teacher lets us sing or listen to music in class. ---

Child Music Profile
(Revised for Second Pilot with 3rd grade)

Circle the numbers that best describe you.

X: selected by third grade (Pilot 2)

1. My friends and I like to listen to music when we are together. X
2. I play an instrument or sing in a choir. X
3. I tap my fingers on the desk when I am bored. X
4. If I had to choose a center to go to during free time, I would choose the center with the tape recorder and headphones.
5. I get songs stuck in my head and sing them throughout the day. X
6. I like to sing in music class. X
7. If I had to do a report on bears, I would make a rap song to tell what I learned.
8. The sound of rain outside my classroom window often catches my attention.
9. My friends tell me that I am always singing! X
10. My best friend and I have a song that we always listen to together. X
11. When I hear music, I am one of the first people to get up and dance. X
12. My whole family can sing.
13. Members of my family can play instruments. X
14. When I grow up I want to be in a band.
15. When I grow up I would like to write music. X
16. When I grow up I would like to be a performer (like Brittany Spears). X
17. When I grow up I would like to be a music teacher.
18. I listen to music when I relax. X
19. I would choose listening to music before writing something.
20. When my teacher plays music, I really get into class.
21. My music teacher helps me to sing and play instruments. X
22. My homeroom teacher lets us sing or listen to music in class. X

APPENDIX C

TEACHER INFORMATION AND DATA

Session for Teachers

I understand that, you as a school, have been studying and implementing the “Basic Schools” model, and as a part of that study, have been integrating the curriculum, especially the arts and music classes. This model fits well with Gardner’s Multiple Intelligences theory in which I have interest. In this theory, Gardner now claims that there are nine intelligences including: Linguistic, Logical-Mathematical, Spatial, Bodily-Kinesthetic, Musical, Interpersonal, Intrapersonal, Naturalistic, and Spiritual-Existentialism. Gardner believes that everyone possesses some degree of all nine intelligences but we develop one or two more fully. Of his nine intelligences, I am most interested in Gardner’s musical intelligence. I want to see what meaning you, as teachers, make of musical intelligence. I would like to share a description of Gardner’s musically smart person.

Musical intelligence includes several things besides singing and playing instruments. People who are musically inclined often pick up on background noise very easily. They might hear rain falling on the school roof if it is raining outside. You might catch them singing to themselves as they work. You might even catch them tapping their fingers on the desk. They might respond favorably when music is included in the room. I have a checklist on musical intelligence that I would like you to complete for me. Please feel free to add additional examples of your musical intelligence.

Now I would like you to think about your musical intelligence. I want you to reflect and write on the development of your musical intelligence. You might want to note any significant events, facilitating or inhibiting experiences; particular people who have helped you develop your musical intelligence. I am particularly interested in school experiences that might have influenced your development in this area.

Next, I want you to think and write about how your musical intelligence affects what you do with music in your classroom, curriculum, and with particular children.

Teachers who have completed this session previously spent about 30-45 minutes answering the questions, however please take as much time as you need. I will be here to collect them when you are finished. Thank you for your time and participation.

Name _____

Grade _____

Teacher Musical Intelligence Checklist

Please put a check mark beside the items that describes you.

- _____ I have a pleasant singing voice.
- _____ I can tell when a musical note is off-key.
- _____ I frequently listen to music on the radio, records, cassettes, or compact discs.
- _____ I play a musical instrument, or sing in a choir.
- _____ My life would be poorer if there were no music in it.
- _____ I sometimes catch myself walking down the street with a television jingle or other tune running through my head.
- _____ I can easily keep time to a piece of music.
- _____ I know the tunes to many different songs or musical pieces.
- _____ If I hear a musical selection once or twice, I am usually able to sing it back fairly accurately.
- _____ I often make tapping sounds or sing little melodies while working, studying, or learning something new.

Other musical strengths:

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NAME _____

GRADE _____

TEACHER NARRATIVE QUESTIONS

Please take as much time as need to reflect and answer these two questions. I will collect these as you finish.

1. Reflect and write on the development of your musical intelligence. You might want to note any significant events, facilitating or inhibiting experiences, particular people who have helped you develop your musical intelligence. I am particularly interested in school experiences that might have influenced your development in this area.

2. Write about how your musical intelligence affects what you do with music in your classroom, curriculum, and with particular children.

“KATHY”

5th grade

1. I grew up with music. I started with piano lessons at an early age. In elem. School we were required to purchase a recorder. I loved playing it. It was easy, I later bought an alto recorder. Our elem. School offered band in 5th and 6th grade. I started the clarinet and was first chair. I also participated in all county chorus. You had to try out in 6th grade and only a few people could go. It was incredible. Thousands of us singing at once. When I got to middle school I dropped band and stuck with chorus. I did all county chorus both years. In high school I made the show choir and got to sing and dance. My chorus teachers were always a huge influence in my life!
2. I really shy away from using singing in the classroom. I think that if I were more self-confident about myself I would use it. I know that voice is a very powerful teaching and learning tool. I don't think that my music intelligence comes through in the classroom at all. Besides the fact that I am aware of recent popular music groups, my kids think that is pretty cool. I think that I have a great deal of musical intelligence but I don't use it as a tool in the classroom. Maybe I should...

“Marlene”

3rd grade

1. Music has been apart of my life ever since I can remember. I was in a church choir from kindergarten to twelve grade. Being in choir and learning the art of singing was so important to my mom that when our church lost its children's music director my mom signed me up for the Methodist church choir. The children's choir at the Methodist church was taught/directed by a music professor at Longwood college. When I was six I started piano and continued for two years. When I was ten I took piano again, but I didn't stick with it. I was bored with learning the scales I wanted to learn songs not scales. I didn't have an ear for music so songs did not make sense unless they were songs that I had heard many times before. I love music. I can't imagine my life without it. Although I don't play an instrument, music moves me, excites me, and relaxes me everyday.
2. I love music and rhythm so I try to include these things in my class. I would like to use more music, but with very limited time and resources it is hard to do everything that I want to do.

“Georgia”

5th grade teacher

1. Music has always played an important part in my life. As a child, my family sang, played music, and participated in choirs at church. My grandmother would sing to us. We would dance with my mom & aunt. I remember making up tunes when playing or walking to the store or school bus. I played the flute in 7th & 8th grade. My cousin & I would play tunes for my family. It is big fun. The love for music has followed me and been a big part of my adult life also. I sang to my daughter, taught her songs, and played all types of music for her to experience.

2. I love to include music in my teaching environment. I will play soft music in the background when students are writing. I try to find and include music that fits with the curriculum. We just learned the parts of speech sung to the tune of “Here we go round the Mulberry Bush”. When students are given choices of projects, one choice is to create a song to fit the unit of study. I think music is very important to human beings. It often calms the hyperactive child or gives focus to someone who needs the rhythm of movement.

“Marcia”

Music Specialist

1. When my family moved to an old farmhouse just as I was about to begin Kindergarten, there was an old upright piano in one corner of the dining room that “came with” the house. After 3 years of listening to me pick out tunes on it, my parents decided I needed to be taking lessons. We moved again as I was about to enter 5th grade – it didn’t take my parents long to realize how unhappy I was without that old piano, so they managed to locate another one, and I resumed my lessons. I was also selected to be a member of an auditioned elementary chorus that year, which started me in my long journey with vocal music. My music teacher, “Sherry Cobalt” (one of the few teachers I’ve had whose name I remember) became the model for me as I went on, eventually choosing music education as my career (no surprise to anyone who knew me). I have worked with thousands of children by now, and continue to be delighted by their musical responsiveness – it is perfectly obvious to me that a musical intelligence not only exists, but can be tapped for learning in other subjects as well (for example, rhythmic spelling/multiplication tables). I also believe that musical intelligence can be developed through consciously selecting activities that promote its use (listening exercises, creative enhancing of children’s literature, etc.)
2. It is ever present! Since I teach music – how to listen, analyze music, sing and play instruments with a pleasant tone, discover how certain songs reflect our country’s history or tell about the culture of another set of people (Native Americans, African, European, Asian, etc.) there is not a single moment that I am not encouraging the use of the musical intelligence. My goal is to assist classroom teachers to find ways to use it as well.

Names	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Fifth Grade	[REDACTED]									
GEORGIA	X	X	X	X	X	X	X	X	X	X
KATHY	X	X	X	X	X	X	X	X	X	X
Third Grade	[REDACTED]									
MARLENE			X		X	X		X		X
K-5 Music Specialist	[REDACTED]									
MARCIA	X	X	X	X	X	X	X	X	X	X
Total (out of 4)	3	3	4	3	4	4	3	4	2	4

APPENDIX D

CHILD INFORMATION AND DATA

Third Grade Writing Task

There are lots of ways to be music smart. Some musically smart people like to sing. Other people might like to listen to music. Have you ever caught yourself humming a song in your head that you heard on the radio . . . in gym class? Some people might tap their fingers on their desks or play air guitar. Some might like going to concerts. Brittany Spears and the Back Street Boys are two examples of famous musically smart people. Can you help me think of other ways someone can be musically smart?

Some possible questions for the third grade.

WHAT ARE SOME MUSICAL THINGS YOU DO AT HOME?

WHAT ARE SOME MUSICAL THINGS YOU DO AT SCHOOL?

ARE THERE SPECIAL PEOPLE OR FRIENDS AT SCHOOL OR OUTSIDE SCHOOL THAT

HELP YOU WITH MUSIC ACTIVITIES?

HOW DO THEY HELP YOU?

Description of Third Grade Before and During Study

Marlene's Class

I came in a little early. Marlene tried to get their attention. She did not raise her voice. She clapped out a rhythm and the kids echoed it back and then paid attention. I noticed that Marlene had a listening station with comfortable beanbag chairs. Children were very vocal and questioning during profile. When the questions were read, more answers were vocalized from the whole class. The teacher often prompted them with "remember when we did . . ." for several of the questions.

Helga's Class

I ENTERED WHILE THE CLASS WAS WORKING ON A SOCIAL STUDIES UNIT. THE CHILDREN WERE IN THEIR SEATS LISTENING WHILE HELGA EXPLAINED THE ANSWERS AND POINTED OUT BODIES OF WATER ON A MAP. THE CHILDREN WERE QUIET AND LOOKING AT THEIR WORKSHEET. WHEN THEY FINISHED, I WAS ASKED TO CONDUCT MY STUDY IN A QUIET SPACE IN THE HALL. THE CHILDREN THAT CAME WITH ME (3) SEEMED TO BE VERY CAUGHT UP IN WHO THEY WERE GOING TO SIT NEXT TO. ONE GIRL MADE IT APPARENT THAT SHE DID NOT THINK HIGHLY OF THE ONLY BOY IN THE GROUP. SHE WOULD NOT SIT WITH HIM ON A RATHER LONG BENCH. SHE ALSO TRIED TO PEEK AT THE OTHER GIRL'S ANSWERS UNTIL I TOLD HER THAT IT WAS OKAY IF THEY WANTED TO SHARE ANSWERS, THEN SHE DID HER OWN WORK. OVERALL, THESE CHILDREN WERE VERY QUIET WHILE PARTICIPATING IN THE STUDY, EVEN IF I ASKED THEM A QUESTION ORALLY. THEY DID NOT SEEM TO GET INTO THE STUDY AS KATHY'S CLASS DID. RATHER IT SEEMED JUST A RELIEF TO BE OUT OF CLASS.

THIRD GRADE NARRATIVE DATA

MARLENE'S CLASS

“Laticia”
3rd grade

1. Piano, listen to music, got to concerts (concerts)
2. Listen to the radio, tap my fingers on the desk, sings songs
3. My music teacher at school, my mom, my grandma
4. They talk to me, they listen to music with me, they show me things

“Kristy”
3rd grade

1. Play music in the CD player and in the car and at home.
2. Mrs. Ruth dances on the table. Ms. Marcia lets us play instruments (instruments). Miss Marlene plays CDs in the CD player.
3. Miss Marlene, “Monica” (my sister), my mom, my dad, Marcia, “Mrs. Armstrong”, “Mrs. Ruth”
4. Miss Marlene sings with us and plays games with us.

“Carol”
3rd grade

1. I play guitar, sing and dance
2. Sing, instruments (instruments), actions, compete
3. Yes, my dad helps me play guitar. My mom teaches me songs.
4. Helps me play instruments, and sing.

“Chau”
3rd grade

1. I singing at home. I listen backstreetboys.
2. We singing song. We listen song. Durm
3. My mom and Marlene. Marcia
4. Sing song together

“Tim”
3rd grade

1. play piano, listen to the radio
2. sing, clap hands, "Ms. Ruth" does the DISCO
3. piano teacher, Marcia, Marlene
4. by teaching me piano, singing

"Caleb"
3rd grade

1. I dance, radio, guitar, sing in shower
2. Clap (back after teacher), music, dance, spanish (music)
3. My music teacher helps, Marlene, Dad helps
4. Marlene sings with us, Marcia sings with us, My dad teaches me to play piano.

"Teri"
3rd grade

1. practice violin, listen to music
2. learn songs, play instruments (instruments), listen to music while working, tapping on the table while working
3. Sunday school music teacher, teachers, music teachers, violin teachers
4. By letting us practice

HELGA'S CLASS

"Crystal"
3rd grade

1. Play piano (sometimes), play music in my stereo (stereo) *or in car*
2. Hum to myself, play instruments (instruments) *sometimes*, listen to music on C.D. day, teacher turned (teacher turned) on the radio
3. My mom, Marcia, My music book, myself
4. To sing, to play, to write a song

"Anne"
3rd grade

1. I listen to music a lot. I sing to the music. I hum when I do my homework.
2. I go to music class. Sometimes I listen to music in class.
3. My sister, my friends (friends), Marica, Marlene
4. My sister sing with me. My friend (friend) help me in music. Marcia help me in music too. Marlene teach us a song.

Fifth Grade Tasks

There are lots of ways to be musically smart. Some musically smart people like to sing. Other people might like to listen to music. Have you ever caught yourself humming a song in your head that you heard on the radio . . . in gym class? Some people might tap their fingers on their desks or play air guitar. Some might like going to concerts. Brittany Spears and the Back Street Boys are two examples of famous musically smart people. There is a guy who thinks that every single person has this type of smarts, and I think so too. I need your help. Now I want you to think and write about your music smartness. Are you like Brittany Spears or the Back Street Boys? Why? Maybe you had a friend that kept telling you that you sing badly, or maybe you saw someone at church playing an instrument and thought, hey I want to do that!

As you write it might help you to think about musical events like concerts, TV programs, etc. Particularly, think about people that helped you to develop your music smartness. I am most interested in the experiences that you have had at school that have helped you to develop or use your music smarts. For example, have you ever learned a song to help you remember the states or math-facts? Maybe you or your teacher made a rap to remember civil war facts. Grammar and spelling don't count, so don't worry about that as you write. It is your thoughts that are important to me.

Description of Fifth Grade Before and During Study

Kathy's Class

Very outgoing. The desks were setup in a horseshoe. All were very excited about filling out survey. Many answered the preview questions excitedly. Students had many mini-discussion among themselves about different musical things they do. Most spent a fair amount of time (25 mins.) completing survey. Few had questions. One child was embarrassed as I asked if he were done and could I read it.

Georgia's Class

This class had just come from music. Many seemed negative about the assignment. They were not as vocal during profile as other 5th grade. Slowly they became a little louder with the questions. When classical music was mentioned they all booed! Some questioned why they had a radio and didn't get to listen to it. Georgia answered that it was played but for children who followed instructions. She also reminded her class of different times they used music or songs. When I mentioned that I might put this information in a book they were more eager to get their forms in.

Fifth Grade Narrative Data

GEORGIA'S CLASS

“Lori”

5th grade

I really don't think I'm like Britany Spears. I'm not very profesinal (professional), but my parents & teachers had helped me develop my music smartness by helping me read music and also sing. I like music. I like it because it get me into a happy mood and it startes my day. ☺

“SANDY”

5th grade

I am not like Brittany Spears or the Backstreet Boys because I like classical more than I like jazz or any other music. I enjoy going to concerts that are classical. My brothers and sisters all play instruments and all of them have played in band. They have helped me appreciate music because of long hours of hearing them practice the same note over and over.

Mrs. Marcia has helped me hate music by making us sing the same boring songs that we learned in Kindergarten in fifth grade.

“Melanie”

5th grade

I don't like claisse (classical) music because it is boring and it doesn't rap or like I don't know it doesn't sound good. I like backstreet boys, N'csy (N'SYNC), Brittany Spears, and stuff like that I write Brittany S. Backstreet boys, N'CSY.

“Thelma”
5th grade

I play the flute right now and I am going to play it in the 6th grade. My sister encouraged (encouraged) me to play an instrument (instrument) *she plays the clarinet*. I always get songs stuck (stuck) in my head that I do not like. I think my flute teacher helped me develop music smartness by teaching me about notes (notes) to play, how to hold the flute and things like that.

Music class has also helped me develop music smartness for some of the same reasons. I some times right already (already) composed music.

KATHY’S CLASS

“Matt”
5th grade

Som time when take a shew (shower) I like to sig Britany spears sogs or the goswqson sog or Titanic. But if I haad to pike a soge person that I like it wad be Britany Spears or mabe the Back Steet Boy My sifl but I do like “Sig 2”

(Sometimes when I take a shower, I like to sing Britany Spears songs or the ???? song or Titanic. But if I had to pick a song person I like it would be Britany Spears or maybe the BackStreet Boys, myself, but I do like “Sig 2”)

“Bob”
5th grade

I wouldn’t consider myself to be like Britany Spears or the Backstreet Boys. I do play a musical instrument though. I don’t really want to be a big pop star when I grow up. I might like to compose music for the piano sometime. I’ve been playing the piano for about half a year so far. At first I didn’t want to go, but now I enjoy it. My piano teacher helps me to play the piano a lot. In middle school I hope to play an instrument in band, like the trumpet or something. Usually I don’t listen to music al the time. Sometimes I listen to music while I do work or play games. We rarely use music in the classroom, but sometimes we do.

“Holly”
5th grade

No, I wouldn’t really call my self a music wanna be. I do like watching MTV and VH1 and other things like that. And I also listen to music. Me and one of my friends always (always) love to listen to the song BLUE! It’s probably our favorite song. My mom always says I catch on to songs quikly (quickly), like I mimarise (memorize) them fast.

At my grandmothers house when my cousins leave or we leave out of my many cousins we always sing a song that like this:

We're sorry your (you're) going away
We wiss (wish) you could stay
We know we will miss you we
Wiss (wish) you could Kiss you
We're sorry your (you're) going away
(Musical notes surround this)

So I think that has developed a lot! We also sing songs in church. Also at my grandmother's house we also sing blessings. Oh, and I play the piano.

“Patrick”
5th grade

No, I am not like BS or the BackStreet Boys. Why? I'm not like them because I'm not a much as a talented singer as they are. I like music concerts and stuff like that but I don't want to be on stage in front of like a million people. Miss Marcia really helped me improve on my music skills but really my mom started teaching me how to sing. I use to have a music teacher named Miss “Caldwell” too. She is the one that started me off with games with music. I like rap, pop, hiphop, and the old kind of rock'n roll. I would like to play drums or maybe piano.

“Eric”
5th grade

I often get commercials stuck in my head. I repeat the songs over and over. I've been to a concert or two, and I really enjoy them. Whenever we get in the car, I always tell my parents to turn the radio up. I expirement with different kinds of music, to see what I like. I often like music I've heard in Movies and from the 70's and 80's; such as “Celebrate” or “American Pie.” I sing in church a lot, and that helps. Right now I really like Christian music. I like Tapping my toes and fingers, my friends think it is annoying.

“Taylor”
5th grade

I am not like the backstreetboys because I don't have as much talent and skills. I'm not good at singing. I like concerts, tv programs, and pop music. Mrs. Marcia has helped me learn a lot about music. She corrected my mistakes. I guess music class has helped me learn a lot about music. I play the violin but it is getting boring. (Written extremely small in the corner) I only like to listen to music the most.

“Patty”

5th grade

School has helped me develop my music smartness (music class) along with my piano lessons. Church also helps me become more familiar with music and it gives me a chance to express my feelings in the songs I sing.

I also enjoy Christian concerts. Its not only the music that helps me become comfortable with different types of music, but just being in an environment such as that is awesome!

I am growing more and more excited about middle school band every day. I cant wait until I can experience the thrill of being in an orchestra! I am thinking of playing the flute. However, it will probably be hard to manage the flute and piano.

“Loris”

5th grade

Yes, I’m like Brittany Spears and the Backstreet Boys because I sing their songs when they come on the radio. I love singing all of the Hiphop and Jazz songs. The people that helped me with my music smartness are Hiphop and Jazz singers, and my uncle plays the guituar.

They helpme by singing. My music teacher helps me a lot.

“Joseph”

5th grade

no im not like Brittany spears because I cant sing very. I like going to concerts last summer I got ticets (Tickets) to go see Rod stewert I enjoyed it. I also had help on playing the flut (Flute) from Mrs. Marcia like yoy (you) said she is a good music teacher. I also have a pair of drums and I also play the air drums.

“Katie”

5th grade

I am going to voice lessons so that I can sing with straning (straining) myself to go on. I will sing to any song on the radio that I know. I have sung in choir in cruch (church). I will sing songs in my head that I know. I will sing songs that I have stuck in my head out lound (loud) in class or out side at resses (recess). I will sing songs wile (while) making them up. I will tap my feet or hit my fingers on the desk in a rhythm. I play the getar (guitar), violen (violin), recorder, flut (flute), and trumpet. That’s about it!

“Heath”

5th grade

I don’t know. I like to hum and sing when I’m alone. I like music. I listen to it sometimes at home or in my mom’s car. I have been to a concert in Salem’s fair. I have a recorder, even though it is broken. I play a piano at a christmas party in somewhere. In church I sing.

Name _____
Grade _____

Child Music Profile

Circle the numbers that best describe you.

1. My friends and I like to listen to music when we are together.
2. I play an instrument or sing in a choir.
3. I tap my fingers on the desk when I am bored.
4. If I had to choose a center to go to during free time, I would choose the center with the tape recorder and headphones.
5. I get songs stuck in my head and sing them throughout the day.
6. I like to sing in music class.
7. If I had to do a report on bears, I would make a rap song to tell what I learned.
8. The sound of rain outside my classroom window often catches my attention.
9. My friends tell me that I am always singing!
10. My best friend and I have a song that we always listen to together.
11. When I hear music, I am one of the first people to get up and dance.
12. My whole family can sing.
13. Members of my family can play instruments.
14. When I grow up I want to be in a band.
15. When I grow up I would like to write music.
16. When I grow up I would like to be a performer (like Brittany Spears).
17. When I grow up I would like to be a music teacher.
18. I listen to music when I relax.
19. I would choose listening to music before writing something.
20. When my teacher plays music, I really get into class.
21. My music teacher helps me to sing and play instruments.
22. My homeroom teacher lets us sing or listen to music in class.

Names	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Fifth Grade										
KATIE (F)	X	X	X		X	X		X	X	X
TAYLOR (M)	X	X	X		X			X		
PATRICK (M)	X	X	X		X	X		X		
LORIS (M)	X		X	X	X	X	X	X		X
BOB (M)	X	X	X		X			X		
HEATH (M)	X		X	X	X	X		X		
JOSEPH (M)	X		X	X	X			X		
THELMA (F)	X		X		X	X				
PATTY (F)	X	X	X		X	X				
MATT (M)	X		X		X		X			X
ERIC (M)	X		X		X	X	X	X	X	X
HOLLY (F)	X	X	X		X	X		X		X
SANDY (F)	X	X	X		X			X		
MELANIE (F)	X		X		X			X	X	X
LORI (F)	X	X	X	X	X	X				X
Third Grade										
ANNE (F)	X			X	X	X				
CRYSTAL (F)	X	X		X	X			X		
CHAU (F)	X		X	X	X	X		X		
TERI (F)		X	X		X	X		X		
TIM (M)	X	X		X	X			X	X	X
KRISTY (F)			X	X	X	X		X	X	
CALEB (M)	X	X	X		X		X	X		X
CAROL (F)		X	X	X	X			X	X	
SAM (M)	X		X		X	X	X			X
LATICIA (F)	X	X	X	X	X	X		X		X
Fifth Grade Total (out of 15)	15 (100%)	8 (53.33%)	15 (100%)	4 (26.67%)	15 (100%)	9 (60%)	3 (20%)	11 (73.3%)	3 (20%)	7 (46.67%)
Third Grade Total (out of 10)	7 (70%)	6 (60%)	7 (70%)	7 (70%)	10 (100%)	6 (60%)	2 (20%)	8 (80%)	3 (30%)	4 (40%)
Overall Totals (out of 25)	22 (88%)	14 (56%)	22 (88%)	11 (44%)	25 (100%)	15 (60%)	5 (20%)	19 (76%)	6 (24%)	11 (44%)

Names	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Fifth Grade										
KATIE (F)	X	X	X	X	X	X		X	X	X
TAYLOR (M)		X	X					X	X	X
PATRICK (M)		X	X					X		X
LORIS (M)	X	X	X	X		X	X	X	X	X
BOB (M)	X		X	X	X			X		X
HEATH (M)								X	X	
JOSEPH (M)									X	
THELMA (F)			X	X				X		
PATTY (F)			X	X		X		X		
MATT (M)		X		X		X		X		
ERIC (M)	X	X			X			X		X
HOLLY (F)			X					X	X	X
SANDY (F)		X	X	X				X	X	X
MELANIE (F)			X		X	X		X	X	
LORI (F)	X	X	X			X		X	X	
Third Grade										
ANNE (F)			X			X		X		
CRYSTAL (F)			X					X		
CHAU (F)	X	X	X	X	X	X	X			X
TERI (F)	X		X	X			X	X	X	X
TIM (M)								X	X	X
KRISTY (F)	X	X	X	X		X			X	X
CALEB (M)	X	X	X					X	X	
CAROL (F)	X	X	X	X		X	X	X	X	
SAM (M)		X	X					X	X	X
LATICIA (F)		X		X	X	X		X	X	
Fifth Grade Total (out of 15)	5 (33.33%)	8 (53.3%)	11(73.3%)	7 (46.67%)	4 (26.67%)	6 (40%)	1 (6.67%)	14 (93.33%)	9 (60%)	8 (53.3%)
Third Grade Total (out of 10)	5 (50%)	6 (60%)	8 (80%)	5 (50%)	2 (20%)	5 (50%)	3 (30%)	8 (80%)	7 (70%)	5 (50%)
Overall Totals (out of 25)	10 (40%)	14 (56%)	19 (76%)	12 (48%)	6 (24%)	11 (44%)	4 (16%)	22 (88%)	16 (64%)	13 (52%)

Names	Q21	Q22	total per child	Specialist comments on child's musical intelligence/participation in class
Fifth Grade				
KATIE (F)	X	X	19	Appears to love all musical activities, often takes leadership role, sings and plays well
TAYLOR (M)	X	X	12	Understands concepts but doesn't volunteer very often – quiet, responsible boy
PATRICK (M)	X	X	12	Musical intelligence is high, but his shyness gets in the way of showing his talent
LORIS (M)	X	X	19	Loves to sing and play instruments, highly creative –wants to do more than lesson calls for
BOB (M)		X	12	No data
HEATH (M)		X	9	Very quiet, withdrawn – hard to tell if grasping concepts has difficulty w/ some skills
JOSEPH (M)		X	6	Not very adept w/ instruments, recalling patterns – must be led through task that should be easy Seems to like activities, but is easily frustrated by his inabilities
THELMA (F)	X	X	9	Highly creative, enjoys music activities
PATTY (F)	X	X	11	Extremely creative, appears to enjoy everything and offers suggestions for enhancing. High recall of facts, demonstrates skills and talent consistently
MATT (M)	X	X	11	No data
ERIC (M)	X	X	15	Extremely musical – talented, intelligent, creative
HOLLY (F)	X	X	13	No data
SANDY (F)		X	12	No data
MELANIE (F)		X	12	No data
LORI (F)		X	14	Very musical, sings and plays well
Third Grade				
ANNE (F)	X	X	9	No data
CRYSTAL (F)	X		9	No data
CHAU (F)	X	X	16	Very quiet, respectful not too forthcoming in demonstrating abilities. Plays cello but did not mention it.
TERI (F)	X	X	14	Extremely musical and talented, leader among her peers, sings very well
TIM (M)	X	X	12	Often volunteers to play piano at end of class, sings well, has no shyness of jumping in, great sense of rhythm, sings as a leader among peers
KRISTY (F)	X	X	15	Very loud singing voice, enjoys class but not always very accurate
CALEB (M)	X	X	14	Kind of quiet, understands concepts and joins activities. Plays piano but didn't mention it.
CAROL (F)		X	15	Quiet, not anxious to demonstrate her abilities, particularly if in small group or others watching
SAM (M)	X	X	13	No data
LATICIA (F)	X	X	16	No data

Fifth Grade Total (out of 15)	9 (60%)	15 (100%)
Third Grade Total (out of 10)	9 (90%)	9 (90%)
Overall Totals (out of 25)	18 (72%)	24 (96%)

APPENDIX E

LETTER OF REQUEST AND PERMISSION FORMS

MEMORANDUM

TO: Melanie Kendra, Janet Sawyers
Human Development

FROM: H.T. Hurd

DATE: February, 21, 2000

SUBJECT: **Expedited Approval** – “An Exploration of the Use of Music in Elementary Classroom” – IRB #00-36

This memo is regarding the above-mentioned protocol. The proposed research is eligible for expedited review according to the specifications authorized by 45 CFR 46.110 and 21 CFR 56.110. As chair of the Virginia Tech Institutional Review Board, I have granted approval to the study for a period of (12) months, effective today.

Approval of your research by the IRB provides the appropriate review as required by federal and state laws regarding human subject research. It is your responsibility to report to the IRB any adverse reactions that can be attributed to this study.

To continue the project past the 12-month approval period, a continuing review application must be submitted (30) days prior to the anniversary of the original approval date and a summary of the project to date must be provided. Our office will send you a reminder of this (60) days prior to the anniversary date.

Good Luck!

HTH/bj

Cc: Joyce Arditti

*A Land-Grant University – 125th Anniversary
An Equal Opportunity / Affirmative Action Institute*

Letter to Assistant Superintendent

Melanie A. Kendra
405 Webb St.
Blacksburg, VA, 24060
(540) 951-8105
mkendra@vt.edu

Dear _____,

My name is Melanie Kendra. I am teacher in the Child Development Lab School and a graduate student at Virginia Tech pursuing a Masters Degree in Child Development. Currently I am entering the research phase of my studies. I am researching the use of music in general education classrooms. The study will consist of meeting with the third and fifth grade teachers of Green Leaf, having them fill out a music intelligence checklist and write a narrative describing their past experiences with music and how these experience affect their use of music in their classrooms. In addition, I would be attending one 30-45 minute class session for each of the classes in third and fifth grade selected (four). During this class I would ask the children to describe their musical intelligence and then to write a narrative about their experiences with music, especially noting any that have occurred at school. I would be in the school for approximately one week. I am writing to seek permission to conduct my study in your school district. The Virginia Tech Institutional Review Board has already approved this study, and measures will be taken to assure the participants of confidentiality. Consent forms for all aspects of the study, as well as an outline of the study are attached for your approval. I have also had the opportunity to speak with the music specialist from Green Leaf and she indicated that she is interested in this study. The writing task for the children would be completed during their class time and does not differ from writing tasks normally incorporated into their classwork. Results of the study will be shared with the music specialist and teachers to help inform their efforts to integrate music in the curriculum. In the meantime, if you have any questions please feel free to contact me. Thank you for your help in advance.

Sincerely,

Melanie A. Kendra

Letter to Principal

Melanie A. Kendra
405 Webb St.
Blacksburg, VA, 24060
mkendra@vt.edu

Dear _____,

My name is Melanie Kendra. I am teacher in the Child Development Lab School and a graduate student at Virginia Tech pursuing a Masters Degree in Child Development. Currently I am entering the research phase of my studies. I am researching the use of music in general education classrooms. The study will consist of meeting with the third and fifth grade teachers of Green Leaf, having them fill out a music intelligence checklist and write a narrative describing their past experiences with music and how these experience affect their use of music in their classrooms. In addition, I would be attending one 30-45 minute class session for each of the classes in third and fifth grade selected (four). During this class I would ask the children to describe their musical intelligence and then to write a narrative about their experiences with music, especially noting any that have occurred at school. I would be in the school for approximately one week. I am writing to seek permission to conduct my study in your school. The Virginia Tech Institutional Review Board has already approved this study, and measures will be taken to assure the participants of confidentiality. Consent forms for all aspects of the study, as well as an outline of the study are attached for your approval. I have had the opportunity to speak with the music specialist and two of your teachers and they have indicated that they are interested in this study. The writing task for the children would be completed during their class and does not differ from writing tasks normally incorporated into their classwork. Results of the study will be shared with the music specialist and teachers to help inform their efforts to integrate music in the curriculum. In the meantime, if you have any questions please feel free to contact me. Thank you for your help in advance.

Sincerely,

Melanie A. Kendra

Letter to Music Specialist

Dear _____ ,

My name is Melanie Kendra. I am teacher in the Child Development Lab School and a graduate student at Virginia Tech pursuing a Masters Degree in Human Development. Currently I am getting ready to conduct the research phase of my studies. I am researching the use of music in general education classrooms. As we have discussed, your role in this study would be:

- Meeting with teachers to write for 30 minutes
- Assisting with collecting the children's writing during the class
- Responding to the analysis and interpretation of the data AND
- Nominating teachers for inclusion in this study.

I would be attending four music periods (one period for each class selected in the study). If you are interested in participating in this research please indicate your willingness by marking the bottom of this letter and returning it to your office. I will be here Wednesday at 3:30pm to collect the form. It is my hope that this study will help to inform current and future teachers in their efforts to integrate music in teaching young children. Thank you for you help in advance.

Melanie A. Kendra

___ Yes, I am willing to help with this study, please contact me.

___ No, I am not willing to help with this study.

Letter to Teachers

Dear _____,

My name is Melanie Kendra. I am a teacher in the Child Development Lab School and a graduate student at Virginia Tech pursuing a Masters Degree in Child Development. Currently I am entering the research phase of my studies. I am researching the use of music in general education classrooms. The study will consist of the third and fifth grade teachers of Green Leaf, having them fill out a music intelligence checklist and write a narrative describing their past experiences with music and how these experiences affect their use of music in their classrooms. A time would be setup that best suits the teachers involved in this study. This should only last approximately 30-45 minutes. In addition, I would like to attend one 30-45 minute class session with your homeroom, should you choose to participate. During this class I would ask your students to describe their musical intelligence by filling out a musical profile, and then write a short narrative about their experiences with music, especially noting any that have occurred at school. In an effort to respect your time as you and your students prepare for the SOL test, I would be in you class for just one class period. The Virginia Tech Institutional Review Board has already approved this study, and measures will be taken to assure the participants of confidentiality. Results of this study will be shared with the music specialist and yourself to help inform efforts to integrate music into the curriculum. If you would be will to help, please indicate this by signing the bottom of this form. I will be back on Thursday to collect these forms. If you would like to leave them with the front desk, I can get them there, or I can come to your classroom. Thank you for your time in advance.

Sincerely,

Melanie Kendra

_____ Yes, I am willing to participate in your study.

_____ No I do not wish to participate in your study.

name/ grade

Letter to Parent

Dear Parent/Guardian,

My name is Melanie Kendra. I am a graduate student at Virginia Tech and am preparing to start my research. I would like to conduct my study in your child's class. I am attaching a permission form to this letter. On this form is a brief description of the study and the role your child will play in the study. The permission form also states how I plan to protect the confidentiality of your child should they decide to participate in my study. Please take a few minutes to read over the form. My phone number, as well as my major advisor's phone number is listed on the back should you have any concerns or questions. If you agree to let your child participate in this study please sign the form and send it back to your child's teacher. Thank you for you time.

Sincerely,

Melanie Kendra

Virginia Polytechnic Institute and State University
Informed Consent for Music Specialist

Title of Project: An Exploration of the Use of Music in Elementary Classrooms
Investigators: Melanie Kendra, Janet K. Sawyers, Ph.D.

I. THE PURPOSE OF THIS RESEARCH

The purpose of the current study is to explore the use of music in elementary classrooms. This study will examine the meaning children and teachers make of music intelligence by analyzing narratives written by children and teachers of the third and fifth grades.

II. PROCEDURES

Should you decide to participate, you will be asked to assist the researcher for a period of two weeks. During the first week you will be asked to nominate two teachers from the third grade and two teachers from the fifth grade. At each grade level you will nominate one teacher that routinely integrates his or her lessons with music and one teacher that does not. All nomination forms will be turned into the researcher by midweek. Starting the second week, you will be requested to join a meeting with the nominated teachers. During this meeting, you will be asked to complete a music intelligence checklist and write for approximately thirty minutes, about your musical development and its impact on your curriculum, in particular music's affects on how you work with particular children. In addition, you will be asked to assist the researcher responding to the interpretation of the data.

III. RISKS

There are no anticipated risks or benefits for participation in this study. This study is designed not to cause any discomfort or risk to the participants. The study will take place in Kipps Elementary School with as little interruption as possible to the students and teacher's schedules.

IV. BENEFITS TO THIS PROJECT

The findings of this study will provide further information about Gardner's Multiple Intelligences Theory. In addition, this study will provide information to inform and empower schools in the midst of education reform.

V. EXTENT OF ANONYMITY AND CONFIDENTIALITY

The names of all participants, third and fifth grade teachers, third and fifth grade students, and the music specialist, as well as the name of the school, will all be kept confidential through the use of pseudonyms in place of actual names. The researcher, music specialist, and committee chair are the only persons with access to the original data. All information/data collected during this study will be stored in a locked metal container. At the completion of this study all data will be erased or destroyed.

VI. COMPENSATION

There is no specific compensation for participation in the study.

VII. FREEDOM TO WITHDRAW

Please be aware that you may decide to withdraw you and your child's participation in the current study at any time without penalty.

VIII. APPROVAL OF RESEARCH

This research has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, and by the Department of Human Development.

IX. PARTICIPANT'S RESPONSIBILITIES

Upon signing this form below, I agree to the participation this study.

X. PARTICIPANT'S PERMISSION

I have read and understand my responsibilities according to the informed consent form. All of my questions thus far have been answered. I know that I will receive a copy of this form. I agree to participate in this project and

understand that I may decline to answer any questions about my child and myself. I am also aware that I may withdraw my participation in the study at any time without penalty.

Signature

Date

Should I have any questions about the research or the conduct of the research, I may contact the following persons at Virginia Polytechnic Institute and State University:

Melanie Kendra, Investigator

Phone: (540) 951-8105

Janet K. Sawyers, Ph.D., Faculty Advisor

Phone: (540) 231-3194

H. Thomas Hurd, Ph.D.
Chair Institutional Review Board
Research Division

Phone: (540) 231-5281

Virginia Polytechnic Institute and State University
Teacher Informed Consent

Title of Project: An Exploration of the Use of Music in Elementary Classrooms

Investigators: Melanie Kendra, Janet K. Sawyers, Ph.D.

I. THE PURPOSE OF THIS RESEARCH

The purpose of the current study is to explore the use of music in elementary classrooms. This study will examine the meaning children and teachers make of music intelligence by analyzing narratives written by children and teachers of the third and fifth grades.

II. PROCEDURES

Should you decide to participate, you will be asked to assist the researcher for a period of two days. You will be asked to attend a short meeting arranged at your convenience. During this meeting, you will be asked to complete a music intelligence checklist and write, for approximately thirty minutes, about your musical development and its impact on your curriculum, in particular music's affects on how you work with particular children. At another time arranged at your convenience, you will be asked to assist the researcher in collecting the narratives from students in your class. This session will take approximately 30-45 minutes.

III. RISKS

There are no anticipated risks or benefits for participation in this study. This study is designed not to cause any discomfort or risk to the participants. The study will take place in Kipps Elementary School with as little interruption as possible to the students and teacher's schedules.

IV. BENEFITS TO THIS PROJECT

The findings of this study will provide further information about Gardner's Multiple Intelligences Theory. In addition, this study will provide information to inform and empower schools in the midst of education reform.

V. EXTENT OF ANONYMITY AND CONFIDENTIALITY

The names of all participants, third and fifth grade teachers, third and fifth grade students, and the music specialist, as well as the school, will all be kept confidential through the use of pseudonyms in place of actual names. The researcher, music specialist, and committee chair are the only persons with access to the original data. All information/data collected during this study will be stored in a locked metal container. At the completion of this study all data will be erased or destroyed.

VI. COMPENSATION

There is no specific compensation for participation in the study.

VII. FREEDOM TO WITHDRAW

Please be aware that you may decide to withdraw you and your child's participation in the current study at any time without penalty.

VIII. APPROVAL OF RESEARCH

This research has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, and by the Department of Human Development.

IX. PARTICIPANT'S RESPONSIBILITIES

Upon signing this form below, I agree to the participation this study.

X. PARTICIPANT'S PERMISSION

I have read and understand my responsibilities according to the informed consent form. All of my questions thus far have been answered. I know that I will receive a copy of this form. I agree to participate in this project and understand that I may decline to answer any questions about my student and myself. I am also aware that I may withdraw my participation in the study at any time without penalty.

Signature

Date

Should I have any questions about the research or the conduct of the research, I may contact the following persons at Virginia Polytechnic Institute and State University:

Melanie Kendra, Investigator

Phone: (540) 951-8105

Janet K. Sawyers, Ph.D., Faculty Advisor

Phone: (540) 231-3194

H. Thomas Hurd, Ph.D.
Chair Institutional Review Board
Research Division

Phone: (540) 231-5281

Student Consent

You have been chosen to participate in a research study. If you want to take part in this study you will be asked to write an answer to two questions during one of your class periods. If you participate in this study, you have certain rights that you need to know.

- The right to withdraw from this study at any time without reason or cause.
- The right to confidentiality. This means I will not use your name when I describe my data.

AND

- A full explanation of the study.

If you would like to participate in this study please sign your name on the line that says signature. Also, please fill in the date that you signed this form. Thank you.

Melanie Kendra

Signature

Date

Virginia Polytechnic Institute and State University
Parent Informed Consent

Title of Project: An Exploration of the Use of Music in Elementary Classrooms
Investigators: Melanie Kendra, Janet K. Sawyers, Ph.D.

I. THE PURPOSE OF THIS RESEARCH

The purpose of the current study is to explore the use of music in elementary classrooms. This study will examine the meaning children and teachers make of music intelligence by analyzing narratives written by children and teachers of the third and fifth grades.

II. PROCEDURES

Should you decide to let your child participate, your child will be asked to assist the researcher for a period of 30-45 minutes. He or she will be requested to complete a music profile checklist. In addition, your child will also be asked to write about his or her music experience.

III. RISKS

There are no anticipated risks or benefits for participation in this study. This study is designed not to cause any discomfort or risk to the participants. The study will take place in Kipps Elementary School with as little interruption as possible to the students and teacher's schedules.

IV. BENEFITS TO THIS PROJECT

The findings of this study will provide further information about Gardner's Multiple Intelligences Theory. In addition, this study will provide information to inform and empower schools in the midst of education reform.

V. EXTENT OF ANONYMITY AND CONFIDENTIALITY

The names of all participants, third and fifth grade teachers, third and fifth grade students, and the music specialist, as well as the school, will all be kept confidential through the use of pseudonyms in place of actual names. The researcher, music specialist, and committee chair are the only persons with access to the original data. All information/data collected during this study will be stored in a locked metal container. At the completion of this study all data will be erased or destroyed.

VI. COMPENSATION

There is no specific compensation for participation in the study.

VII. FREEDOM TO WITHDRAW

Please be aware that you may decide to withdraw your child's participation in the current study at any time without penalty.

VIII. APPROVAL OF RESEARCH

This research has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, and by the Department of Human Development.

IX. PARTICIPANT'S RESPONSIBILITIES

Upon signing this form below, I agree to the participation this study.

X. PARTICIPANT'S PERMISSION

I have read and understand my responsibilities according to the informed consent form. All of my questions thus far have been answered. I know that I will receive a copy of this form. I agree to participate in this project and understand that my child may decline to answer any questions about him or herself. I am also aware that I may withdraw my child's participation in the study at any time without penalty.

Parent's signature

Date

Should I have any questions about the research or the conduct of the research, I may contact the following persons at Virginia Polytechnic Institute and State University:

Melanie Kendra, Investigator

Phone: (540) 951-8105

Janet K. Sawyers, Ph.D., Faculty Advisor Phone: (540) 231-3194

H. Thomas Hurd, Ph.D.
Chair Institutional Review Board
Research Division

Phone: (540) 231-5281

APPENDIX F

DISCUSSION

Upon reflection of this study, several recommendations have been noted for further research, as well as extensions of this study. First, the researcher found it difficult to attain the permission forms from the parents. While this is a complication for many researchers, this predicament might be avoided with more forewarning to the parents. It is suggested to send out a notice several weeks in advance describing the study, and then send home a permission form. However, this will extend the researcher's time in the school, and thus disrupt the teacher's schedule.

It was also noted that the timing of this study was at a rushed period in the third and fifth grade classrooms. While this would be a good time to observe for musical interactions, it was difficult to schedule a time around preparation for the Standards of Learning testing that was forthcoming. Many teachers noted that their schedule was tight due to this testing and they did not have time to participate in this study. It is recommended that a replication of this study in a public school take place at a time when testing is not forthcoming to avoid the confusion of scheduling around the testing.

Further research is recommended by extending this study by completing several observational periods. One limitation to this study was the ability to assess only what the teachers and students said about their musical experiences in and out of school. Further observation would affirm if the teachers and students actually participate or incorporate these activities into their lives, particularly in an educational setting.

In addition, further research is necessary to fully understand why music is acceptable from outside sources, such as church or private lessons, but not from school settings. This study

was able to attain that many students were incorporating music into their lives, but very few were using the school setting to accomplish this. Is it a comfort factor or just a time issue?

Furthermore, studies examining the break down in use of music from the preschool level to the elementary level are necessary. Many teachers are still utilizing music in the preschool setting, and this utilization seems to be acceptable. However, somewhere in the elementary school, music is being set aside. Research is needed to find where this break down occurs and why. This research will provide researchers and educators further insight into the music integration dilemma and how to combat the negative feelings surrounding it.

Overall, it was found that most teachers and children think that music is an important part of their lives. Most teachers noted that “they grew up with music” or that “music was a very important part of their lives”. It seems that upon reflection, the teachers were able to positively assess their musical experiences and note that they would like to extend their passion into the school setting. Many children also noted the positive experiences they had had with music, although as noted earlier, these experiences were less likely to occur in school.

Another interesting trend noted in the data was that most teachers and children tended to get songs stuck in their head. Following this framework, it would seem advisable for teachers to include music into their curriculum to assist the children in remembering concepts. This might alleviate some of the stress, which arises when teachers are trying to prepare for testing. Instead of using some of the coveted time, music might actually provide a little extra.

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APPENDIX G

VITA

Melanie A. Kendra

405 Webb Street
Blacksburg, VA 24060
(540) 951-8105
mkendra@vt.edu

EDUCATION	<p>Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA. (expected) MS May 2000, Child Development, Major GPA: 3.92/4.0 Thesis: Musical Pathways to Educational Reform</p> <hr/> <p>Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA. BS May 1998, Family and Child Development, emphasis in Early Childhood Education, Major GPA: 3.6/4.0, Overall GPA: 3.65/4.0</p>
WORK EXPERIENCE	<p>Head Teacher, Virginia Tech Child Development Laboratory, Blacksburg, VA Aug. 1998 – May 1999 & Aug. 1998 – May 1999 and Aug. 1999-May 2000</p> <hr/> <p>Camp Counselor Supervisor, Kingsmill Resort, Williamsburg, VA, May–Aug. 1999</p> <hr/> <p>Camp Counselor, Kingsmill Resort, Williamsburg, VA, May – Aug. 1997 & 1998</p> <hr/> <p>Supervisor, Deet’s Place Specialty Coffee Shop, Virginia Tech, Blacksburg, VA, Aug. – May 1997 & 1998</p>
PROFESSIONAL DEVELOPMENT	<p>Student Teacher, Elliston Lafayette Elementary School, Elliston, VA Aug. – Dec. 1997 and Jan. – April 1998</p> <hr/> <p>Co-teacher in toddler room, Virginia Tech Child Development Laboratory, (Intern) Blacksburg, VA, Jan. 1997 – May 1997</p>
SUPERVISION OF PRACTICUM STUDENTS	<ul style="list-style-type: none"> • Guidance, implementation, and modeling of lesson plans, grading, classroom discipline, and professionalism • Directed and assisted action research and presentation at state conference • Provided written and oral evaluation of work performance • Evaluated and directed work performance on daily basis
ACTIVITIES/HONORS	<ul style="list-style-type: none"> • Golden Key National Honor Society (March 1997–May 1998) • Kappa Omicron Nu (February 1997–present) • Student Virginia Education Association, Co-Treasurer (September 1997–May 1998) • Deans List (7 times) • Received Wolf Trap “Artist in Residence” Grant (November 1999)
SKILLS AND CERTIFICATES	<ul style="list-style-type: none"> • Competent in use of Microsoft Office • Skilled in the use of internet software • Virginia Teaching Certificate • Infant/child and Adult CPR certified
PRESENTATIONS	<ul style="list-style-type: none"> • Virginia Association of Early Child Educators March 1999 and March 2000
REGGIO EMILIA TRAINING	<ul style="list-style-type: none"> • Presented at Virginia Association of Early Childhood Educators conference on Reggio topics (March 1999 & March 2000) • Two years instructing at Reggio Inspired Lab School • Hosted/attended Reggio Summer Conference at Virginia Tech (August 1999) • Visit to Reggio Schools (May 2000)